CRAEFT

Dissemination Plan and Activities

Project Acronym	Craeft
Project Title	Craft Understanding, Education, Training, and Preservation for Posterity and Prosperity
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http://www.craeft.eu/

Executive summary

This deliverable is designed as a living document to be periodically updated by all partners to keep a trace of any dissemination activity realised during the project. To increase the impact of the results produced by the project, the dissemination plan will consistently rely on the diversification of the actions according to the expertise and aptitude of the project partners, as well as the maturity of the solution and the different communication means (e.g., in-presence and online).

Section 1 provides an introduction.

Section 2 regards academic publications and related research data. In that section, we report the Open Access policy of Craeft. Next, we report the publications achieved so far. Finally, in that section, we report our plans for forthcoming publications.

In Section 3, we report synergies and collaborations with other EC and nationally funded research projects.

In Section 4, we report on our approach to the organisation and participation in dissemination events.

This deliverable has two appendices. The first targets potential venues for the publication of academic papers. The second contains the log of participation in dissemination events by Craeft participants.

Document history

Date	Author	Affiliation	Comment
22-03-2023	Nikolaos Partarakis	FORTH	First draft
11/03/2023	Polykarpos Karamaounas	FORTH	Quality Assurance review.
16/03/2023	Xenophon Zabulis	FORTH	Updated draft based on Quality Assurance review and Open Review across members of the consortium.
08/02/2024	Jelena Krivokapic	MDE	Updating the Log of Dissemination activities sheet.
23/2/2024	Xenophon Zabulis	FORTH	Added recent publications

22/1/2025	Jelena Krivokapic	MDE	Updating the deliverable with a relevant activates and plans from 2024.

Abbreviations

2½D	Two-and-a-half dimensional
2D	Two-dimensional
3D	Three-dimensional
AI	Artificial Intelligence
AR	Augmented Reality
CH	Cultural Heritage
EC	European Commission
ECVET	European credit system for vocational education and training
EQAVET	European Quality Assurance in Vocational Education and Training
EQF	European Qualifications Framework
EU	European Union
GANS	Generative Adversarial Networks
Gpix	Gigapixel
GUI	Graphical User Interface
ICH	Intangible Cultural Heritage
ICT	Information and Communication Technologies
ORDP	Open Research Data Pilot
REA	Research Executive Agency
TCs	Traditional Crafts
TVET	Technical and Vocational Education and Training
UI	User Interface
VET	Vocational Education and Training
VR	Virtual Reality

XR	eXtended Reality

Table of contents

1 Introduction

At Craeft we are feeling the obligation to pursue the widest possible dissemination of our research outcomes. This obligation stems from the fact that since our project is financed by EU citizens, we should provide the widest possible benefits in return to society. We strongly believe that this is also supported by the priorities set by the project that put the social dimensions of craft preservation, training and practice in focus. In this context, we intend to follow all relevant EU guidelines under a systematic approach and with the willingness to share our results with potential users - peers in the research field, industry, other commercial players and policymakers. By doing so Craeft will have the possibility of sharing its research results with the rest of the scientific community, in the scientific fields targeted by the project, thus contributing to scientific progress and excellence.

In this deliverable, we are placing the foundation of a step-by-step approach to the dissemination of the outcomes of the project. Dissemination in Craeft will involve all activities by which project-related knowledge is provided to relevant stakeholders and other interested parties (including the general public) at local, national, European and international levels.

2 Research publications

What: As academia is an important target audience for the dissemination of research results and the developed technology, publishing articles in academic journals and other professional publications will be an ongoing activity by all research partners of Craeft.

Objectives: Academic and professional publications largely contribute to understanding the academic field and may instigate Action among stakeholders. Publications will be in Open Access.

How: All research partners within Craeft have experience with (academic) publishing. An inventory of academic journals and other relevant audiences that are targeted at the topics of Craeft is provided in Appendix A.2.

Partners will follow a well-defined publication plan as presented in this section. All publications will be entered in the Log of Communication & Dissemination activities.

Citation tools and methods will be used to measure the impact of publications. When an academic paper is published, a short abstract with a link to the original publication will be published as an article on our project website.

Craeft will pursue publication in highly ranked academic Journals and Conferences and has already related an inventory of potential venues to assist towards this direction (see Appendix A.2). Furthermore, it will organise two special issues concerning the main topics of the project the first focusing on the widest possible scientific dissemination of cross-disciplinary research conducted in Craeft and the second will focus on basic research outcomes that are exploited by the project. Key information on these special issues is presented in the following sections together with the initial planning of the consortium contributions to each of them. The special issues will also target the widest possible scientific audience outside the project to collect contributions and thus create a critical mass of scientists publishing craft-related research which will foster the further dissemination of the approach followed by the project.

In the subsections below, we report

- The policy of Craeft regarding Open Access to publications and data (Section 2.1).
- The papers that have been published (Section 2.2).
- The special issues that have been published promoting crafts and cultural heritage are edited by members of the consortium (Section 2.3).
- The plan for a forthcoming special issue (Section 2.4).
- The plan for forthcoming publications (Section 2.5).

2.1 Open access

2.1.1 Publications

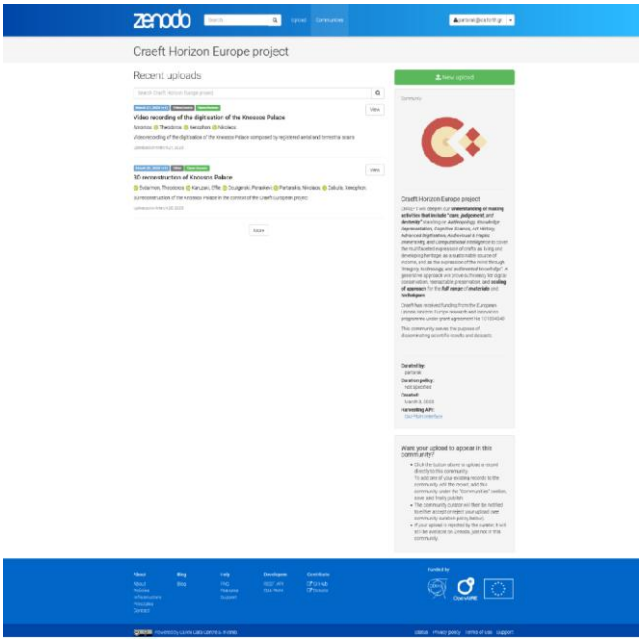
Craeft addresses open research data as a keystone in advancing EU research and fostering innovation. Craeft will target "Gold" open access and has foreseen budget for this activity. Wherever "gold" is not possible, "green" open access will be pursued. The target is to maximise the impact on scientific excellence in ways that include publication in open-access yet highly appreciated journals as well as blogs and publicly available White Papers.

2.1.2 Research data

In Craeft, with regards to open access to research data Craeft will participate in the Commission's pilot on open access to research data, which has recently been extended to cover all thematic areas of Horizon Europe, thus realising the Commission's ambition of "open research data per default".

The Craeft project will use an open-access repository to share the publications as well as the research data, which the project members intend to designate for sharing under the ORDP, to enable third parties to access and use free of charge. The project members are free to choose the specific repositories to utilise, as long as they satisfy the free access requirements of the ORDP. Example open access repositories recommended by the OpenAIRE project[1], funded by the EC aiming to support the implementation of open access in Europe, including the Zenodo repository[2].

From the beginning of the project, we have set up a community for the project in the Zenodo repository to collect and disseminate open research data. Zenodo provides the flexibility on selecting the dissemination policy to support various types of licences including restricted access or moderated access to research data thus supporting the full range of potential dissemination strategies that may be needed in the context of Craeft. The landing page of the community is presented in Figure 1.



[1] https://www.openaire.eu/
[2] http://www.zenodo.org/

Figure 1. The landing page of Craeft Community in Zenodo.

The following research work has been published under the Craeft community in Zenodo:

1. Galanakis, G.; Zabulis, X. and Argyros, A. (2024). Nearest Neighbor-Based Data Denoising for Deep Metric Learning. In *Proceedings of the 19th International Joint Conference on Computer Vision*, Imaging and Computer Graphics Theory and Applications - Volume 2: VISAPP, ISBN 978-989-758-679-8, ISSN 2184-4321, pages 595-603., https://doi.org/10.5281/zenodo.10630698

   This paper addresses the challenge of label noise in supervised deep metric learning, which can negatively impact model accuracy. The proposed method operates online during training, identifying and excluding noisy samples based on features from previous epochs, without needing prior knowledge of noise contamination. Tested across multiple datasets and loss functions, it outperforms or matches existing methods, improving dataset reliability and model accuracy. This publication demonstrates Craeft's commitment to open data sharing and advancing machine learning, supporting innovation and collaboration.

2.2 Published papers

To total of dissemination activities can be found in Appendix A.2, along with a short description for each one.

The following journal papers have been published in Open Access.

1. **A Roadmap for Craft Understanding, Education, Training, and Preservation**, Xenophon Zabulis; Nikolaos Partarakis; Ioanna Demeridou; Paraskevi Doulgeraki; Emmanouil Zidianakis; Antonis Argyros; Maria Theodoridou; Yannis Marketakis; Carlo Meghini; Valentina Bartalesi; Nicolò Pratelli; Christian Holz; Paul Streli; Manuel Meier; Matias Katajavaara Seidler; Laura Werup; Peiman Fallahian Sichani; Sotiris Manitsaris; Gavriela Senteri; Arnaud Dubois; Chistodoulos Ringas; Aikaterini Ziova; Eleana Tasiopoulou; Danai Kaplanidi; David Arnaud; Patricia Hee; Gregorio Canavate; Marie-Adelaide Benvenuti; Jelena Krivokapic, Heritage, 6(7):5305-5328, https://doi.org/10.3390/heritage6070280

   Proposing a systematic roadmap for craft preservation and evaluation, this article aims to enhance understanding and design tools for documentation, education, and training while stimulating practitioner income diversification.

2. **Safeguarding Traditional Crafts in Europe**, Nikolaos Partarakis, Xenophon Zabulis., Encyclopedia, 3(4), 1244-1261, https://doi.org/10.3390/encyclopedia3040090

   This paper addresses the challenge of safeguarding crafts in Europe, defined as the systematic process of understanding, preserving, and promoting them according to UNESCO and UN-World Tourism Organization guidelines. It explores multidisciplinary challenges from technology to ethics, law, and policy, emphasizing the importance of education and training in preserving crafts amidst declining practitioner numbers, crucial for both cultural heritage and community impact.

3. **A Review of Immersive Technologies, Knowledge Representation, and AI for Human-Centered Digital Experiences**, Nikolaos Partarakis and Xenophon Zabulis, Electronics, 13(2):269, https://doi.org/10.3390/electronics13020269

   This paper reviews the impact of digital technology evolution on diverse interaction domains including user interface design, web-based information systems, knowledge representation, X-reality applications, human motion and 3D digitization, serious games, and AI. We examine how these domains influence our interaction with digital interfaces, information processing, and immersive experiences.

4. **A low-cost close-range photogrammetric surface scanner**, Panagiotis Koutlemanis, Xenophon Zabulis, Nikolaos Stivaktakis, Nikolaos Partarakis, Emmanouil Zidianakis, Ioanna Demeridou, Frontiers in Imaging, 3:1341343, https://doi.org/10.3389/fimag.2024.1341343

   A low-cost, close-range photogrammetric surface scanner is proposed, made from Computer Numerical Control (CNC) components and an off-the-shelf, consumer-grade macro camera.

5. **Applying Cognitive Load Theory to eLearning of Crafts**, Nikolaos Partarakis and Xenophon Zabulis, Multimodal Technologies and Interaction, 8(1):2, https://doi.org/10.3390/mti8010002

   This research paper presents a comprehensive framework for applying Cognitive Load Theory to enhance craft education and training via eLearning platforms.

6. **Large Scale Optical Projection Tomography without the Use of Refractive-Index-Matching Liquid**, Petros Stavroulakis, Theodore Ganetsos and Xenophon Zabulis 3, Sensors, 23(24), 9814, https://doi.org/10.3390/s23249814

   In this paper, we demonstrate that a specific class of transparent objects can be reconstructed without the need for opaque spray coatings using Optical Projection Tomography (OPT).

7. **Motion Capture Benchmark of Real Industrial Tasks and Traditional Crafts for Human Movement Analysis**, Brenda Elizabeth Olivas-Padilla, Alina Glushkova, and Sotiris Manitsaris, IEEE Access, 11:40075 - 40092, https://doi.org/10.1109/ACCESS.2023.3269581

   This paper presents seven datasets recorded using inertial-based motion capture. The datasets contain professional gestures carried out by industrial operators and skilled craftsmen performed in real conditions in situ. The datasets were created to be used for research in human motion `modelling, analysis, and generation. The protocols for data collection are described in detail, and a preliminary analysis of the collected data is provided as a benchmark.

8. **Reviving Antiquity in the Digital Era: Digitization, Semantic Curation, and VR Exhibition of Contemporary Dresses**, Aldo Xhako, Antonis Katzourakis, Theodoros Evdaimon, Emmanouil Zidianakis, Nikolaos Partarakis and Xenophon Zabulis, Computers 2024, 13(3), 57; https://doi.org/10.3390/computers13030057

   In this paper, we present a comprehensive methodology to support the multifaceted process involved in the digitization, curation, and virtual exhibition of cultural heritage artifacts. The

proposed methodology is applied in the context of a unique collection of contemporary dresses inspired by antiquity. Leveraging advanced 3D technologies, including lidar scanning and photogrammetry, we captured and transformed physical garments into highly detailed digital models. Furthermore, we harnessed the power of these 3D models to transcend traditional exhibition boundaries, crafting a virtual experience that transcends geographical constraints. This virtual exhibition not only enables online exploration but also invites participants to immerse themselves in a captivating virtual reality environment.

9. **Modelling and Simulation of Traditional Craft Actions**, Xenophon Zabulis, Nikolaos Partarakis, Ioannna Demeridou, Valentina Bartalesi, Nicolò Pratelli, Carlo Meghini, Nikolaos Nikolaou, Peiman Fallahian, Applied Sciences, 2024; 14(17), 7750; https://doi.org/10.3390/app14177750

   This study addresses modeling and simulating traditional crafting actions to enhance craft understanding, documentation, and training. Physical entities in crafting are identified and characterized, while actions are classified into four goal-based categories with shared operational principles and tools. Archetypal simulators, developed using the Finite Element Method, simplify this classification and are specialized for specific craft actions. Validation involves predicting and simulating these actions, which are rendered in 3D for visual demonstrations and potential integration into game engines for training purposes.

10. **Using Large Language Models to Create Narrative Events**, Valentina Bartalesi, Emanuele Lenzi, Claudio De Martino, PeerJ Computer Science, 2024; 10:e2242; https://doi.org/10.7717/peerj-cs.2242

    This paper explores integrating large language models (LLMs) with Semantic Web technologies to transform raw scientific data into reliable narratives. It defines narrative events and evaluates smaller LLMs for generating accurate outputs. Testing on datasets of 5 and 124 narratives identifies LLaMA 2 as the most suitable model, capable of generating high-quality narrative events aligned with input texts. Prompt engineering further enhances its performance, ensuring the integrity and reliability of generated narratives.

11. **A Review, Analysis, and Roadmap to Support the Short-Term and Long-Term Sustainability of the European Crafts Sector**, Partarakis N, Zabulis X, Meghini C, Dubois A, Moreno I, Ringas C, Ziova A, Kaplanidi D, Arnaud D, Crescenzo N, et al.. Heritage. 2025; 8(2):70. https://doi.org/10.3390/heritage8020070

    This publication highlights the strategic combination of the preservation of heritage and innovation for supporting the sustainability of traditional crafts in Europe. Demonstrating both challenges and opportunities faced by artisans, there is a need to balance cultural authenticity and the pressures of current markets and environmental imperatives. The research has explored interventions at three levels of craft practice, education, and training and recommends practical directions on short- and long-term bases.

In addition, a pre-print of publication 4 above has been published in Preprints.org

Koutlemanis, P., Zabulis, X., Stivaktakis, N.M., Partarakis, N., Zidianakis, and E., Demeridou, I. A Close-Range Photogrammetric Surface Scanner and its Evaluation. Preprints 2023, 2023071609. https://doi.org/10.20944/preprints202307.1609.v1

2.3 Published special issues

Title: Electronics and Computer Science for Cultural Heritage: Advancements, Preservation, and Applications

Journal: MDPI Electronics (ISSN 2079-9292)

https://www.mdpi.com/journal/electronics/special_issues/SJ5V01V65B

This Special Issue aims to showcase innovative research that harnesses the potential of electronics and computer science to advance the preservation, understanding, and utilization of cultural heritage. We seek contributions that highlight the transformative role of technology in tackling challenges related to cultural heritage documentation, conservation, analysis, interpretation, and dissemination. The issue will provide a platform to explore interdisciplinary approaches, showcase practical applications, and foster collaboration between researchers, practitioners, and professionals in the realms of electronics, computer science, and cultural heritage.

Topics of interest include, but are not limited to:

1. Technological advancements in cultural heritage preservation;
2. Digital documentation techniques for artefacts, monuments, and sites;
3. Augmented reality (AR) and virtual reality (VR) applications for cultural heritage;
4. Data-driven approaches for cultural heritage analysis and interpretation;
5. Machine learning and computer vision for artefact recognition and classification;
6. Computational methods for historical text analysis and language processing;
7. Digital archiving and data management for cultural heritage collections;
8. Human-computer interaction (HCI) and user interfaces for cultural heritage experiences;
9. Internet of Things (IoT) applications in heritage conservation and monitoring;
10. Collaborative platforms and crowd-sourcing in cultural heritage research;
11. Ethical considerations in the application of electronics and computer science to cultural heritage;
12. Case studies showcasing successful projects and best practices.

Special issue editor

- **Dr Xenophon Zabulis**

  Research Director, Institute of Computer Science, Foundation for Research and Technology Hellas, Heraklion, Crete, Greece

  Interests: stereo and multiple-view computer vision; pose estimation and motion estimation for objects and persons; medical and industrial image analysis; applications of computer vision in interactive environments

Title: Advances in Immersive Technologies, Knowledge Representation, and AI for Human-Centred Digital Experiences

Journal: MDPI Electronics (ISSN 2079-9292)

https://www.mdpi.com/journal/electronics/special_issues/VQ93259W15

This Special Issue on Human-Centred ICT Technologies is approaching research and technological development in an interdisciplinary way. It serves as a platform for researchers, practitioners, and professionals to contribute by projecting advances in their research field to the field of Human-Computer Interaction, thus prioritizing human experiences and interactions.

The journal welcomes contributions from various disciplines, embracing the intersection of technology, design, and human factors. It provides a forum for researchers and experts to share their insights, discoveries, and innovations in a wide range of topics, including but not limited to:

1. Advances in User Interface design, development, and evaluation including new approaches for explicit and implicit interaction.
2. Human-centred web-based information systems leveraging knowledge representation, data visualization and data mining, big data analysis, and visualization.
3. Semantic Knowledge Representation and Presentation to enhance user interaction with information, user participation in information processing, and user experience.
4. X-Reality Applications (AR, VR, MR) for immersive human-centred experiences, in vocational education and training.
5. Human motion and 3D digitization for enhancing digital experiences and supporting novel interaction metaphors.
6. Serious Games design and development to address educational, training, and societal challenges.
7. AI approaches in User Interfaces, Information Processing, and Information Visualization.

In this Special Issue, we welcome high-quality research papers, case studies, review articles, and theoretical perspectives that contribute to the advancement of the aforementioned research topics. We also encourage the submission of interdisciplinary studies that bridge the gap between technology and human experiences.

Special issue editor

- **Dr. Nikolaos Partarakis**

  Postdoctoral researcher, Institute of Computer Science, Foundation for Research and Technology Hellas, Heraklion, Crete, Greece

  Interests: eXtended Reality (XR) applications; intelligent environments; adaptive and intelligent distributed user interfaces; design for all and universal access; universally accessible platforms and online communities; serious games; 3D reconstruction technologies; automation; micro-controllers and robotics

2.4 Planned special issue

Title: Handicraft production processes simulation, training and product design

Journal: MDPI Heritage (ISSN 2571-9408)

Crafts are part of Cultural Heritage (CH) and involve tangible craft artefacts and products, traditional materials and tools, and handicraft processes. These processes are considered integral parts of the intangible nature of crafts and combine knowledge of materials, dexterity, know-how, and skilled use of tools. crafts are part of the history and economic life of areas and communities. Their nature, diversity, excellence and significance contribute to the sustainability and flourishing of local communities.

This special issue regards the understanding of the making process, as the purposeful interaction of the mind with the world through senses and actions. Knowledge representation is essential for reenactable preservation, but also for understanding human creative tasks, enabling us to provide more specific tools for its aid.

Contributions to this special issue may contain multidisciplinary research on:

- Advanced digitisation of handicraft production processes
- Object and activity recognition
- Semantic representation of handicraft production processes
- Mechanical models of handicraft production and simulation
- Handicraft production simulation
- AI-based product design
- Haptics for multimodal, immersive handicraft training
- Visualization of handicraft products and their production
- Human factors in immersive handicraft training

Special issue editors

- **Dr Xenophon Zabulis**

  Research Director, Institute of Computer Science, Foundation for Research and Technology Hellas, Heraklion, Crete, Greece

  Interests: stereo and multiple-view computer vision; pose estimation and motion estimation for objects and persons; medical and industrial image analysis; applications of computer vision in interactive environments.

- **Dr. Nikolaos Partarakis**

  Postdoctoral researcher, Institute of Computer Science, Foundation for Research and Technology Hellas, Heraklion, Crete, Greece

Interests: eXtended Reality (XR) applications; intelligent environments; adaptive and intelligent distributed user interfaces; design for all and universal access; universally accessible platforms and online communities; serious games; 3D reconstruction technologies; automation; micro-controllers and robotics.

- **Dr Carlo Meghini**

  Consiglio Nazionale delle Ricerche, Istituto di Scienza e Tecnologie dell'Informazione "A.Faedo", **Interests:** information systems

- **Prof. Dr. Arnaud Dubois**

  Conservatoire National des Arts et Métiers, Paris and Ecole Nationale Supérieure d'Art, Limoges, France

  Interests: anthropology of colour; relations between aesthetic technology and society; the link between art craft and industry.

- **Prof. Dr Christian Holz**

  Interests: Technical human-computer interaction, Augmented Reality/Virtual Reality, and biomedical engineering, involving wearable sensing, computational interaction, and predictive mobile health.

- **Dr. Sotiris Manitsaris**

  MINES ParisTech, PSL Université Paris, Paris, France

  Interests: machine/deep learning; action and gesture recognition; data analysis and modelling; human-centred AI

2.5 Publication planning

We plan to publish all aspects of our work in Craeft. Currently, the following publications are planned.

- **Title: From Archetypal Modelling of Actions to Craft Specific Actions Simulators**

  Co-authoring organisations: FORTH, KHORA, CETEM, CNAM, PIOP, CERFAV

  Abstract: In this paper, we present the concept of archetypal simulators that computationally, geometrically, and mechanically model Elementary Actions (knots, additive/subtractive, free-form transforms). Their implementation is based on existing models from the domain of mechanical systems design and generative AI methods. Based on these simulators, we propose the development of a software method that refines those archetypal simulators to craft-specific simulators. The method uses generative AI (GANs) for this refinement, trained on craft representations, third-party knowledge sources and craft-specific data.

- **Title: Craft Simulation and Immersive Craft Training**

  Co-authoring organisations: FORTH and ARMINES

  Abstract: In this paper, we propose a method for the simulation of craft actions to empower the training of craft practitioners via simulation exercises, a Web-based UI for the educational material, and an immersive 3D GUI interfacing with haptic, VR, and AR devices to achieve realistic, hands-on training.

- **Title: Haptic Devices for Training, simulation, and Design**

  Co-authoring organisations: ETH and FORTH

  Abstract: In this paper, we present the Implementation of interactive haptic apparatuses and systems that simulate the tactile sensations of tool use during craft actions, including the tactile examination ("feeling") of surfaces, especially during manipulation. These systems are used to enable practice and increase exercisability for the development of dexterous actuation skills, in the domain of traditional crafts training.

- **Title: Very-high-resolution 2D and 2½D surface scanning**

  Co-authoring organisations: FORTH

  Abstract: The surface of heritage objects holds important clues about their creation. In this paper, we present an advanced, non-contact surface scanner that acquires 2D and 2½D (anaglyph) digitisations in very high resolution (>1Gpix/cm2). The implementation creates 2½D scanning by extending prior work on 2D digitisation with photogrammetric reconstruction applied to lateral surfaces.

- **Title: Digitisation of transparent, translucent, and shiny materials**

  Co-authoring organisations: FORTH

  Abstract: This paper presents a novel, non-contact 3D reconstruction method, based on polarised and structured illumination. The method uses AR to guide the operator and simplify the 3D reconstruction process.

- **Title: Scene and activity monitoring**

  Co-authoring organisations: ARMINES, FORTH

  Abstract: This paper proposes an approach towards scene and activity monitoring that employs body and hand tracking, object recognition, haptic interaction, and tracking of material deformation. The implementation will utilise craft-specific simulators to generate mental imagery that is compared to the craft digitisations to validate the monitoring results.

- **Title: Craft Understanding, Education, Training, and Preservation for Posterity and Prosperity**

Co-authoring organisations: All partners

Abstract: This paper presents our approach towards deepening our understanding of the making activities that include "care, judgement, and dexterity" standing on Anthropology, Knowledge Representation, Cognitive Science, Art History, Advanced Digitisation, Audio-visual & Haptic Immersivity, and Computational Intelligence to cover the multifaceted expression of crafts as living and developing heritage, as a sustainable source of income, and as the expression of the mind through imagery, technology, and sedimented knowledge.

- **Title: Ethnographic Strategies for Craft Understanding**

  Co-authoring organisations: CNAM, FORTH, CETEM, PIOP, CERFAV

  Abstract: This paper presents interdisciplinary and iterative strategies for ethnographic methods to represent craftwork and capture sensorimotor, intellectual, and mechanical elements of crafting activities. These strategies have been formulated with the participation of experienced craft practitioners & instructors, as the main source of knowledge. The development of ethnographic strategies is guided by anthropologists, philosophers, and information scientists.

- **Title: Action and Affordance Modelling for Traditional Crafts**

  Co-authoring organisations: FORTH, CNR, CETEM, CNAM, PIOP, CERFAV

  Abstract: This paper presents a novel approach towards action and affordances modelling based on the digitisation of practitioner motion, haptic interaction, and material transformations in the context of traditional crafts. Modelled actions can be used for the instantiation of action simulators and specify affordances, conditions, and parameters. The results of this research work contain a training dataset that associates semantic, geometric and mechanic representations of actions and plans with multimodal recordings of their execution and effect will be compiled.

- **Title: A semantic model and authoring platform for Maker-Material Negotiation**

  Co-authoring organisations: CNR, FORTH, CETEM, CNAM, PIOP, CERFAV

  Abstract: This paper presents the design and implementation of an ontology for the negotiation of the maker with materials in traditional crafts. The ontology models basic concepts such as tools, materials, workspaces, process schemas, and contextualisation narratives and advanced concepts such as action plans, material effects of actions, action hypotheses, conditions, parameters and perceptual stimuli. The model is used as the backbone ontology of an authoring platform for crafts representation, presentation and simulation.

- **Title: An Authoring Environment for Multimodal Craft Training**

  Co-authoring organisations: FORTH, ETH, CETEM, PIOP, CERFAV

Abstract: In this paper, we present an authoring environment for multimodal craft training with 3D and immersive rendering components powered by a game engine rendering pipeline and rich authoring components powered through an ontology model and platform for traditional crafts representation. The backbone of the environment builds on generic and craft-specific simulations of crafting procedures, action plans and schemas.

- **Title: Toys and Games for Informal Craft Education**

  Co-authoring organisations: FORTH and KHORA

  Abstract: In this paper, we present the design and prototype implementation of creative digital games and physical toys for craft introduction, recreation, and development of crafting capacities. These are based on a simplification of traditional crafts and techniques and have both digital and physical components.

- **Title: Novel Approaches towards the Education and Training of Traditional Craft Apprentices**

  Co-authoring organisations: CERFAV FORTH, ARMINES, KHORA, CETEM, CNAM, PIOP

  Abstract: In this paper, we present a novel approach toward the education and training of craft apprenticed with the support of intuitive digital aids, telecommunications, craft-specific simulators, advanced immersive, and high-end digitisation, to widen access, economise learning, increase exercisability, and relax remoteness constraints in craft learning.

- **Title: Creative Design to Empower the Preservation of Traditional Crafts**

  Co-authoring organisations: CNAM, FORTH, ARMINES, KHORA, CETEM, CERFAV, PIOP

  Abstract:

- **Title: Valorisation Strategies and ICT Solution in the Service of Traditional Craftsmanship**

  Co-authoring organisations: PIOP, FORTH, ARMINES, KHORA, CETEM, CNAM, CERFAV, MDE

  Abstract: In this paper, we propose several dimensions towards the valorisation of traditional craft products. These include binding traditional craft products with digital content, certificates, and applications available online, using their appearance or embedding visual codes in their design. Such linked content can be of any type the producer of craftwork may wish to attach to an individual item or a collection of items such as online services and games, offers, combinations with other products and multimodal narratives that serve contextualization and personalization of objects. Additionally, supporting certification of validation and authentication purchase, creator signage, collective/certification marks, composition, origin, production method and linkage to “green” certificates of production in general and material provenance, in particular, may support this objective. Finally, Combine them with proposed serious & creative digital games and physical toys for all ages.

- **Title: Community-based Innovation in Traditional Crafts**

  Co-authoring organisations: MDE, FORTH, ARMINES, KHORA, CETEM, CNAM, PIOP, CERFAV

  Abstract: In this paper, we study how community-based innovation in traditional crafts is a collaborative process of creating and improving traditional crafts through the active participation of members of a community. This approach to innovation recognizes the importance of local knowledge and expertise in the preservation and development of traditional crafts. In this process, artisans and craftspeople work together with members of their community, including designers, researchers, and other stakeholders, to identify opportunities for innovation and improvement in traditional crafts. They may incorporate new materials, techniques, or designs into their work, while still maintaining the unique cultural and historical significance of the craft. Community-based innovation in traditional crafts can also involve the use of digital technologies and other modern tools to enhance the production process, expand markets, and connect artisans with buyers and consumers. By working together and sharing knowledge and resources, communities can revitalize and sustain their traditional crafts while also generating economic opportunities and promoting cultural heritage.

3 Synergies and collaborations

In this section, we present the synergies established by Craeft that will have an impact on the dissemination activities of the project. Each synergy is led by a Craeft partner. For each synergy, the services provided to others and the services provided to Craeft are specified.

3.1 Project cluster

Research Programme Administrators Rodrigo Martin Galan and Angel M. Fuentes from the European Research Executive Agency (REA), Unit C1 of the European Commission, launched an introductory activity for the "sister" projects that include Craeft, HEPHAESTUS, Colour4CRAFTS, and Tracks4Crafts. Following the introductory email and exchange, FORTH took the lead in organising two online meetings between project coordinators and the Research Programme Administrators in April 2023 and February 2024. During these meetings, consortia introduced their projects and discussed potential clustering activities to enhance dissemination, result sharing, and policy recommendations.

Subsequently, MDE, the leader of the communication and dissemination work package, took over the responsibility for fostering interaction and collaboration among the cluster projects. Starting in June 2024, regular monthly meetings were established to maintain communication and encourage active collaboration.

CRAFTOUR Initiative

These efforts culminated in the creation of the joint CRAFTOUR Initiative, coordinated by MDE and FORTH. The initiative was officially launched on 25 October 2024 at the Salon International du Patrimoine Culturel in Paris, followed by a partner meeting. The conference agenda can be seen here, while the highlights from the Conference can be accessed here.

Following the launch of the initiative, the CRAFTOUR members met online on 17 January 2025 for a working meeting to finalise key dates and venues for upcoming activities:

- 25 November 2025: A Round Table on Policy Recommendations will be held as a joint onsite event in Brussels. Participation is a contractual obligation for all projects.
- 29-30 January 2026: The CRAFTOUR Conference will take place, featuring published proceedings:
  29 January (Evening): Invited talks and a round table discussion.
  30 January (All Day): Peer-reviewed scientific papers, with open submissions and paid registrations

In the meeting, the partners also agreed on the next steps, which include:

- Organising the Bornholm meeting.
- Launching working group sessions based on a defined methodology.
- Completing and submitting the Springer Humanities Proceedings document.
- Communicating details for the policy round table and conference.

Preparations for the Bornholm meeting are ongoing, alongside updates on the structure and activities of the working groups. The document "CRAFTOUR PARTNERS AND WORKING GROUPS" has been updated to reflect these developments. Each working group will draft policy recommendations in their respective areas for the draft and rehearsal presentation at the Bornholm meeting where all the partners will gather onsite.

Working Groups

The working groups and their focuses are as follows:

- **Understanding & Valorisation / Documentation & Archiving**
- **Authenticity & Safeguarding**
- **Education & Transmission**
- **Business Models**

Each group comprises members from all projects, along with topic-specific experts. Leaders will be appointed for each group to guide the drafting process, with initial drafts due at the Bornholm meeting.

Expansion of the CRAFTOUR Initiative

In addition to the sister projects, the CRAFTOUR Initiative has welcomed the MOSAIC and Culturality projects, as advised by Research Programme Administrator Rodrigo Martin Galan.

The initiative has also established a distinct visual identity, reflecting its vision to sustain activities beyond the current project implementation and funding phase.

3.2 EC-funded projects

3.2.1 MOSAIC

This synergy is brought by MDE as a member of the World Craft Council Europe which participates in this project.

Project Information

- 18 partners
- Mastering job-oriented Skills in Arts & crafts thanks to Inclusive Centres of vocational excellence
- https://mosaiceuproject.eu/

Abstract

The MOSAIC project will focus on three areas within the Arts & Crafts sector: Traditional & rare crafts, Precious metals & jewellery, Furniture & Wood and their relation with Design, Arts & Industry. The platform of transnational cooperation that will be set up within this project will bring together relevant EU and non-EU partners who want to foster Excellence in VET within the Arts & Crafts sector, ensuring high-quality skills that lead to quality employment and career-long opportunities, which meet the needs

of an innovative, inclusive and sustainable economy. The platform will also make it possible to break down the barriers and bring together certain universes, which still too often function in a silo.

Objectives

- Increase and improve collaboration between companies and VET centres, to reach a state of cross-fertilisation
- Improve VET provision by delivering new training modules
- Foster internationalisation and transnational strategies in response to the evolutions of vet and society
- Provide forward-looking VET through the use of digital methodologies and tools

Ongoing synergy with Craeft

The collaboration between the MOSAIC project and Craeft merges their strengths to draft comprehensive policy recommendations that can advance training and transmission in the Arts & Crafts sector. With MOSAIC's focus on excellence in VET across traditional crafts, jewelry, and furniture, and Craeft's dedication to preserving European craft heritage, the partnership fosters innovative strategies for skill transmission and education.

MOSAIC leads the Education & Transmission Working Group, leveraging its vocational teaching expertise to design forward-looking policies that bridge gaps between VET, industry, and traditional crafts. Key areas of focus include integrating digital tools, fostering cross-disciplinary collaboration, and promoting international strategies to address evolving societal and economic needs.

3.2.2 CHARTER

This collaboration is brought by MDE through their craft practitioner network.

Project Information

- https://charter-alliance.eu/
- CHARTER -Cultural Heritage Actions to Refine Training, Education and Roles
- Erasmus+ started in January 2021
- Duration: four years.
- 28 full partners and 19 affiliates
- 5 fields of analysis: safeguarding and preservation; crafts and traditional knowledge; dissemination and communication; knowledge; planning and management.

Abstract

CHARTER, the European Cultural Heritage Skills Alliance, brings together and represents the whole range of the cultural heritage sector in Europe. We strive towards making apparent the value of cultural heritage and creating a resilient and responsive sector. We work towards creating a lasting, comprehensive strategy that will guarantee Europe has the necessary cultural heritage skills to support sustainable societies and economies.

Objectives

With a budget of close to 4.000.000 euros, CHARTER aims to:

- Clarify occupational roles and activities as well as create tools for an integrated, responsive education system.
- Identify curricula and learning outcomes to equip education and training to respond to current and future needs for cultural heritage skills.
- Structure cultural heritage as an economically active sector.

The Alliance covers 5 fields of analysis to identify core and transversal competencies, including digital, technological and green adaptation skills. Safeguarding and preservation; crafts and traditional knowledge; dissemination and communication; knowledge; planning and management.

Relation with Craeft

The collaboration will focus on the preservation of crafting techniques, as well as the preservation and reuse of designs.

3.2.3 ARACHNE

This collaboration is brought by PIOP as a beneficiary of this project.

Project Information

- Advocating the Role of Silk Art and Cultural Heritage at National and European Scale
- 14 partners
- Horizon Europe RIA
- https://cordis.europa.eu/project/id/101095188

Abstract

The overarching goal of ARACHNE is to create a wide and well-connected Silk Innovation Ecosystem that, starting from the historical path followed by Marco Polo in his travels to the East, also includes the routes of production and commercialization of silk in Europe in the following centuries. An innovation ecosystem is an interconnected network of quadruple helix stakeholders, including academia, industry and different levels of the public sector and civil society. This multi-level approach applies a systemic and bottom-up approach to creating research, innovation and knowledge. Silk Innovation Ecosystem includes every stakeholder and innovator in the cultural silk value chain even if not participating directly in the project activities. The production and, more in general, the past and present development of the silk sector in the ARACNE Consortium countries represent the common thread for the future “European Silk Route” as a cultural itinerary across Europe, to boost the European values concerning the silk arts and CH for the benefit, prosperity, peace of our societies. To this aim, the project will explore the CCIs’ capacities to create a cultural and artistic niche market where silk produced within EU boundaries will be valued as a distinct immaterial asset; on the other hand, the ambition is to contribute to stopping the loss of technical, traditional and cultural know-how and skills that accompanied the decline of this fibre production and

that is detrimental exactly to those CCIs which might be active in fashion, art, design and product communication.

Objectives

- Enhancement of knowledge and memory for the renaissance of a European Silk Innovation Ecosystem (WP1)
- Co-creation of human-centred and place-specific creative silk-based solutions leveraging digital and cutting-edge technologies (WP2)
- Implementation of innovative strategies and business, governance and financing models for the involved CCIs organisations and SMEs, building on previous research (WP3)
- Support the establishment of a cultural European Silk Route, based on the tangible and intangible silk cultural heritage and landscapes (WP4)
- Raise awareness of ARACHNE results and impacts among different stakeholders of the territories and CCIs of the silk sector and raise the expectation for the constitution of a European Silk Route in support of the European silk CH and silk CCIs (WP5)
- Enhance the European cultural identity and strengthen European competitiveness for a more resilient post-crisis society (ALL WPs)
- Contribution to the European Green Deal, the New European Bauhaus and the Sustainable Development Goals (SDGs) (ALL WPs)

Relation with Craeft

Through PIOP, Craeft will provide a technical way to the representation of historical narrative and textile scanning technologies. Craeft will gain from the enrichment of its narrative directory and will promote its semantic authoring platform for the representation of historical narratives and crafting processes.

3.2.4 Crafting 50 & Beyond

This collaboration is brought by MDE as a beneficiary of this project.

Project Information

- Digital enabler for ageing crafts people's business
- 7 partners
- Erasmus+
- https://madineurope.eu/en/crafting-50-beyond/

Abstract

The project "Crafting 50 & Beyond" aims at improving the entrepreneurial skills of European professional craftspeople, aged 50 years or more and accompanying them in the digital transition. For many of them, the economic crisis of 2008-2014 and the following Covid-related ones, have represented a loss of income and unemployment. This is particularly true for European areas with less economic and social preparation to face the collapse. Traditional handicrafts are human-centred professions, rooted in European territories as part of the local culture and economy, including the circular economy. It is necessary to keep crafts

professions alive and preserve access to artisanal products. And it is urgent to increase the revenues of craftsmen to make this possible. In many cases, crafts businesses are also an opportunity to involve people with disabilities by providing them with social integration.

Objectives

Support the solution to the following problems:

- Products are created in small quantities as opposed to industrial products that can be made in series. The economy of scale is not possible for artisans, which makes their products less competitive.
- Traditional crafts production works more locally where products are recognised and valorised or through specific resellers, aware of the products.
- Professionals are ageing and have not integrated new ways of promoting their skills and their work to ensure their revenues.
- The sector is fragmented into micro businesses, often based in rural areas, and not connected with the global market.

Considering the characteristics of the craft sector, Crafting 50 & Beyond will work to understand the competencies that craftsmen from different partner countries have and the activities they need to develop to make these activities more creative and digital. Taking advantage of the economic restructuring that the pandemic requires, the entire craft area will be worked on, understanding the cultural and legislative contexts of each country for these activities, and working directly with craftsmen to endow them with the business and technical skills needed to boost their business. At least 42 craftsmen will be involved in the project activities, following a co-construction methodology and 18 craftsmen will have the opportunity to participate in the blended mobility of learners. 230 stakeholders will be involved in multiplier events directly.

Relation with Craeft

Crafting 50 & Beyond will provide requirements and aspirations for digital tools and engage in fruitful discussions with Craeft on relevant topics. Craeft will provide digital training tools and materials to Crafting 50 & beyond. Moreover, Craeft through its partner MDE will provide Crafting 50 & Beyond reports and insights obtained through their participation in the 3D4ELDERLY – “3D printing to create innovative learning pathways for caregivers and staff members dealing with people with Alzheimer's and elderly people with dementia” project (project number: 2020-1-LT01-KA204-077896) is a project supported by the European Commission through the Erasmus+ programme, Key Action 2- Strategic partnership for adult education.

3.2.5 CULTURALITY

This synergy is brought by MDE as advised by the Research Programme Administrator Rodrigo Martin Galan.

Project Information

- Cultural heritage in rural remote areas for creative tourism and sustainability.
- 13 partners
- Horizon Europe RIA
- https://culturalityproject.eu/

Abstract

The CULTURALITY project aims to promote cultural and creative tourism activities to aid the sustainable development of rural areas, encouraging job creation and population settlement. By researching the cultural heritage, including artisan material culture (techniques, materials, patterns, and decorative elements) and intangible culture (music, oral knowledge, and culinary traditions), the project will foster non-seasonal tourism. It will cater to local communities' needs, focusing on at-risk groups like women, the elderly, and youth, involving international multidisciplinary teams specializing in digital heritage, research, communication and dissemination. The emphasis will be on constant collaboration and sharing of experiences to enhance collective knowledge and ensure optimal results.

Objectives

- Establishing a collaborative network to promote cultural tourism in rural & remote areas through crafts & skills
- Revitalising and economically developing local ecosystems through cultural tourism research activities linked to crafts
- Embracing digital tools & technologies as a key platform to enhance productivity, visibility, and impact
- Developing suitable stakeholder engagement tools & clustering actions
- Promoting knowledge exchange and contributing to capacity building & peer to peer learning of local ecosystems as agents of change

Relation with Craeft

Together with other "sister projects," CULTURALITY will play a key role in enriching the Craftour initiative through its dedication to developing innovative tools and strategies to support and ensure the sustainability of the crafts sector. With its extensive expertise in business models and the transmission of craft skills, CULTURALITY will contribute significantly to the Education & Transmission and Business Models working groups. This contribution will directly support the drafting of policy recommendations that aim to strengthen the crafts sector's resilience, improve cross-sector collaboration, and create sustainable frameworks for economic and cultural development.

3.2.6 MindCrafts

This collaboration is brought by MDE as a coordinator of this project.

Project Information

- Mind about crafts to build a better future
- 4 partners
- Erasmus+

Abstract

The MINDCRAFTS project employs an innovative non-formal learning methodology to engage young people (ages 15–25) and raise awareness of traditional building crafts and their significance in preserving built heritage and fostering sustainable practices. By linking crafts to cultural heritage, local economies, and environmental sustainability, the project inspires young generations to consider these professions as viable and meaningful career paths. MINDCRAFTS integrates hands-on experiences, hybrid educational modules, and heutagogical approaches to encourage curiosity and active participation, fostering a deeper connection to cultural roots and local materials. With a focus on transgenerational dialogue, the project brings together craftspeople, architects, and sustainability experts to share knowledge and provide guidance.

Objectives

- Raise awareness: Highlight the value of traditional crafts in heritage, sustainability, and local economies while addressing risks from globalization.
- E-Learning: Use hybrid modules with hands-on learning and digital tools to inspire curiosity and active participation.
- Cross-sector collaboration: Build connections between crafts, architecture, and related fields for heritage preservation and sustainable practices.

Relation with Craeft

Since MDE is the coordinator of the MindCrafts project, a significant aspect of the initiative involves documenting traditional building craft techniques. To support this effort, MDE has introduced the Ethnographic Protocol as an innovative approach to documenting crafts. This protocol offers a structured and detailed methodology to capture the knowledge, skills, and processes of traditional craftspeople. As part of the project, MindCrafts partners, alongside craft professionals, will test this methodology in real-world settings. Their feedback will play a crucial role in refining the protocol, ensuring it meets the needs of practitioners and enhances the documentation process. This collaborative effort not only creates space for the improvement of the Ethnographic Protocol but also strengthens the integration of Craeft project outcomes into the broader MindCrafts initiative, fostering greater impact and adaptability.

3.3 Nationally funded projects

3.3.1 PROTEAS

Brought by FORTH who is the coordinator of this project.

Project Information

- http://proteas-project.eu
- 6 Greek partners

Abstract

The project introduces the public to the work of the art conservator and, through this, to the materials and techniques employed, the historical context of a work of art as well as the message and the expression of the creator. Establishing an open communication channel between curators, conservators and researchers is important for implementing this idea. The project is coordinated by ISL and the HCI Laboratory is responsible for the image registration algorithm and tool.

Relation with Craeft

Craeft and Proteas have α common scientific goal on Very-high-resolution 2D surfaces, whereas Craeft is also exploring the 2½D (anaglyph) digitisations in very high resolution.

3.3.2 Branding Heritage - digitization of contemporary art inspired by Greek antiquities

Brought by FORTH who is the coordinator of this project.

Abstract

Digitization of contemporary art to create unique experiences for each visitor by i) enhancing collections with additional information; ii) enabling promotion and dissemination; iii) enhancing accessibility; and iv) improving the visit and converting it from a simple visit to a rich media experience suitable for education, interaction and entertainment.

Relation with Craeft

FORTH digitised 2D and 3D digitisation artefacts. From this project, we obtained insight into the presentation of textiles in virtual museums and linked them with archaeological artefacts from which their designs were inspired.

4 Participation and organization of events, workshops, and conferences

What: All consortium partners, and especially the ones that partake in research, have the responsibility to take part in conferences and events, and organise workshops, to present or promote Craeft.

Objectives: Presentations, workshops and events are opportunities to achieve a deeper understanding of the project and instigate action. They are especially targeted at expert audiences, such as museums and HC institutes, academics and researchers and the ICT community.

How: An online collaborative spreadsheet is used to keep track of upcoming events and opportunities for communications. This is a living document, to which all partners contribute events and opportunities that are relevant to Craeft. Partners need to indicate whether they are attending these events and describe the type of activity that they are planning to perform.

Afterwards, partners need to keep track of events they attended or organised where dissemination activities about Craeft have taken place. This should be entered in the Log of Communication & Dissemination activities that will be shared with all partners via monthly email reminders. The format of this log is provided in Appendix A.2.

Appendix A

A.1 Inventory of academic journals

The inventory of academic journals is a living document in Google Sheets that is updated continuously by all partners. Concerning dissemination, the following journals are of interest.

Journal	URL
ACM Journal on Computing and Cultural Heritage	https://jocch.acm.org/
Heritage, MDPI	https://www.mdpi.com/journal/heritage
Electronics, MDPI	https://www.mdpi.com/journal/electronics
IEEE Access	https://ieeeaccess.ieee.org/
Continuum - Journal of Media & Cultural Studies	https://www.tandfonline.com/toc/ccon20/current
Curator - The museum journal	https://curatorjournal.org/
Heritage	https://www.mdpi.com/journal/heritage
Heritage & Society	https://www.tandfonline.com/toc/yhso20/current
International Journal of Cultural Policy	https://www.tandfonline.com/toc/gcul20/current
International Journal of Heritage Studies	https://www.tandfonline.com/toc/rjhs20/current
International Journal of Intangible Heritage	http://www.ijih.org/
Journal of Cultural Heritage	https://www.journals.elsevier.com/journal-of-cultural-heritage
Journal of Cultural Heritage Management and Sustainable Development	https://www.emeraldinsight.com/journal/jchmsd

A.2 Log of dissemination activities

Partners will keep track of:

- Organisation or participation in an event/conference/workshop regarding Craeft or as a representative of Craeft
- Publication of a scientific publication regarding Craeft
- Distribution of the Craeft Communication Kit
- Any other activity in which they communicate about Craeft

All partners will fill in an online spreadsheet regarding their dissemination activities following the form presented below. The spreadsheet will be updated every three months, before submitting the quarterly reports. So in this way, we have the same deadlines for both communication and dissemination activities

Partner short name: CNR						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
02.04.2023.	Workshop	Carlo Meghini	Workshop Text2Story 2023	Dublin	https://text2story23.inesctec.pt/	CRAEFT project will be introduced and described as a context in which the CNR Narrative Ontology will be used and extended for the semantic representation of traditional craft processes and their technological, social, and historical context as narratives.
Partner short name: MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**

This project has received funding from the European Commission, under the Horizon Europe research and innovation programme, Grant Agreement No 101094349.
http://www.craeft.eu/

05.05.2023.	Meeting	Madina Benvenuti	Online meeting with DANIEL CARPENTER	Online	N/A	The meeting was focused on understanding Heritage Craft's methodology for increasing awareness of the Craeft project to the Heritage Crafts community, mapping endangered crafts (Red List) and finding synergies.
Partner short name: MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
25.05.2023.	Webinar	Madina Benvenuti	FRH Webinar - "European Year of Skills: the future of endangered heritage crafts"	Online	https://www.youtube.com/watch?v=aGX31k_G8bg&t=2725s	Daniel Carpenter and Mary Lewis from the Heritage Crafts Association discussed the UK's "Red List of Endangered Crafts," while Madina Benvenuti introduced the CRAEFT project. Together, they explored CRAEFT's contribution to addressing the issues highlighted by the "Red List."
Partner short name: FORTH and all other partners						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
13.06.2023.	Journal article	Xenophon Zabulis, et al	A Roadmap for Craft Understanding, Education, Training, and Preservation	Heritage. 2023; 6(7):5305-5328. MDPI HERITAGE	https://www.mdpi.com/2571-9408/6/7/280	Proposing a systematic roadmap for craft preservation and evaluation, this article aims to enhance understanding and design tools for documentation, education, and training while stimulating practitioner income diversification.
Partner short name: MDE						

Date	Action type	Disseminator(s)	Event/publication name	Location	Link	Short description
22.06.2023.	Information session	Madina Benvenuti	Info session with the EAC D1 unit of the European Commission	Online	CHARTER	MDE had the opportunity to participate in an Info session with the EAC D1 unit of the European Commission, alongside the EAC D2 unit and EACEA. During the meeting, MDE discussed its activities, including the Creaft project. Following the meeting, the Craeft consortium was advised to create synergies with the CHARTER project.
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
05.10.2023.	Journal article	Partarakis N. and Zabulis X.	Safeguarding Traditional Crafts of Europe	Encyclopedia 2023, 3(4), 1244-1261.	https://www.mdpi.com/2673-8392/3/4/90	This entry addresses the challenge of safeguarding crafts in Europe, defined as the systematic process of understanding, preserving, and promoting them according to UNESCO and UN-World Tourism Organization guidelines. It explores multidisciplinary challenges from technology to ethics, law, and policy, emphasizing the importance of education and training in preserving crafts amidst declining practitioner numbers, crucial for both cultural heritage and community impact.
Partner short name: MDE						

Date	Action type	Disseminator(s)	Event/publication name	Location	Link	Short description
11.10.2023	Training event	Xenophon Zabulis	Harnessing Robotics: Applications and Challenges	Online	https://www.ekt.gr/el/events/29479	Organised by the National Documentation Centre (Greece's Nation Aggregator for Europeana).
Partner short name: Cerfav						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
02. – 05.11.2023	International Heritage Fair	David Arnaud	Paris Salon international du patrimoine 2023	Paris	https://www.patrimoineculturel.com/en/the-2023-edition/	Cerfav seized the opportunity to showcase the Craeft project to an international audience at one of the largest Heritage Fairs.
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
11.11.2023.	Ceremony	Xenophon Zabulis	Memorandum of Understanding (MoU)	FORTH Headquarters	https://www.linkedin.com/feed/update/urn:li:activity:7133398151234736129	Ceremony where The Palace Museum in Beijing and the Foundation for Research and Technology-Hellas signed the Memorandum of Understanding (MoU). Scientific dissemination to the delegation of the Palace Museum for advanced digitisation methods in Craeft.
Partner short name: MDE						

Date	Action type	Disseminator(s)	Event/publication name	Location	Link	Short description
15. – 16.11.2023.	Event	Madina Benvenuti	Pilot 2 of the Horizon project, Tracks 4 Crafts	Florence	Tracks 4 Crafts	Attended as an expert at Pilot 2 of the Horizon project. At this occasion, Madina presented Craeft by highlighting the value of creating a bridge between Artificial Intelligence and digital tools with the crafts sector to empower it.
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
16.11.2023.	Workshop	Xenophon Zabulis	Gender dimension in research on Culture/Cultural Heritage/Cultural & Creative Industries - organised by the German Federal Ministry of Education and Research	Online	https://www.eubuero.de/files/agenda_workshop_culture_231116_final.pdf	As an invited speaker, Xenophon Zabulis presented Craeft and talked about gender dimensions in traditional crafts.
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**

17.11.2023.	Training event	Xenophon Zabulis	Advanced digitisation methods in Craeft	Online	https://www.mdpi.com/2571-9408/6/7/280	As a lecturer, Xenophon Zabulis presented Craeft to scientists of The Palace Museum's, Digital and Information Department, Cultural Relics Protection, Technology Department, Cultural Relics Protection Standardization, Research Institute, Ancient Architecture Department, and Heritage Monitoring Department (about 30 people). The lecture was organised by the Ministry of Culture and Tourism of China
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
21.11.2023.	Training event	Xenophon Zabulis	Documenting and Digitizing Intangible Cultural Heritage: Issues and Good Practices	Online	https://www.ekt.gr/el/events/29706	Organised by the National Documentation Centre (Greece's Nation Aggregator for Europeana).
Partner short name: CETEM						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
04.12.2023.	Event	Communication department	Cambium	Online	https://cambium.gva.es/cetem-impulsa-la-talla-de-madera-milenaria-	Appearance of a press note about the project and woodcarving in this media sector.

					de-yecla-en-el-siglo-xxi/	
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
14.12.2023.	Journal article	Xenophon Zabulis, et al	Large Scale Optical Projection Tomography without the Use of Refractive-Index-Matching Liquid	Published in the journal, Open Access	https://doi.org/10.3390/s23249814	In this study, we demonstrate that a specific class of transparent objects can be reconstructed without the need for opaque spray coatings using Optical Projection Tomography (OPT).
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
29.12.2023.	Journal article	Partarakis N. and Zabulis X.	Applying Cognitive Load Theory to eLearning of Crafts	Published in journal, Open Access	https://www.mdpi.com/2414-4088/8/1/2	This research paper presents a comprehensive framework for applying Cognitive Load Theory to enhance craft education and training via eLearning platforms.
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**

07.01.2024.	Journal article	Partarakis N. and Zabulis X.	A Review of Immersive Technologies, Knowledge Representation, and AI for Human-Centred Digital Experiences	Published in the journal, Open Access	https://www.mdpi.com/2079-9292/13/2/269	This paper reviews the impact of digital technology evolution on diverse interaction domains including user interface design, web-based information systems, knowledge representation, X-reality applications, human motion and 3D digitization, serious games, and AI. We examine how these domains influence our interaction with digital interfaces, information processing, and immersive experiences.
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
31.01.2024.	Journal article	Partarakis N. and Zabulis X.	A low-cost close-range photogrammetric surface scanner	Frontiers in Imaging	https://www.frontiersin.org/articles/10.3389/fimag.2024.1341343/full	A low-cost, close-range photogrammetric surface scanner is proposed, made from Computer Numerical Control (CNC) components and an off-the-shelf, consumer-grade macro camera.
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
	Conference paper	G. Galanakis, X. Zabulis, and A. Argyros.	International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory	Online	https://visapp.scitevents.org/	Accepted for publication

			and Applications. VISAPP 2024			
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
07.02.2024.	Paper	G. Galanakis, X. Zabulis, and A. Argyros.	Nearest Neighbor-Based Data Denoising for Deep Metric Learning	Published on Zenodo	https://doi.org/10.5281/zenodo.10630698	This paper addresses the challenge of label noise in supervised deep metric learning, which disrupts the learning process and affects model performance. The proposed method operates online during training at the batch level, identifying and excluding noisy samples based on neighborhood analysis derived from previous training epochs. This dynamic approach improves data representation as the model learns. Evaluated across multiple datasets and loss functions, the method outperforms or matches competing techniques without requiring prior knowledge of noise contamination rates.
Partner short name: FORTH						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
22.02.2024.	Journal article	Aldo Xhako, Antonis Katzourakis, Theodoros Evdaimon,	Reviving Antiquity in the Digital Era: Digitization, Semantic Curation, and VR	Published in the journal, Open Access	https://www.mdpi.com/2073-431X/13/3/57	This paper presents a methodology for digitizing, curating, and virtually exhibiting cultural heritage artifacts, demonstrated through a collection of contemporary dresses inspired by antiquity. Using advanced 3D

		Emmanouil Zidianakis, Nikolaos Partarakis, and Xenophon Zabulis	Exhibition of Contemporary Dresses			technologies and partnering with the national aggregator in Greece, the project enables broad access, preserves cultural heritage, and offers immersive virtual experiences that redefine audience engagement.
Partner short name: CERFAV						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
29.02.2024.	Information session	David Arnaud	Visit by a delegation from the Atelier d'Art de France AAF in the presence of current president Stéphane Galerneau and french local partners	On site, at Cerfav	https://www.atelier sdart.com/	information session as part of the ICC pole
Partner short name: FORTH, MDE, CNAM and CNR						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
05.03.2024.	Online meeting	Xenophon Zabulis, Madina Benvenuti, Sotiris	Expert Meeting	Online		The Craeft consortium organised an expert meeting with advisory board members, including Elisa Guidi from Artx and the Tracks4Crafts project, and Ignasi Guardans, Co-founder and Chairman of CUMEDIAE AISBL.

		Manitsaris and Arnaud Dubois				Representing the HEPHAESTUS project, Elena Raviola and Francesca Leonardi joined the discussion in place of Marta Gasparini. The meeting aimed to disseminate the project's achievements and foster collaborative exchange among participants.

Partner short name: CETEM						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
16.04.2024.	Conference	Almudena Muñoz	Conference social innovation	Yecla, Spain	https://cetem.es/en/actualidad-cetem-en/cetem-organiza-una-exitosa-jornada-sobre-innovacion-en-el-sector-del-habitat-y-en-zonas-rurales/	Conference on innovation in the habitat sector and in rural areas, within the framework of the European project NewEcoSmart.
Partner short name: CETEM						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
24.04.2024.	Conference	Josefina Garrido	LIAISE Cost action event	Yecla, Spain	https://cetem.es/en/actualidad-cetem-en/setenta-	Meeting of an extensive network of experts sharing their knowledge in order to generate relevant approaches and synergies between

					expertos-de-27-paises-distintos-liderados-por-cetem-se-dan-cita-en-yecla-para-impulsar-estrategias-de-simbiosis-industrial/	the different actors of the quadruple helix model (academia, industry, policy makers, technology transfer institutions, end users, etc.).

Partner short name: FORTH and MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
21.05.2024.	Meeting	Xenophon Zabulis and Madina Benvenuti	Meeting with sister projects	Online		On the Craeft initiative the four sister projects met to discuss the participation and organisation of the conference in October at the Salon International du Patrimoine Culturel - SIPC 2024
Partner short name: MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**

18.06.2024.	General Assembly	Madina Benvenuti and Jelena Krivokapic	World Crafts Council Europe (WCCE) General Assembly	Barcelona ,Spain		MDE was part of the World Crafts Council Europe (WCCE) General Assembly during which it presented the Craeft project and so far achivments/results. The general assamply was attended by 38 member organisations. List of the members: https://wcc-europe.org/our-members/
Partner short name: MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
25/06/2024 and 22/07/2024	Meeting	Xenophon Zabulis, Jelena Krivokapic and Madina Benvenuti	Meeting with sister projects	Online		Continuing the work on the Conference as well as the follow-up project/initiative. The consortium was enlarged by the two new partners: CULTURALITY and MOSAIC as advised by the EU Commission.
Partner short name: FORTH, KHORA and MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
17/07/2024	Meeting	Xenophon Zabulis, Peiman Fallahian Sichani, Madina Benvenuti and Jelena Krivokapic	Meeting with Fab Lab Barcelona	Online		The main topic of the meeting is the exchange on how technology is applied in supporting crafts with a special focus on designing tools, a design studio that is being developed by Khora. The meeting was attended by Fab Lab Barcelona team: Jessica Carmen Guy and Olga Trevisan

Partner short name: FORTH and CNR						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
18/07/2024	Journal article	Xenophon Zabulis and Nikolaos Partarakis	Multimodal Dictionaries for Traditional Craft Education	Published in the journal, Open Access	https://doi.org/10.3390/mti8070063	We address the problem of systematizing the authoring of digital dictionaries for craft education from ethnographic studies and recordings.
Partner short name: MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
22/08/2024	Meeting	Madina Benvenuti and Jelena Krivokapic	Meeting with Kerstin Rice from the Arch organisation	Online		Continuing the collaboration and work on the "Heritage CRAFTS/Red List of Endangered Crafts" and how can Craeft results contribute to this topic.
Partner short name: MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
More than once	Meeting	Madina Benvenuti and Jelena Krivokapic	Meeting with Mindcrafts project partners	Online		As the leader of a small scale Erasmus+ KA2 project - Mindcrafts MDE introduced the Ethnographic Protocol to the project partners (La Table Ronde de L'Architecture, Confartiganato Udine and Centro Edile per la Formazione e la Sicurezza) and advised the consortium to use the ego-centric recording

						and video elicitation in the documentation of crafts inside the Mindcrafts project.
Partner short name: FORTH, CNR and KHORA						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
02/09/2024	Journal article	Xenophon Zabulis, Nikolaos Partarakis, Ioanna Demeridou, Valentina Bartalesi, Nicolò Pratelli, Carlo Meghini, Nikolaos Nikolaou and Peiman Fallahian	Modelling and simulation of traditional craft actions	Published in the journal, Open Access	https://www.mdpi.com/2076-3417/14/17/7750	The problem of modelling and simulating actions found in traditional craft processes is addressed, to support craft training. A taxonomy of fundamental craft actions is proposed and modelled. A Computer-Aided engineering approach based on the Finite Element Method to create archetypal simulators for these fundamental actions is presented, identifying the relevant material properties and mechanical models for each. The approach is validated by developing archetypal simulators and specialising them in craft-specific actions. The simulated actions are rendered in 3D to create visual demonstrations and can be integrated into game engines for training applications.

Partner short name: MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**

16/09/2024	Meeting	Jelena Krivokapic	Arch: Information Session - Modern Technology protecting of rare crafts heritage	Online		MDE, represented by Jelena, participated to the discussion session in which she presented the technological aspect of the Craeft. Its main focus was the Ethnographic protocol and its further implementation across various pilots.
Partner short name: MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
18/09/2024	Conference	Jan Brems	URBAN LUNCH Conference	Brussels, Belgium	https://www.mdpi.com/2076-3417/14/17/7750	Presentation: https://www.youtube.com/watch?v=fGQcJiqL00U
Partner short name: FORTH and CNR						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
10/10/2024	Meeting	Valentina Bartalesi, Xenophon Zabulis	Meeting with ECHOES and AUTOMATA projects	Online		Starting a collaboration between ECHOES - AUTOMATA - Craeft
Partner short name: FORTH and MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
14/10/2024	Meeting	Xenophon Zabulis and	Meeting with Sister projects,	Online		Meeting prior to the Conference. Final tunning in with the Conference pannelists and their presentations.

		Madina Benvenuti	CRAFTOUR Initiative			
Partner short name: CNR						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
22/10/2024	Journal article	Valentina Bartalesi, Emanuele Lenzi, Claudio De Martino	Using large language models to create narrative events	Published in the PeerJ Computer Science	https://doi.org/10.7717/peerj-cs.2242	This article explores the possibility of integrating Large Language Models (LLMs) into a workflow that, exploiting the Semantic Web technologies, transforms raw textual data gathered by scientific communities into narratives. In particular, we focus on using LLMs to automatically create narrative events, maintaining the reliability of the generated texts.
Partner short name: MDE, FORTH, CERFAV and support of the other partners						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
24 and 25/10/2024	Conference at the Crafts Fair	Madina Benvenuti, Xenophon Zabulis and David Arnaud	CRAFTOUR Conference	Salon International du Patrimoine Culturel, Paris, France	https://doi.org/10.7717/peerj-cs.2242	The launch of the CRAFTOUR Initiative in the shape of the CRAFTOUR Conference. The detailed Conference agenda is available here while the Conference highlights can be accessed here
Partner short name: MDE						

Date	Action type	Disseminator(s)	Event/publication name	Location	Link	Short description
09/12/2024	Meeting	Regina Garcia Nunez	European Heritage Alliance 3.3 - Autumn Meeting	Brussels, Belgium		Presentation of the CRAFTOUR initiative with the emphasis that it is possible to join the initiative. Craeft was presented as the key project from where this initiative began.
Partner short name: MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**
10-13/12/2024	Meeting	Madina Benvenuti	Interregional Meeting (Cuba-European Union) for the Sustainability of the Santa Clara School for Training in the Arts and Crafts of the Restoration of Cuba and the Caribbean	Havana, Cuba		The event was organised within the framework of the Transcultura Program: Integrating Cuba, the Caribbean and the European Union through Culture and Creativity, funded by the European Union and implemented by the UNESCO Regional Office in Havana, with the coordination and support of the Office of the Historian of the City of Havana, as one of the national counterparts. Madina had a chance to present the Craeft project, as well as the CRAFTOUR Initiative in front of the key European heritage stakeholders, European Comission representatives and Latine America and Caribbean UNESCO representatives.
Partner short name: FORTH and MDE						
Date	**Action type**	**Disseminator(s)**	**Event/publication name**	**Location**	**Link**	**Short description**

17/01/2025	Meeting	Xenophon Zabulis and Madina Benvenuti	Meeting with the sister projects, CRAFTOUR Initiative partners	Online		Preparation of the 2025 activities: Policy Round Table and Scientific Conference. Agenda and Notes from the meeting are available here.

*The last entry to this table was made on the 22nd of January 2025.