

DELIVERABLE

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Deliverable 6.9 Report on the CARARE Network and Community

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1. Executive Summary

The participants in the CARARE project has established a strong community over the three years of working together, building up a close network of pan-European colleagues and friends both socially and professionally. CARARE has brought together a range of cultural heritage organisations whose main interest is archaeology and who have varying roles and experience in digitisation and metadata. This has proved to be invaluable, especially to some of the smaller organisations, who have been able to learn and adopt best practice within their own organisations and to promote these to fellow national institutions in the same field. The CARARE metadata schema is considered to be very good and highly fit for purpose and has been adopted by several of the partners as the in-house de facto standard, facilitating the supply of new content to Europeana as well as encouraging the digitisation of more resources along with the creation of metadata.

CARARE has enabled at least two organisations to plan and start implementing technology systems and databases that are suitable for the modern requirements of data representation (e.g. digitisation and metadata) for archaeology. Careful attention to coordinating the metadata schema requirements with the INSPIRE Directive has enabled partners to address this issue and provide an effective solution, sometimes with additional benefits such as the creation of the “Mapping – what is where?” tool located at <http://carare.eculturelab.eu/Carare48m/Map.html> which shows where the content supplied by CARARE to Europeana refers to geographically. Additionally, participation in the project has opened up the opportunities for 3D models with partners experienced in this technology able to transform their existing 3D models into 3DPFs for Europeana and less experienced partners to learn about this growing field and to consider applying 3D technologies to their own monuments and treasures.

During the project, the partners have participated in social media through the CARARE Facebook page, LinkedIn and Twitter and have also been highly active in disseminating the project results. Many made contributions to the CARARE newsletter and over the last year, a total of seventeen national dissemination workshops were held. Over the last three years, partners have attended over a hundred different events, giving presentations and talks about the project as well as the occasional radio and television interview. They have learnt much about how their partner organisations operate in their own countries and how they promote and preserve their national heritage from networking socially at the meetings as well as through more structured presentations at workshops and conferences.

One measure of the success of the CARARE community is the high number of partners who have gone on to participate in related projects such as 3D-ICONS, LoCloud, ARIADNE etc. and who have become members of other networks such as DARIAH.

Finally, after several discussions about the project sustainability, it has been decided to establish a Community Interest Group, which has been enthusiastically endorsed by the CARARE partners.



2. Introduction

The CARARE Project consortium consists of thirty-one partners from twenty one countries and includes heritage agencies, ministries, archaeology museums, research institutes, digital archives plus three technology providers (NTUA, DCU and VisDim) and a training provider (AVINET). Over the three years of the project, the partners have formed a close community who have exchanged their experience and knowledge, supported each other and all worked towards the defined goal of mapping and ingesting their metadata into Europeana and making their digital content available to a wider audience. The partners embraced the social media used for dissemination, in particular using Facebook as an informal intra-project communication channel and LinkedIn as the channel for professional networking. By the end of the project, the CARARE LinkedIn Group had around 500 members.

The screenshot shows the LinkedIn interface for the CARARE group. At the top, the browser address bar shows the URL: www.linkedin.com/groups?gid=2792030&goback=%2Egsm_2792030_1_*2_*2_ina_PENDING_*2. The LinkedIn navigation bar is visible, showing the user's name 'Sheena Bassett' and 'Add Connections'. The group name is 'CARARE: connecting archaeology and architecture to Europeana'. Below the group name are tabs for 'Discussions', 'Members', 'Promotions', 'Jobs', 'Search', 'Manage', and 'More'. The main content area is titled 'Your Activity' and shows a 'Start' section with a 'Discussion' tab selected. Below this, there are several discussion posts. The first post is titled 'Call for two full time Marie-Curie Fellowships at the Digital Heritage Lab of the Cyprus University of Technology' by 'Follow Marios', posted 15 days ago. The second post is titled 'NEW VIRTUAL LEARNING AND WORKPLACE CAMPUSES IN AVAYALIVE ENGAGE WITH GRONSTEDT GROUP' by 'Follow Joe', posted 28 days ago. The third post is titled 'Digital heritage and the University of Toronto Museum Studies program' by 'Follow Costis', posted 22 days ago. On the right side, there is a 'Manager's Choice' section featuring a post about the first edition of the CARARE newsletter published by 'Kate Ferris'. Below that is a 'Latest Updates' section showing that 9 people have joined the group, including 'Jose Eduardo Medeiros', 'Julie Melin', and 'Georgia Aristodemou'. At the bottom, there are advertisements for 'Postgraduate courses' and 'Plan Your Projects Better'.

Screenshot from the CARARE LinkedIn Group

Twitter has also provided an active dissemination channel, especially in the final year as CARARE had built up a good following with many of the partners re-tweeting through their own accounts.

Many of the partners have contributed to the CARARE website (<http://www.carare.eu/>). Translations were provided in French, German, Lithuanian, Spanish, Dutch, Italian, Czech, Estonian and Greek for many of the key pages with contributions for the News and Events pages. Articles were provided about partner institutions, activities and project achievements for the CARARE Newsletter. Looking at the website statistics for the last year (1 January 2012 – 31 January 2013), it is evident that social media and partner networking, promoting the website through their own websites and channels, has contributed to the traffic to the website which averages at just under 1,000 visitors a month (11,489 pa). 21% of traffic came from referrals. In addition to Google, four partners appear in the top 10 referrers along with the three social media channels, Europeana and “Wiki Loves Monuments” (with whom some CARARE partners have collaborated to supply geo-location data and unique references for monuments). Most of the remaining partners appear in the top 50 referrers.

	Domain	Identity
1	kf.vu.lt	VUFC, Lithuania
2	google.com	Google search engine
3	linkedin.com	CARARE LinkedIn Group
4	pro.europeana.eu	Europeana Professional
5	facebook.com	CARARE Facebook Group
6	npu.cz	NPU, Czech Republic
7	t.co	Twitter referrals
8	cimec.ro	CIMEC, Romania
9	archaeologydataservice.ac.uk	ADS, UK
10	wikilovesmonuments.eu	CARARE associate

Partners also contributed to the eight CARARE Newsletters that were published over the last three years. These included articles on:

- The National Heritage Board of Sweden (SwNHB)
- Vilnius University, Lithuania (VUFC)
- The Directorate of Monuments and Landscapes for the Brussels Region (MBRC)
- The Monuments Board of the Slovak Republic (PUSR)
- Documenting Malta’s Prehistoric Sites (Heritage Malta)
- The German Archaeological Institute (DAI)
- DCU Digitisation Project (DCU)

- CAAI and 3D Scanning (CAAI)
- EVA Conference Jerusalem (STARC)
- Hack4DK (KUAS)
- Pyrga Loves Monuments (STARC)

In addition to attending Project Meetings and Conferences, the project partners were able to take part in archaeology-related trips organised for the Saturday after the meetings and further networking opportunities.



When VUFC hosted the September 2012 Project Meeting in Vilnius, many of the partners joined an organised tour which visited some of the most important historical sites in Lithuania including Medininkai, Trakai and Kernavė. Following the International Conference in Mykonos, the partners went to the nearby island of Delos (pictured above), a World Heritage Site famous for its Greco-Romano archaeological site. As part of the CARARE Final Conference, participants

were able to choose between three hour-long historical walking tours of Copenhagen lead by guides from the National Museum.

Finally, the partners have been very active in disseminating information about CARARE at conferences and events, presenting papers, holding workshops, appearing on television and publicising the project on their own websites and social media channels. Seventeen Dissemination Workshops were held during Year 3 (as reported in D6.8) and several of the partners are now participating in follow-on projects such as 3D-ICONS (which will supply several hundred 3D Models to Europeana) and ARIADNE (archaeological research data infrastructure network).

3. Post-Project Community

The CARARE Project spent some time investigating the options for sustaining the CARARE infrastructure and network. In the initial sustainability survey, it was evident that whilst the partners were keen to sustain the network, most were not able to pay anything more than a low cost subscription fee. The project looked at the possibility of establishing a legal body such as a ‘stichting’ but eventually concluded that the best way forward was to establish a no-fee community interest group with the main objectives of:

- Networking: fostering collaboration and exchanging information and ideas between people, projects and initiatives active in the area of bringing together archaeological and architectural heritage content such as CARARE, Ariadne, DARIAH, 3D ICONS, LoCloud and others
- Workshop: participating in an annual workshop or summer school to bring together the people involved in the network, with the focus on documentation of the archaeological and architectural heritage, harvesting and interchange of information and content, developing access and user engagement. Collaborating with relevant working groups in CIDOC, CAA, Europeana etc.
- Dissemination: providing a forum for the exchange of news, information and ideas, a channel for promoting good practices. In collaboration with Europeana and others.
- An aim of the group would be to facilitate the development of sustainable tools and services to integration of archaeological and architectural heritage content. This might include supporting the development of tools such as MINT and MORE, playing a role in the Europeana network and discussions about aggregation services, standards and systems and continuing the investigation of sustainable business models to support the network.
- Members of the group would be asked to commit some time or perhaps other resources rather than charging a membership fee. This might involve you in helping to organise the annual meeting (which could be a standalone event or a workshop run as part of a regular conference such as EAA or CAA), hosting the website and member forum, following the activities of DARIAH, LoCloud, Ariadne and sharing news, contributing to the maintenance of the CARARE documentation and guidelines, etc.
- Membership of the group will be open to all those with an interest in the aggregation of archaeological and architectural heritage content, including the partners in CARARE, 3D ICONS and others.

The Board, once appointed later this year, will need to establish the terms of reference for the group and procedures for members to vote on proposals.

One of the terms of reference for the Board could be to monitor the need to establish the Group as a legal entity or to raise income (for example by running workshops or training events, or through membership fees) in future, with any such proposals being put to members to vote on.

When this was proposed in January 2013, the project partners responded very positively, all endorsing the idea and their wish to be members of the CARARE Community Interest Group.

4. Individual Contributions on Networking

This section contains several contributions from CARARE partners on the networking and community experiences and benefits the partners have gained from being part of the CARARE project. These demonstrate a commitment to Europeana and the desire to continue supplying content as well as developing new services and in-house systems to facilitate greater inter-operability between national institutions and pan-European initiatives such as Europeana. In order, these contributions are from:

- KUAS, the Danish Agency for Cultural Heritage, Denmark
- CETI, ‘Athena’ Research Centre, Greece
- CIMEC, Romania
- CAAI, Spain
- N303 BV, Netherlands
- KNAW-DANS, Netherlands
- MBRC, Brussels
- MDR Partners, UK
- VUFC, Lithuania
- NID, Poland
- CHA, Netherlands
- DAI, Germany
- SwNHB, Sweden
- NPU, Czech Republic
- AHAI, Iceland

4.1 The Danish Agency for Cultural Heritage – CARARE experience

Kulturarvsstyrelsen (KUAS), the Danish Agency for Cultural Heritage was the CARARE coordinator. At the beginning of the project KUAS was an independent agency under the Danish Ministry of Culture but during 2012 it was merged with the Agency for Art and the Agency for Library and Media. These three agencies became the Danish Agency for Culture¹.

The project lead role meant that KUAS has followed all things CARARE related from the technical to the social networking and community building around the project. The knowledge sharing amongst the consortium made a huge difference for KUAS in its work with the archaeological and architectural databases that it is charged with maintaining and promoting. The experience lead to KUAS facing up to and rethinking issues about data ownership and rights management institutionally and nationally.

In the first part of CARARE's life, KUAS worked very closely with the Athena Research Centre, the National Technical University of Athens, MDR and other partners on the development of the CARARE metadata schema and the semantic tools for interoperability. This work was provided the foundations for the implementation of the schema by the Greek partners in the current tools; the MINT web service for uploading and mapping metadata, and the MORE repository.



Network building at the CARARE kickoff meeting, Copenhagen March 2010

¹ The Acronym KUAS continues to be used in CARARE



Officially, KUAS was not involved in the 3D work package or with the work on GIS and map-based searches, but has been taking an active interest in the work. This led to collaborative ties with the Slovenian and Belgian partners and the work has made a difference in the way KUAS represents many of Denmark's most famous landmarks as well as adding value to individual data entries in its databases.

KUAS' national workshop became a hackathon event in collaboration with the Royal Library of Denmark and the National Museum of Denmark. The hackathon was very successful in the sense that it led to not only development of some finished apps for Android and/or IOS, but also in the sense that it put KUAS in contact with programming and developers. It turned out there was a difference in what programmers and developers wanted from the data and what KUAS assumed they wanted. The results of the hackathon were disseminated both nationally and internationally to Nordic partners.

Aggregating data from mostly archaeological museums, enriching the entries and uploading to MORE via MINT has meant an increase in the collaboration with the local museums and KUAS; the central agency. More importantly, it has meant that the difficult questions of data ownership and rights management was explicitly asked and finally clarified.

KUAS has taken part in all of the plenary events in CARARE's lifetime and was the organiser of the CARARE final conference in November 2012. This event summed up the project in its entirety and delved into questions of sustainability and future work. The conference filled the National Museum of Denmark's conference hall with stakeholders and speakers from all over Europe for two full days. The social events gave a chance for the partners to informally debate the future of the project when project funding came to an end, and this fed into the latest discussions on the subject.

KUAS has supported both centralised and de-centralised versions of sustaining the results and knowledge created in the CARARE project, and KUAS believes it essential that all the good work and all the important deliverables be preserved and developed further.



4.2 The CARARE Experience – CETI, ‘Athena’ research centre

CETI is focused on strengthening research and technological activities to the humanitarian science, cultural heritage and education domains. More specifically, it concentrates its scientific activities such as the application of Information Technology to the study of texts, analyses, study and registry of languages, works of art, monuments and artefacts, the study of related material, particularly ceramics, paper and parchments and the digitisation, preservation, management, promotion and dissemination of our cultural heritage thesaurus.

As a CARARE partner, CETI played the role of 2D and 3D cultural heritage content provider. Actually, the first 3D content offered to Europeana was content prepared by CETI. This content was organised into three collections. The first two collection carried 2D content: The "*Thracian Electronic Thesaurus*" (<http://www.ipet.gr/thesaurusII>) that contains information about flat rural houses, mountainous bi-level houses, mansions of urbanised communities of the Ottoman period, special buildings made at the end of the 19th century and the beginnings of the 20th, the "*Ark of Refugee Heirloom* " (<http://www.ipet.gr/kivotos>) contains photographs and information of almost four thousand articles, related to the waves of early 20th century Greek refugees. These tokens of Greek presence in North and Eastern Thrace, Asia Minor and Pontos, are today located in Municipal, Religious and Private Collections, or they are individually kept as family relics in the Prefectures of Evros, Rodopi, Xanthi, Kavala and Drama, forming the Region of Eastern Macedonia-Thrace, North Eastern Greece. The third collection (abridged C3D) covers 3D reconstructions of urban areas of cultural importance in the area of Eastern Macedonia and Thrace ([Old City of Xanthi](#), [Old city of Kavala](#), [Santa Barbara Springs](#)) Byzantine churches in region of Mani ([Agios Vasilios at Kelefa](#), [Church of Episkopi](#)) and a [Byzantine castle](#) located in the city of Kavala, Greece. One of the main advantages of CETI's 3D digital content is the fact that all 3D reconstructions have properties (low geometrical complexity, multiple resolutions of texture map sizes) that are considered 'Internet Friendly' and thus they can easily be accessed over the Web.

CETI has followed the 2D/3D content pipelines proposed by the project's partners by working in close collaboration with MDR, NTUA, DCU and Visual Dimension. Additionally, CETI performed research and developed working prototypes of possible alternatives in areas such as *Web browser based 3D visualisation* (<http://www.ipet.gr/~akoutsou/x3d/demo>) approaches but also *on-line keyword-based search engine* for 3D scenes (<http://www.ceti.gr/3DSSE>) with a functionality that provides the automated positioning of the virtual visitor in a point of interest within a 3D scene and the ability to perform queries related to archaeological, historical, architectural and georeferenced-spatial-topological relationships and properties. Furthermore and although CETI was not formally involved in the generation of the CARARE's metadata schema, its research interests are within the specific area and thus members of CETI's project team closely attended the process of development and presented some of their opinions and ideas. In fact, some of the ideas implemented in the *keyword-based search engine for 3D scenes* were discussed between several members of the metadata and 3D data working groups.

During the CARARE project, CETI has actively participated in several project meetings and conferences related with both metadata and 3D content. A number of publications mentioning the CARARE project have been made. These are as follows:

- i. A. Koutsoudis, K. Stavroglou, G. Pavlidis, C. Chamzas, 3DSSE - A 3D Scene Search Engine, Exploring 3D Scenes Using Keywords, Journal of Cultural Heritage, Vol. 13(2012), pp 187-194.
- ii. A. Koutsoudis, B. Vidmar, G. Ioannakis, F. Arnaoutoglou, G. Pavlidis, C. Chamzas, Multi-Image 3D Reconstruction Data Evaluation, Journal of Cultural Heritage, accepted for publication, December 2012.

Additionally, the CARARE project has been mentioned in an interview given to the SPAR Point Group and can be found online at <http://www.sparpointgroup.com/Blogs/Continental-View/Interview--Dr-Anestis-Koutsoudis---At-the-cutting-edge-of-Greek-3D/>.

CETI as a research entity considers itself as a part of the CARARE community. Being a partner of the currently EU funded project 3D-ICONS, CETI will certainly continue working on evolving the *infrastructure* being created by the CARARE project.

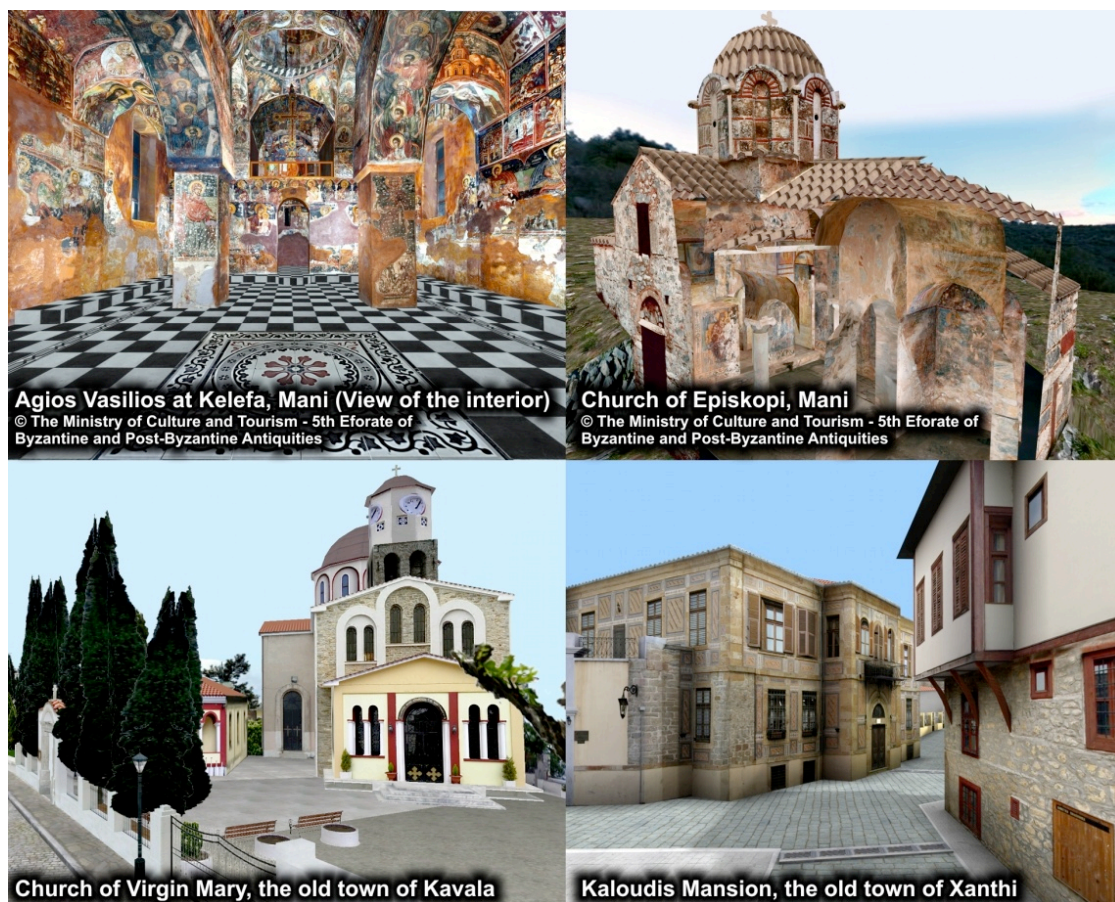


Figure 1. Screenshots from the 3D content provided by Athena R.C.



4.3 The CIMEC Networking and Community Experience

CIMEC - The Institute for Cultural Memory became partner in the CARARE project as the leading Romanian institution in national digital resources for cultural heritage. Since 1996, the Institute for Cultural Memory has run a website (www.cimec.ro) which is the main access portal to various sources for Romanian cultural heritage: museums, mobile cultural heritage, archaeology, historical monuments, rare books, history, numismatics, ethnography, performance arts, the digital library for manuscripts and rare books, electronic books, cultural legislation, digital maps, etc. The website has a capacity of 16.2 GB on a dedicated server. The website is written in Romanian, being partially accessible in English and with some web pages also translated into French, Hungarian and German. In 2010 there were 1.5 million individual visitors. On 1 July 2011, CIMEC was absorbed as a division for the Preservation of Cultural Memory within the National Heritage Institute, which is an organisation under the Ministry of Culture.

Participating in the CARARE project was an opportunity and a stimulus to improve the illustration of our cultural heritage records, to add visual resources to our databases of places of worship, archaeological sites and historic monuments. Until 2010 we maintained and updated regularly our online national databases and developed a cartographic interface (map server) for the map of Romania (scale 1:100,000) allowing both visualization of search results and individual items on the map and search on the map with link to the record in the databases (<http://map.cimec.ro>). After 2010, for the first time we added images to our records of archaeological excavation reports (<http://cronica.cimec.ro/>) and to the National Archaeological Record database (<http://run.cimec.ro>) which greatly improved our service to specialists and public. This was just the beginning. With the new software module for images we plan to add much more images to our databases using both our own archives and getting images from other sources. For instance, we established a collaboration with the University of Bucharest, History Department, to digitize their slides archive for archaeological sites and architectural monuments and publish them online. Those resources will be also available for *Europeana*.

Another great opportunity was to establish relations with other organisations in Romania and abroad, to cooperate with them and learn new things. CARARE made us aware of voluntary initiative like Wiki Loves Monuments. We worked with the WLM Romanian team to put to good use their more than 20,000 images of historic monuments gathered in 2011 and 2012 and make them available in *Europeana*. We initiated new collaborations with Romanian heritage organisations (National History Museum of Romania, Cluj County Library, National State Archive) and many others became interested in participating in *Europeana*. We also enjoyed participating in the training workshops and seminars organized during the project, meeting colleagues from other organisations across Europe.

CARARE will continue to mark our plans of developing visual archives and 3D models for archaeological and architectural heritage.



4.4 CAAI- University Institute for Iberian Archaeology and CARARE

Situation before joining the project

Before starting the project CARARE, the CAAI had developed other projects obtaining a notable amount of 3D models of archaeological materials. At the same time CAAI had also accumulated a lot of information and 2D images on the culture of the Iberians. In parallel, thanks to projects like AREA and EPOCH, we had become aware of the importance of European-level dissemination and use of new technologies. CARARE project has provided the technical tools to give a European dimension to the culture of the Iberians. This way one of the most important Iron Age culture is now more accessible to European society through Europeana.

Networks and contacts established during the project

Contacts:

- Libraries General Coordination Office, Ministry of Education, Culture and Sport, Spain
- Andalusian Institute for Historical Heritage, Sevilla, Spain, IAPH
- Department of Computing. Area of Computer Languages and Systems. University of Jaén
- Department of Graphic Engineering, Design and Projects. University of Jaén
- Department of Computer Languages and Systems. University of Granada
- Library of the University of Jaén
- Andalusian Foundation for the Image, Color and Optic (FAICO). Area of 3D technologies. Sevilla.
- Allard Pierson Museum of the University of Amsterdam (Holland)
- Museum of Castulo (Linares, Jaén)
- Provincial Museum of Jaén
- Company “Conecta Pymes”, Pontevedra
- Company “Toposur” de Granada.

Plans and activities post CARARE

Project 3D-Icons (UE). 3D Digitisation of Icons of European Architectural and Archaeological Heritage. Co-ordinated by Università degli Studi di Napoli L'Orientale (Italia). CIP-ICT-PSP.2011.2.2-Digitising content for Europeana Number of partners: 15

Current status: Running until 2015.

Project *Connecting Early Medieval European Collections* (CEMEC) coordinated by Allard Pierson Museum of the University of Amsterdam. Proposal for the EU Culture Programme –Strand 1.1: Multi-annual Cooperation Projects. Number of co-organizers: 11.

Current status: under evaluation.



Doctoral thesis of Ana Martínez.

Specific examples of speaking invitations and joint activities etc.

Arturo Ruiz and Ana Martínez. High specialization course. Intervention models on cultural heritage: research, protection, conservation and enhancement. Module: New European research lines: technology applied to cultural heritage. CSIC and TEchnoHeritage Network. Madrid. 13th december 2011.

Arturo Ruiz and Ana Martínez. “Carare Project” Andalucía Researchers’ Night. 28th september 2012. Scientific dissemination European Project belonging to PEOPLE programme (7th Framework Programme, EU) held simultaneously in 200 european cities since 2005.

Congress, meetings, exhibition... 2010-2013

2010

Martínez, A. and Ruiz, A. “Cerámica arqueológica on line: El proyecto CATA como caso de estudio”. *International Seminar “Heritage and digital innovation. Latest technologies for cultural heritage management and exploitation*. Lleida (Spain) from 13th to 15th May 2010.

Martínez, A. and Ruiz, A. Archaeological knowledge on Internet: The case of the CATA project. *XXXVIII Annual Conference on Computer Application and Quantitative Methods in Archaeology*. Granada. 6th to 9th April 2010.

Ruiz, A. and Martínez, A. L. El proyecto CATA: la mirada tecnológica. *I Congreso Internacional sobre Estudios Cerámicos. Homenaje a la Doctora Mercedes Vegas*. Cádiz, 1st-5th November 2010.

2011

Martínez, A. L., F. Gómez, F., Ruiz, A. and Molinos, M “El patrimonio arqueológico ibérico en la Biblioteca Digital Europea” *I Congreso Internacional El Patrimonio Cultural y Natural como motor de desarrollo: investigación e innovación*. Jaén 26, 27 y 28 Enero 2011.

Presentation at exhibition: *Tras los pasos perdidos. Investigación e Innovación en Arqueología*. Director Arturo Ruiz. Granada Science Park. CAAI, UJA y FECYT. 28th January-20th March 2011.

Martínez, A. L., Gómez, F and Sánchez. A. “Integración de contenidos 3d de la cultura ibérica en Europeana” *3rd International Meeting on Graphic Archaeology and Informatics, Cultural Heritage and Innovation* Seville 22-24 June 2011.

Sánchez. A. “El Centro Andaluz de Arqueología Ibérica”. *Primera Reunión de la Red de Ciencia y Tecnología para la Conservación del Patrimonio Cultural*. (TechnoHeritage 2011). Madrid, 28-29 June 2011.



Martínez, A. and Ruiz, A. “On line management of archaeological data: the case of CATA and CARARE projects”. *Tagung Fundmassen: Innovative Strategien zur Auswertung frühmittelalterlicher Quellenbestände* held in Esslingen am Neckar (Germany) 8-11 November 2011.

Martínez, A. and Ruiz, A and Castro, M. “Documentation 3D in Archaeology: a new tool for the interpretation and research: Projects CATA, CARARE and Forum MMX”. *XIV Edition of the Borsa Mediterranea del Turismo Archeologico*, Paestum (Salerno, Italy) 17-20 November 2011

Martínez, A. “Proyecto CATA: digitalización y puesta on line del registro arqueológico”. *Curso Alta especialización en el CSIC: Curso de Alta especialización. Modelos de intervención sobre el patrimonio cultural: investigación, protección, conservación y puesta en valor*. CSIC and TechnoHeritage Network. Madrid, 13 December 2011.

Ruiz, A. and Sven Reher, G. Coordination of the section III: “Nuevas tendencias de investigación y conservación”. *Curso de Alta Especialización Modelos de intervención sobre el patrimonio cultural: investigación, protección, conservación y puesta en valor*. CSIC and TechnoHeritage Network. Madrid, 12-16 december 2011.

2012

Martínez, A. L., Ruiz, A., Gómez, F and Sánchez. A "Connecting Archaeology and Architecture in Europeana: the Iberian digital collections. Computer Applications and Quantitative Methods in Archaeology (CAA). Southampton, 26-30 march 2012

Ruiz, A and Martínez, A. “Carare Project” *Andalucía Researchers’ Night*. Scientific dissemination European Project. PEOPLE programme (7th Framework Programme, EU). Jaén 28th September 2012.



4.4 N303 and CARARE

N303BV is a consultancy firm and operates in the not-for-profit/public sector. The cultural heritage sector however is one of its key businesses within the not-for-profit sector. Being involved in CARARE from the beginning has been a very interesting experience. Not just because of the project itself, but also as a business cooperating with predominantly public bodies. N303 was responsible for the stakeholder case survey in Workpackage 7 Sustainability. By means of a questionnaire all participating CARARE partners and some external heritage organisations were asked to comment upon a series of questions relating to their own ‘business’, and their views on a possible CARARE business case. In conducting the research on sustainability one of the important questions was for the CARARE partners to formalise their motives to join. This gave not only the project, but also gave N303 a better understanding of the objectives of cultural heritage organisations. The survey proved in this way to be beneficial for CARARE and for N303. It provided a better focus on heritage institutions and their motives.

Overall, by participating in the CARARE project N303 was able to intensify already existing relations in the Netherlands and Belgium and get access to new relations. This has been a major advantage from a business point of view. Having a European-wide network through the CARARE partners will be very helpful to initiate new European projects as we are planning to do this year. So in this respect CARARE has been the start for new ideas and projects within Europeana and cultural heritage.

During the project N303 has been asked to present CARARE and Europeana to a host of Dutch museums and archives during 2011. In the same year N303 gave a presentation at the DISH 2011 conference in Rotterdam, The Netherlands. In 2012 several different organizations (e.g. STAP, National Archives of the Netherlands, Netherlands Architectural Institute, ProRail, museums, provinces) have been visited to promote CARARE and Europeana on a more basic level. Through contacts N303 already had with the cultural heritage department of ProRail, the organisation for building and maintaining rail infrastructure, it was possible to interest them in Europeana and CARARE, especially the 3D component. ProRail is in principle willing to adopt the Europeana Data Exchange Model and the CARARE data model as mandatory schemas in the briefs they make. They like the idea of making their archaeological data available on a larger scale. IN the concrete case of the railway tunnel in Delft, where large scale archaeological digs have taken place in the old city during the last couple of years they are looking into the possibility of using 3D developed by CARARE (Daniel Pletinckx) as a means of producing easy to use and to maintain 3D models for the general public. The city of Delft is to provide the necessary archaeological content through CARARE; they are very willing to co-operate on this. ProRail would supply the funding. This may turn out to be a good example using CARARE 3D and heritage material in the public space. At the moment we are making the necessary business case.

In case of the Netherlands Architectural Institute (Nai) N303 has, together with the RCE, been responsible for the advising to the head of collections in order to get several collections ready for harvesting to CARARE (via MINT) and via CARARE to Europeana. This has succeeded in getting five architectural collections ready for harvesting before February 1 2013, including a signed data agreement with Europeana.



4.5 CARARE - KNAW-DANS/e-depot Dutch Archaeology Koninklijke Nederlandse Akademie van Wetenschappen (KNAW) Data Archiving and Networked Services (DANS)

Data Archiving and Networked Services (DANS) promotes sustained access to digital research data. For this purpose, DANS encourages scientific researchers to archive and reuse data in a sustained manner. DANS operates the online archiving system EASY and gives support and guidance to other data archives. DANS stimulates cooperation between data producers and users and does research into long term accessibility.

As partner in the cultural heritage project CARARE, DANS contributes to the project through the e-depot for Dutch archaeology. This contribution consists of a selection of smaller datasets of 7000 archaeological reports. These are the files with desk based assessments, field surveys, trial trenches and excavations in the Netherlands that are available as open access publications to all registered users of EASY.

Working together with the Cultural Heritage Agency of the Netherlands and N303BV as Dutch organisations as well as European CARARE partners, DANS joined a broad network. Participating at the Dutch archaeology conference “The Reuvensdagen” and discussing the key topic of sustainability at the conference “ Digital Strategies for Heritage” (DISH 2011) made the dialogue with archaeologists and cultural heritage organisations possible. DANS contributed to the CARARE workshop held at the Computer Applications & Quantitative Methods in Archaeology (CAA) Conference at the University of Southampton, UK in 2012. The workshop was lead by CARARE project partners the ADS from York, UK and the DCU based in Athens, Greece and offered an opportunity for the international archaeological community to explore the work of the CARARE project and its relationship with Europeana.

Driven by data, DANS ensures that access to digital research data keeps improving, through its services and by taking part in national & international projects and networks. KNAW-DANS will participate in the European infrastructure project ARIADNE, to facilitate access to, and integration of excavation and monument record data. KNAW-DANS will expand and improve access to its online archiving system EASY to the international research community and will harmonize and linking information by semantic web technologies (linked data) to improve the accessibility of the data.



4.6 The MRBC Network and Community

The situation before joining the project

The Heritage Direction of the Ministry of the Brussels Capital Region (MBRC) is the state agency response for the heritage on the territory of the Brussels Capital Region (Belgium is a federalized country with three regions. The regions are in charge of heritage, except in the case of the federal museums.) The principal aims of the Heritage Direction are to identify study and protect the Region's heritage, to inform the public on the value and the role of heritage in our society through publications, exhibits, conferences, etc., and participate in international projects in order to encourage cooperation and exchange of good practices.

The last years, a switch was gradually made from paper publications to constantly updated online inventories of the Region's heritage. Two major websites were created: a scientific inventory of the architectural heritage (www.irismonument.be) and one for the remarkable trees and natural sites (www.arbres-inventaire.irisnet.be).

Networks and contacts established during the project

The CARARE project has, on a local level, raised the consciousness within the Heritage Direction that its collection of data, pictures, postcards, maps, etc. should be completely digitised in order to share our heritage with the European citizen. Although the Heritage Direction lacked the necessary organisational carrying capacity to solve this first step completely, the visibility of the Heritage Direction's already accessible data in Europeana, through the CARARE-project, is clearly enhanced and has therefore created an impetus that will be augmented in the months and years after the CARARE-project.

Through the CARARE project, contacts could be made with other heritage institutions within Belgium, both on a regional as on a federal level. These institutions are or already collaborating with Europeana, like "erfgoedplus.be", or in similar European heritage projects like e.g. ATHENA (Royal Museums for Art and History). We share the same aim of informing the public of the richness of our collections, but collaborations are difficult to implement because of the Belgian organisational system. Through international projects like the CARARE project and the contacts it generates, future collaborations between these various institutions can therefore be organised.

The participation of the Heritage Direction of the MRBC in the CARARE project made it possible to have contacts with the other European Heritage Institutions – the understanding of our mutual cultural, political, social situations and the solutions brought to solve the comparable problems encountered (e.g. the use of thesauri), enhance the network between the institutions and encourage thus the use of good practices.

During the project, ICOMOS Belgium was a major partner in the dissemination of the results. This collaboration will certainly be continued, the aim of the organisation being to promote the conservation, the protection, the use and the reassessment of monuments and sites within Belgium. The second volume of the series "Thema et Collecta" (edited by ICOMOS Wallonie-Bruxelles) is



indeed dedicated to the digitisation of heritage and contains a presentation of Europeana and the CARARE-project.

Plans and activities post CARARE

It is the strong wish of the Heritage Direction to continue the collaboration within the future structure of the CARARE project in order to continue the enrichment of Europeana. Therefore, in the near future (2013-2014), while several new websites will be created containing various contents, the technical descriptions contain the specification that the metadata must be organized according to CARARE metadata scheme, in order to facilitate future ingestion into Europeana. A continuous updating of the ingested data and the adding of the latest data of the existing websites will be organised. New types of documentation, like e.g. the 3D documentation for the archaeological objects originating from archaeological excavations within the Brussels Capital Region will be organised. Collaborations with other departments and directions within the Ministry of the Brussels Capital region will be started: e.g. the general cartography department and the connection with their recently established LiDAR collection covering the whole Brussels Capital Region.

Collaboration with ICOMOS Belgium will be organised in order to disseminate on a regular basis the ingestion of data in Europeana via the future CARARE-structure and the results of collaborations with other European projects, to the larger heritage community within the country, e.g. via their electronic newsletter.

As a member of the European Archaeological Council (EAC) and as Chair of the Archaeological Archives Working Party within the EAC, the Heritage Direction will establish a continuous information campaign concerning the future CARARE structure and Europeana, and any other European heritage project, in order to augment the number of potential partners and contribute as such to the development of the interoperability of heritage data in the network of European heritage organisations.



4.5 MDR Partners – the CARARE experience

MDR is a specialist SME which works with libraries, archives, museums, information providers, and other organisations in the cultural heritage, public data and education sectors, at European level and internationally. Its services include research and strategic development, consultancy, training, project management and implementation, service development and technical support.

MDR's involvement with CARARE from the beginning built on its experience in networking projects in the libraries sector such as Europeana Local, and on the professional experience of one of its project managers, Kate Fernie, in the archaeological heritage domain at UK level.

As project manager for CARARE, MDR was responsible for communications within the project partnership and part of its role has been encouraging partners to create and take opportunities to network. The growth of the Europeana Network during the three years of the project has provided opportunities for networking within the European GLAM network, with MDR and many CARARE partners becoming involved in expert working groups on Sustainability, Users, Communications and other issues. Participation in Europeana Network plenary meetings and Europeana project collaboration meetings have also provided opportunities to meet colleagues, exchange news and share experiences.

Within the CARARE project MDR was involved in the Sustainability work package. Working with ADS and with N303 on the stakeholder survey and research into business models has given insight into sustainability in the context of Europeana, its aggregation services and the needs and motivations of heritage organisations.

Participating in the CARARE network enabled MDR to build on its existing network of contacts and brought it into contact with the people behind voluntary initiatives such as Wiki Loves Monuments, researchers active in the field of 3D digitisation and visualisation, research infrastructures such as Ariadne and DARIAH, and many others. MDR's extensive experience in developing and implementing the CARARE Schema and knowledge of the cultural heritage sector along with all the new contacts made through the CARARE community has enabled MDR to bring this valuable knowledge to follow-on projects such as 3D-ICONS, LoCloud and Ariadne.



4.7 Vilnius University Faculty of Communication Report on Networking and Community

Vilnius University Faculty of Communication was established in 1991 and has been the leading Higher Education establishment working in this field. VUFC has an integrated approach towards information and communication, looking at libraries, museums, archives, media, publishing enterprises, information agencies and information businesses as parts of the information infrastructure of the society. Its mission is realized through communication and information study programs, basic and applied research, and continuing professional development opportunities, and particularly through interdisciplinary and international cooperation. The Faculty contributed to several international research projects such as CALIMERA, PubliCA, Pulman and Cultivate-CEE, DPE, NORSLIS.

The first EU funded projects connected with digitized cultural heritage in Lithuania started to appear in 2004 after Lithuania became a member of EU. However, there was still a gap in international archaeological digitization projects practice. National digitized archaeology projects also were not very common. The main archaeological database ARUODAI combining these resources was created in 2003–2006. It contained about 2000 digitized archaeological images. Because of lack of national financing no more new content was added since 2005. CARARE was a major impulse to re-new our archaeological digital resources as Lithuania was invited to join the project as one of the content providers. VUFC in a close cooperation with ARUODAI managed to supplement images' archive by 20,000 images. With the help of CARARE the biggest Lithuanian archaeology collection on the Internet was created. Moreover, CARARE project was the first international project dealing with digitized archaeological material in Lithuania. It also provided as an opportunity to present Lithuanian archaeological heritage and to become a part of European Community. Overall, 21,190 images were published in Europeana as VUFC contribution to CARARE project. VUFC got a positive feedback from project managers and other CARARE colleagues. We were invited to give a presentation about Lithuania's experience in the project during the final CARARE conference in Copenhagen.

Our experience is considered to be a successful beginner's example revealing the importance of the professional network, where a possibility for novice country to learn from old-timers was created. It was a big step for our institution to be the part of this network, to cooperate, to learn from others, and increase our knowledge and competencies in this field. Also to make our contribution to the network and to create this good practice together.

After CARARE project, the importance of the ARUODAI information system increased significantly. So far it remains one of the most visited (about 11,000 unique visitors per year) web portals providing digitized information about our cultural heritage. Connection to EUROPEANA conditioned its accreditation as the Lithuanian Heritage and History Research Infrastructure. It provides us a further possibility to create a repository (an electronic compendium) of sources on Lithuanian heritage, history and culture. Such repository will provide the means to preserve and analyse heritage, language, folklore and ethnological, archaeological, and historical data in a modern



way. It is expected that the new opportunities for advancing the process of digitalizing sources on Lithuanian history and heritage will be created.

Participation in CARARE network also accelerated VUFC activity in other important European researcher communities, such as EUROPEANA, DARIAH, Wiki Loves Monuments and V-Must. It helped us to connect with other international organisations and cooperate with them establishing international relations. Presenting VUFC as one of CARARE partners made us more recognizable, especially among EUROPEANA Community.

Members of VUFC became a part of EUROPEANA Network and participate in EUROPEANA's plenary meetings and its activities. We are also actively involved in particular work groups, such as Technical and User Engagement WG.

From 2011 VUFC has joined DARIAH as one of the cooperating partners. Our institution's involvement into DARIAH activities lead us to start a dialog with the Lithuanian Ministry of Science and Education and to initiate Lithuania becoming a true member of DARIAH (hopefully in 2013) and a part of international infrastructure.

CARARE also introduced to us an initiative of Wiki Loves Monuments. We are planning to participate in it in 2013.

Contacts in CARARE network made us aware of V-Must or the network of excellence that aims to provide the heritage sector with the tools and support to develop virtual museums. VUFC joined V-Must as one of the associate members in 2012. We have further plans to develop visual archives and work with archaeological 3D models.

Participation in CARARE project ensured the continuity of international projects activities for VUFC. Our organization is one of the partners of the upcoming LoCloud project initiated by CARARE colleagues. It provided a possibility for our researchers to improve their competencies in this field and to keep moving further, which is necessary for our country in general. During the LoCloud project, VUFC will have an opportunity not only to provide digitized archaeological content to EUROPEANA, but also to contribute our expertise in order to improve the services of Archaeological Thesaurus and Thesaurus of geographic names. Also, we were asked to intermediate in the process of involving the Latvian archaeologists as one of the project partners.

Further cooperation with CARARE network could be developed by the Community Interest Group, which also could help us to follow the activities of ARIADNE project. The latter one could broaden our understanding of archaeological infrastructures, research and networking.

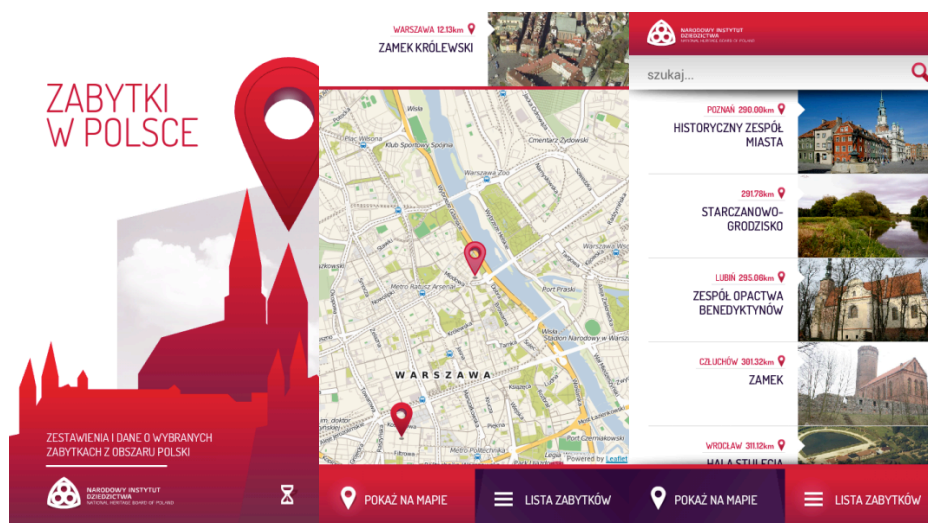
Our involvement into European projects activities also re-connected us with Lithuanian colleagues who works with international projects. We were able to share our experiences and to distinguish the main problems and thus to search for better solutions together. We also became more aware about our digital content too. Major interest shown at the national CARARE dissemination event confirmed that VUFC is greatly accepted among the Lithuanian digitization professionals.

4.8 National Heritage Board for Poland - Network and Community

The National Heritage Board of Poland is a state agency established by the Minister of Culture and National Heritage. We gather and disseminate information on heritage, set standards for its protection and conservation, and aim to raise the social awareness on cultural heritage of Poland in order to save it for future generations in accordance with the strategy for sustainable development. In 2009 when we started thinking about the CARARE our heritage archives were mostly un-digitised. We had several computer databases all of which were created in the 1990's and could not stand the test of time and rapid IT development.

Over the last few years, however, we adjusted our activity to the challenges of modern heritage management. In 2009 we became a Competence Centre for digitisation of monuments and as such we are to implement innovations on digitisation and maintenance of digital resources, coordinate process of data accumulation and storage, lead training for institutions dealing with digitising their heritage content, promote digitisation and provide access to digital resources.

As the Competence Centre we are also responsible for implementation of the INSPIRE directive in the field of protected areas regarding cultural heritage. Work on INSPIRE and CARARE has been carried on almost simultaneously. Our CARARE collection and INSPIRE protected areas are presented in one internet portal that has already been launched (<http://e-zabytek.nid.pl/>). At the final stage of our INSPIRE project the INSPIRE content is to be integrated with the CARARE content. The CARARE/INSPIRE content is also presented by means of a mobile application (http://tnij.org/nid_apk). In this context the CARARE content can be seen as a popular, amateur side of heritage presentation.



The Zabytki Portal

During the project we presented CARARE in our periodical *Ochrona Zabytków/Monuments' Protection* and on numerous events in Poland trying to show the necessity for digitisation and online presentation of cultural heritage as one of basic means for its promotion in our digitising world.



Owing to our activity, several museums and research organisations have decided to provide their results through our web services. Some of them included Europeana in their popularisation and promotion schemes, e.g. while applying for donations from Minister of Culture and National Heritage. Presenting heritage and research results in Europeana turned out to be particularly appealing to local authorities.

We continue our project of laser scanning. Creation of a 3D model, that is the popularisation aspect, is now a fixed final stage in our 3D documentation workflow. Moreover, we have started a co-operation with Warsaw University of Technology regarding setting standards of laser scanning in heritage. Researchers planning 3D documentation of heritage sites consult us on specification for 3D so that the outcome is ready for presentation in Europeana.

In the future we plan to enrich our heritage content, presenting online more and more registered and listed monuments, world heritage sites, cultural landscape parks and others according to the standards established during our participation in the CARARE project.

4.9 Cultural Heritage Agency of the Netherlands (Rijksdienst voor het Cultureel Erfgoed)

The Cultural Heritage Agency of the Netherlands is responsible for the management of Dutch heritage above ground, below the ground and under water from the Middle Palaeolithic period to the post-war period of reconstruction.

As part of the Ministry of Education, Culture and Science, the Cultural Heritage Agency operates under the direct responsibility of the Minister. In our role as a government agency, we maintain an overview of the cultural heritage throughout the country, including the legislation governing it. We tell the stories behind our cultural heritage and advise national, regional and local authorities in their decision-making. We also make a valuable contribution to international cooperation in this field through the exchange of knowledge and information.

The Cultural Heritage Agency has been involved in several projects financed by the European Union through the Culture 2000 programme, Interreg and the different Framework programmes (5th, 6th and 7th) including PlanArch (1&2), NAVIS (1 & 2), MoSS, BACPOLES, Transformation and MACHU. It was the leading organizer for the MACHU project. The Cultural Heritage Agency has knowledge and experience in making information and data accessible to a broader public.

The CHA is involved in the CARARE project as content provider, and was leader of the CARARE Work Package 4. In this role, it was also involved in the harvesting and ingestion process of the project. As content provider, the CHA provides 3 datasets (protected townscapes, registered monuments and pictures of monuments and landscapes ca. 500.000 items.) The pictures (beeldbank) are available online on the website of the Cultural Heritage Agency. The registered monuments and protected townscapes datasets consists of text and geospatial information.

The Cultural Heritage Agency of the Netherlands works together with DANS and N303BV as CARARE partners. CHA has a broad range of institutions and partners national as international.

The CHA works in a broad network, which contains:

- public authorities: local authorities, provincial authorities, other government ministries, water boards,
- organizations involved in heritage management, education and research,
- owners and managers of buildings, sites and landscapes (both private and institutional),
- private sector parties, such as contractors, architects and restoration specialists.

In order to ensure that the project results of CARARE are sustainable, CHA will continue to act as a national aggregator. CHA will also take part in future projects that succeed CARARE, such as LoCloud. There are also several other national activities and projects, in which CHA is taking part, that can be linked to the CARARE project goals (such as the Pilot Linked Open Data, DimCon, DARIAH). CHA is, as a national aggregator for protected areas, also obliged to freely distribute its spatial datasets of these areas under the guidelines of the INSPIRE directive.



4.10 German Archaeological Institute

The German Archaeological Institute (DAI), founded in 1829 in order to research and raise awareness of monuments of ancient art, epigraphy and topography, today is a federal agency that is within the area of responsibility of the ministry of foreign affairs. The institute employs around 120 scientists, who carry out research in the area of archaeology and in related fields, which includes domestic, but especially international excavations, expeditions, and other projects. The 15 branches are located in Germany, Mediterranean countries and Near East, while research areas include material cultural heritage from classical antiquity as well as from Asia and South America.

In charge of curation for hundreds of research archives and research material like huge libraries and photographic collections since the 19th century, the German Archaeological Institute makes extensive efforts for the preservation of these materials by digitisation projects to offer them for use by the scientific community as well as the broader public including new digital born data and the currently more than 60 volumes of yearly publications. Therefore, Arachne became the central object-database of the German Archaeological Institute (DAI) in cooperation with the Cologne Digital Archaeology Laboratory (CoDArchLab) at the University of Cologne. This repository to date has over 8,500 registered users who can access more than a million scans and about 300,000 objects free of charge.

Especially in recent years, simultaneous to the CARARE project several initiatives and funded projects made extensive contributions to our data assets among which are 100,000 very old and vulnerable glass plate negative collections. Furthermore 3.000 volumes with more than 200,000 pages of ancient books with no Intellectual Property rights on them, for which annotations can be made have been digitised. All these items including their object descriptions, in total about 300,000 images and nearly 200,000 data sets, have been contributed to Europeana via CARARE.

As it is the policy of DAI and CoDArchLab to address issues of complexity in an international framework rather than on their own, CARARE provided the opportunity to exchange techniques, develop and establish important solutions and make available precious resources to an international community.

Interoperability addresses the way data is shared and connected, which is not only crucial inside the DAI itself, so a given object will only reside once inside the overall data space of DAI, minimizing redundancy but for access to research sources for the scientific community. Our efforts towards Semantic Web Technologies focus on implementing uniform resource identifiers (URI) to unmistakably identify objects residing in Arachne and adopting the CIDOC Conceptual Reference Model. Also, support for the Open Archives Initiative is integrated. Finally, all objects will reflect their contextualisations in basic categories of material and topography to build a huge network of knowledge, resolving barriers between resource types. There is still a long way to go to meet this objective. The engagement in CARARE gave an impetus at the DAI for an internal project defining strategies for 3D-model preservation management.

For the German Archaeological Institute it was a pleasure to disseminate the ongoing work and results of the CARARE project with presentations at several conferences, e.g. at 'Deutsches Kulturerbe auf dem Weg in die Europeana' (October 2010 in Berlin), at EuroMed 2010 in Limassol, at a CLAROS meeting (July 2011 in Oxford) and internal or cooperative meetings, as well as publications: "Das CARARE-Projekt – Bringing Arachne to Europeana" In KuBa1, 2011, 199 - 200. A Training workshop in Cologne was organised in March 2011.



4.11 Riksantikvarieämbetet (SwNHB)

The Swedish National Heritage Board, which serves as Sweden's central administrative agency in the area of heritage and the historic environment, is under the auspices of the Ministry of Culture. Our mission is to play a proactive, coordinating role in heritage promotion efforts and to ensure that the historic environment is preserved in the most effective possible manner.

The Swedish National Heritage Board are managing two databases with cultural environmental data; Sites and Monuments (survey records and images of archaeological sites and monuments in Sweden, including those protected by law) and Built heritage (inventory records and images of buildings in Sweden, including listed buildings protected by law). The Swedish National Heritage Board is also a national aggregator (Swedish Open Cultural Heritage; SOCH) and is responsible for making data from Swedish museums available through Europeana and through our own API. During the project period, we have also participated in other projects with our building and monument data; INSPIRE and Wiki Loves Monuments.

We participated in CARARE as a content provider and made the monuments available through Europeana in early 2012. Our aim is to make the building information available through Europeana during 2013. Participating in the project has given us a better understanding of how different organizations are working with heritage data in Europe and a larger network of people who work with the same types of issues. We have often noticed that we are faced with the same problems, regardless of the size of the organization.

Working in the CARARE project have helped us to be more aware of the shortcomings in our own information structure regarding IPR issues to both meta data and media (particularly images) and standardized vocabularies. Unfortunately we could not solve these problems during the project but will continue working on these issues in 2013 which will enable the delivery of more qualitative data to Europeana.

We presented CARARE at DISH 2011 in Rotterdam and held a national CAA-SE workshop in Stockholm in October 2012.



4.12 Czech National Heritage Institute report on the CARARE Network and Community

The National Heritage Institute (Národní památkový ústav - NPU) is a national institution funded by the Ministry of Culture of the Czech Republic in order to provide state care of cultural heritage in the field of architecture and archaeology under Act. No. 20/1987 Coll., on the State Care of Monuments. It consists of the Directorate General and 14 regional offices. NPU also takes care of more than 100 important historical properties which are open to the public.

Our first database system was created in the 1990s for the Central Register of Cultural Monuments. Since 2003, NPU has been building the Integrated Information System of the Care of Monuments (IISCM), which works on the principle of interdependency of all information sources in the NPU. The IISCM contains basic applications – CRCM (Central Register of Cultural Monuments of the Czech Republic), GIS (Geographical Information System with essential database of objects in the Czech Republic and with specialized thematic layers), MIS (Meta-information System for storing, describing and making available digital or digitized documents relating to the object of interest) and SAR (State Archaeological Register) – see <https://iispp.npu.cz/homepage.htm>. At the beginning of the CARARE project, all these databases were available on the internet but the most important one – the Central Register was obsolete and could not be integrated. It was limited only to listed monuments, but we need to describe other monuments, too. During the last years we have strived to build a new modern application but all projects always failed to overcome financial and administrative barriers. Now a tender for supplier of the new system is under way. The CARARE project was really very useful in preparation of the assignment for this tender. It was and still is a great opportunity to learn about international metadata standards and technical tools and services for harvesting and interchanges of information.

During the project we presented CARARE periodically on our website <http://www.npu.cz/carare> and on numerous events in the Czech Republic – for example on the conference “Archives, Libraries, Museums in the Digital World” in Prague, on the Europeana workshop at National Library in Prague, on the International Conference on Cultural Heritage Preservation in Split, Croatia and on the XXIIIrd International CIPA Symposium (ICOMOS) in Prague (see also our Dissemination Activity Report). We met many Czech specialist involved in heritage information systems, for example from the National Museum (Athena project), the National Library (Manuscriptorium), the Moravian Museum and the National Archives. It was very interesting to compare our experience with our colleagues from other countries within the CARARE community.

Participation in the CARARE project encouraged an interest in 3D objects in our institution, although we don't provide any 3D objects to Europeana yet. Some colleagues established cooperation with university students who can create 3D documentation of historical monuments.

We intend to enrich further our heritage content and we expect our new application for the Central Register will enable to increase the number of records we provide to Europeana considerably.



4.13 AHAI (Iceland) Report on the CARARE Network and Community

The Archaeological Heritage Agency of Iceland and the Architectural Heritage Board unite in the CARARE project.

The Archaeological Heritage Agency of Iceland (AHAI), established in 2001, is the central authority for protection and management of archaeological monuments and sites in Iceland. The mission of the Agency, in accordance with the Cultural Heritage Act (no. 107/2001), is to safeguard the Icelandic cultural heritage and pass it on intact to future generations. To achieve this, the main focus of the Agency is on in-situ preservation of archaeological monuments and sites, on the increasing of public awareness and access to the cultural heritage, and on promoting research.

The Architectural Heritage Board of Iceland (AHBI) is the central authority for the preservation of the Icelandic architectural heritage and is subject to the provisions of the Architectural Heritage Act (no. 104/2001). The board formulates policy in the field of architectural conservation and assesses which buildings should be listed as conserved structures. The Architectural Heritage Board administers the Architectural Heritage Fund, whose role is to provide grants for maintenance and renovation of listed buildings and structures, and of other buildings deemed by the Architectural Heritage Board to be of historical/cultural value.

Our contribution is two datasets; Listed buildings in Iceland and Scheduled archaeological sites in Iceland. Beforehand our datasets were in-house small scale databases (File Maker and Personal geospatial database, access) supported with various files (word documents, excel, digital images). Our participation in the CARARE project did, therefore, call for a serious modifications of the structure and coordination of the data. In order to do that, a PostgreSQL database was designed and the datasets are now available on the internet (<http://minjar.fornleifavernd.is/minjar/> and <http://hus.fornleifavernd.is/hus/>).

The CARARE metadata schema proved to be very good. We are happy with the result and will most likely used for all our datasets but that includes dataset for all archaeological sites and manmade structure in Iceland 100 years old and older and archaeological researches in Iceland from 1870 to present. We have presented the CARARE metadata schema as our choice of metadata schema for our input to join open administrative data in Iceland, based on INSPIRE.

We have presented the program in various fields, especially in heritage management meeting in Iceland and joint Nordic meetings but also meeting about geographical information in Iceland. Next step will be to take part in the LoCloud project but now as a one institution, The Culture Heritage Agency of Iceland. We held a workshop in November 2012. The Workshop covered an introduction to Europeana and the CARARE project and included the topic of 3D in archaeology and CARARE. Daniel Pletinckx was so kind to take part in the workshop and introduce to Icelanders 3D in CARARE. Following the conference, Daniel Pletinckx conducted a workshop for three-dimensional data, methodology and standardization. We hope, as a result, Icelanders will be presenting a 3D content to Europeana in the near future.



5. Conclusion

The CARARE best practice network brought together a group of individuals and cultural heritage organisations all with an interest in that archaeological and architectural heritage. From the start of the project this shared interest proved to be invaluable in building the community, encouraging individuals to take an active part in project activities and facilitating the sharing of knowledge and experiences.

Over the last three years, partners have attended over a hundred different events, giving presentations and talks about the project and the occasional radio and television interview. These national and international activities brought members of the network in contact with organisations within their own countries learning on the way more about how their national heritage is promoted and preserved. The project has brought to light opportunities for collaboration between cultural heritage organisations, with schools, voluntary initiatives such as “Wiki Loves Monuments” and also with other projects such as 3D-ICONS, LoCloud, ARIADNE, DARIAH and others. In many cases this networking activity has raised awareness of Europeana and stimulated new organisations to make their digital collections available.

A Community Interest Group has been enthusiastically endorsed by CARARE partners as a way of continuing the network after the end of project funding. The Group will meet for the first time during the European Archaeologists’ Association meeting in the Czech Republic in September 2013.