

HORIZON
2020

SILKNOW. Silk heritage in the Knowledge Society: from punched cards to big data, deep learning and visual / tangible simulations

Risultati

Informazioni relative al progetto

SILKNOW

ID dell'accordo di sovvenzione: 769504

[Sito web del progetto](#)

DOI

[10.3030/769504](https://doi.org/10.3030/769504)

Progetto chiuso

Data della firma CE

9 Aprile 2018

Data di avvio

1 Aprile 2018

Data di completamento

31 Agosto 2021

Finanziato da

SOCIETAL CHALLENGES - Europe In A Changing World - Inclusive, Innovative And Reflective Societies

Costo totale

€ 2 390 060,50

Contributo UE

€ 2 390 060,50

Coordinato da

UNIVERSITAT DE VALENCIA



Spain

Questo progetto è apparso in...



In che modo le tecnologie digitali possono svolgere un ruolo fondamentale per la conservazione del patrimonio culturale europeo

CORDIS fornisce collegamenti ai risultati finali pubblici e alle pubblicazioni dei progetti ORIZZONTE.

I link ai risultati e alle pubblicazioni dei progetti del 7° PQ, così come i link ad alcuni tipi di risultati specifici come dataset e software, sono recuperati dinamicamente da [OpenAIRE](#) .

Risultati finali

Documents, reports (18)

[Design of SILKNOW ontology and the ontology](#)

Report with the technical design of the SILKNOW ontology. The entities, properties, axioms of the SILKNOW ontology will be described in this document. This deliverable will also include the implementation of the SILKNOW ontology developed in an OWL based format.

[Report about the project's scientific results and interdisciplinary synergies](#)

Report with the description of the new synergies created among project stakeholders, both from ICT and SSH fields. This report will basically summarize the technical and scientific results presented in journals and conferences, as well as in the dissemination workshops, highlighting interdisciplinary results.

[Report about online campaigns, educational materials and exhibition](#)

4 promotional campaigns (months 6, 18, 24 and 36) will be carried out through IC channels: massive electronic mailings, coordinated presence in all of the IC's websites (including those of its 87 centers in 44 countries worldwide), social media accounts... They will complement their foreign language teaching units based, and the exhibition about SILKNOW as a tool for a richer interpretation of European heritage, shown at 5 IC centers in European countries. A document will fully report about the impact of these communications, dissemination and exploitation activities.

[Historical silk multilingual thesaurus](#)

Report with the controlled vocabulary related to silk, in the project's four languages. Terms will be structured, indicating their meaning and relationship with the model defined in Task 2.1.

[Dissemination plan, unabridged version](#)

The version of the plan included in this document has been shortened, due to extension constraints. An unabridged version will be formulated to serve as a template for day-to-day operations. It will be updated throughout the project timespan as required by future developments.

[Media coverage reporting on SILKNOW and its outcomes, and other promotional materials](#)

Press-clipping from international fashion media coverage of the project, as explained in Task 8.4. The promotional materials prepared by the project (press kit, video and images for social media, desktop wallpapers, leaflets, posters...) will be here also reported. For instance, 12 newsletters will be sent during the project lifespan, to an esteemed minimum of 100 email addresses. The website will allow any interested person to subscribe. Additional subscribers will be actively sought after by project partners among their professional networks.

[Specifications about IPR and knowledge management](#)

Report dealing with the IPR strategy and knowledge management. This report will be aligned with the Consortium Agreement that will regulate all project policies regarding IPR management, as explained in section 2.2.1.3 and Task 8.1.

[Project Quality Handbook](#)

This document, to which all partners will contribute, will define the project success indicators, communication management, reporting, risk management and quality management plans.

[Testing report in a real scenario](#)

Technical report with the evaluation result of the classification system performed in the Task 7.2. This report will contain its errors, the needed classification improvements, and whether they are going to be solved or not.

[Functional evaluation report](#)

Technical report with the result of the evaluation of functional and stress test developed on the system. This report will also point to the weak points of the system and how to upgrade it for improving the efficiency.

[Communication plan, unabridged version](#)

The version of the plan included in this document has been shortened, due to extension constraints. An unabridged version will be formulated to serve as a

template for day-to-day operations. It will be updated throughout the project timespan as required by future developments.

[Tutorial for SSH and fashion / design schools on using SILKNOW for teaching purposes](#)

This resource for project-based learning assignments will be developed with participating schools' staff.

[Guidelines about digital data curation strategies for small heritage institutions](#)

Resulting from involvement with many small textile heritage institutions helping them to improve their digital assets management a document will be produced and published showing best practices success stories and recommendations for future developments

[Policy brief of the 2nd reporting period](#)

Policy brief of the 2nd reporting period.

[Report about small museums becoming data providers for Europeana](#)

A report or publication about the main requirements and advantages for cultural heritage institutions, in order to make their digital collections more sustainable and accessible, by collaborating with Europeana as data providers. It will be based on the experiences of the interested institutions doing so thanks to SILKNOW's training and support.

[Testing report in a controlled scenario](#)

Technical report with the evaluation result of the classification system performed in the Task 7.1. This report will be developed during the task execution, it will contain the system errors, the needed classification improvements, and when are they solved.

[Ontology web server](#)

The web server application that supports the management of the SILKNOW ontology and its data. This deliverable will also contain a document with software design of the server. This document will expose the structure of the web server, the tools used for supporting the ontology management and the web server application, and the web service based API.

[Policy brief of the 1st reporting period](#)

Demonstrators, pilots, prototypes (1)



[Production of 3D printed textiles for IC and the Creative industries](#)

A set of 3D printed clothes and all the document and files used by its creation, the artist design, the CAD files and a document that exposes the elaboration process (steps, pieces' joining, etc.). For reporting and evaluation of the fashion event, see D7.5.

Websites, patent fillings, videos etc. (1)

[SILKNOW website and social media accounts](#)

The main online presence of the project will be the website www.silknow.eu, giving access to the searchable interface of the thesaurus, the visualization tools, all documents generated throughout the project and an intranet for partners and collaborating institutions. Social media accounts in the main networks (Facebook, Twitter, YouTube, Instagram, SlideShare) will serve as tools for audiences' engagement.

Other (3)

[Data interchange application](#)

This deliverable will include the application developed in task 6.2, as well as a report about the manual export task performed by CH partners.

[Visualization and deployable components](#)

The development of the visualization and deployable components developed in task 5.5. This task will also include a technical report with the software design of these components.

[System documentation](#)

HTML report with multimedia material with the user manual of the web accessible multilingual thesaurus.

Pubblicazioni

Conference proceedings (10)

El hilo de la historia: del patrimonio mueble al intangible. Rescatando el patrimonio textil sedero

Autori: Alba, E.; Gaitán, M.; León, A. Sebastián, J;
Pubblicato in: Actas del I Simposio anual de Patrimonio Natural y Cultural ICOMOS España, 2021, ISBN 9788490488263
Editore: Editorial Universitat Politècnica de València

[MULTI-TASK DEEP LEARNING WITH INCOMPLETE TRAINING SAMPLES FOR THE IMAGE-BASED PREDICTION OF VARIABLES DESCRIBING SILK FABRICS](#)

Autori: M. Dorozynski, D. Clermont, F. Rottensteiner
Pubblicato in: ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Numero IV-2/W6, 2019, Pagina/e 47-54, ISSN 2194-9050
Editore: ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci
DOI: 10.5194/isprs-annals-iv-2-w6-47-2019

Explainable Zero-Shot Topic Extraction Using a Common-Sense Knowledge Graph

Autori: Harrando, I, Troncy, R.
Pubblicato in: 3rd Conference on Language, 2021
Editore: Schloss Dagstuhl – Leibniz-Zentrum für Informatik

A Innovación social en el patrimonio cultural y museos de la seda en Europa: una mirada conectada con las industrias creativas

Autori: Ester Alba; María Dolores Pitarch; Rubén Arnandis; Cristina Portalés; Mar Gaitán
Pubblicato in: XLVI Conferencia Internacional de Ciencia Regional. Hacia un modelo económico más social y sostenible, 2019, ISBN 978-84-09-05604-0
Editore: Asociación Española de Ciencia Regional

Deep Learning zur Analyse von Bildern von Seidenstoffen für Anwendungen im Kontext der Bewahrung des kulturellen Erbes

Autori: Mareike Dorozynski; Dennis Wittich; Franz Rottensteiner
Pubblicato in: Proceedings of the 39th Annual scientific-technical meeting of the German Society of Photogrammetry and Remote Sensing (DGPF), Numero Volume 28, 2019, Pagina/e 387–399
Editore: Publications of the DGPF

[TOMODAPI: A Topic Modeling API to Train, Use and Compare Topic Models](#)

Autori: Pasquale Lisena, Ismail Harrando, Oussama Kandakji, Raphael Troncy
Pubblicato in: Proceedings of Second Workshop for NLP Open Source Software (NLP-OSS), 2020, Pagina/e 132-140
Editore: Association for Computational Linguistics
DOI: 10.18653/v1/2020.nlp-oss-1.19

[Virtual Loom, from Historical Fabrics to Interactive 3D Models.](#)

Autori: Pérez, M.; Casanova, P.; Portalés, C.; Gimeno, J.

Pubblicato in: Adjunct Proceedings of the ACM International Conference on Interactive Media Experiences (IMX) 2020., 2020, ISBN 978-1-4503-7976-2

Editore: ACM International Conference

DOI: 10.6084/m9.figshare.c.5020919.v1

Technological tools for the conservation of silk heritage: Improving the conservation of European Religious Textile Cultural Heritage

Autori: Alba Pagán, E., Fernández, M., Gaitán, M., León, A., Portalés, C., Sebastián, J., & Sevilla, J.

Pubblicato in: ESRARC 2019 11th European on Religious Art, Restoration and Conservation, 2019, Pagina/e 150-156, ISBN 978-88-32029-11-6

Editore: ESRARC

[ASSESSING THE SEMANTIC SIMILARITY OF IMAGES OF SILK FABRICS USING CONVOLUTIONAL NEURAL NETWORKS](#)

Autori: D. Clermont; M. Dorozynski; D. Wittich; Franz Rottensteiner

Pubblicato in: ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 2020

Editore: Copernicus Publications

DOI: 10.15488/10876

[Préserver et diffuser le patrimoine textile européen grâce aux technologies numériques. La réutilisation des données patrimoniales par le projet SILKNOW](#)

Autori: Puren, M., Vernus, P.

Pubblicato in: Humanistica 2021, 2021, Pagina/e 66-67

Editore: Humanistica

DOI: 10.5281/zenodo.4745005

Peer reviewed articles (12)



[Multi-Purpose Ontology-Based Visualization of Spatio-Temporal Data: A Case Study on Silk Heritage](#)

Autori: Javier Sevilla, Pablo Casanova-Salas, Sergio Casas-Yrurzum, Cristina Portalés

Pubblicato in: Applied Sciences, Numero 11/4, 2021, Pagina/e 1636, ISSN 2076-3417

Editore: MDPI

DOI: 10.3390/app11041636

[From Silk to Digital Technologies: A Gateway to New Opportunities for Creative Industries, Traditional Crafts and Designers. The SILKNOW Case](#)

Autori: Ester Alba Pagán, María del Mar Gaitán Salvatella, María Dolores Pitarch, Arabella León Muñoz, María del Mar Moya Toledo, José Marin Ruiz, Maurizio Vitella, Georgia Lo Cicero, Franz Rottensteiner, Dominic Clermont, Mareike Dorozynski, Dennis Wittich, Pierre Vernus, Marie Puren

Pubblicato in: Sustainability, Numero 12/19, 2020, Pagina/e 8279, ISSN 2071-1050

Editore: MDPI Open Access Publishing

DOI: 10.3390/su12198279

[Interactive Tools for the Preservation, Dissemination and Study of Silk Heritage—An Introduction to the SILKNOW Project](#)

Autori: Cristina Portalés, Jorge Sebastián, Ester Alba, Javier Sevilla, Mar Gaitán, Paz Ruiz, Marcos Fernández

Pubblicato in: Multimodal Technologies and Interaction, Numero 2/2, 2018, Pagina/e 28, ISSN 2414-4088

Editore: MDPI

DOI: 10.3390/mti2020028

Pintores y ornatos para los Tejidos de seda en la Ilustración y la Academia valenciana de Bellas Artes

Autori: María José López Terrada & Ester Alba

Pubblicato in: Quaderns de Filologia, Numero Estudis Literaris XXIII, 2018, ISSN 2444-1457

Editore: Universitat de València

Spanish Religious Textiles from the 18th and the 19th centuries: the Garín case

Autori: Alba, E., Gaitán, M., León, A., & Sebastián, J.

Pubblicato in: European Journal of Science and Theology, Numero 16(1), 2020, Pagina/e 187-197, ISSN 1841-0464

Editore: Acad Organisation Environmental Engineering & Sustainable Development

[Los catálogos de museo, una gran oportunidad para el conocimiento abierto... si se abren](#)

Autori: Sebastián, J.; Alba, E.; Portalés, C.; Gaitán, M.; León, A.

Pubblicato in: Revista PH, 2020, Pagina/e 2-4, ISSN 2340-7565

Editore: Instituto Andaluz del Patrimonio Histórico

DOI: 10.33349/2020.100.4630

[Silk Road Museums: Design of Inclusive Heritage and Cross-Cultural Education](#)

Autori: Ricard Huerta

Pubblicato in: Sustainability, Numero 13/11, 2021, Pagina/e 6020, ISSN 2071-1050

Editore: MDPI Open Access Publishing

DOI: 10.3390/su13116020

[Virtual Loom: a tool for the interactive 3D representation of historical fabrics](#)

Autori: Cristina Portalés, Manolo Pérez, Pablo Casanova-Salas, Jesús Gimeno
Pubblicato in: Multimedia Tools and Applications, Numero 80/9, 2021, Pagina/e 13735-13760, ISSN 1380-7501
Editore: Kluwer Academic Publishers
DOI: 10.1007/s11042-020-10294-w

[From Historical Silk Fabrics to Their Interactive Virtual Representation and 3D Printing](#)

Autori: Manolo Pérez, Pablo Casanova-Salas, Pawel Twardo, Piotr Twardo, Arabella León, Dunja Mladenec, Beshar M. Massri, Raphaël Troncy, Thibault Ehrhart, Georgia Lo Cicero, Maurizio Vitella, Mar Gaitán, Jesús Gimeno, Elena Ribes, Marcos Fernández, Cristina Portalés
Pubblicato in: Sustainability, Numero 12/18, 2020, Pagina/e 7539, ISSN 2071-1050
Editore: MDPI Open Access Publishing
DOI: 10.3390/su12187539

[Applying Axial Symmetries to Historical Silk Fabrics: SILKNOW's Virtual Loom](#)

Autori: Mar Gaitán, Cristina Portalés, Javier Sevilla, Ester Alba
Pubblicato in: Symmetry, Numero 12/5, 2020, Pagina/e 742, ISSN 2073-8994
Editore: Multidisciplinary Digital Publishing Institute (MDPI)
DOI: 10.3390/sym12050742

SILKNOW, tejiendo el pasado hacia el futuro

Autori: Alba, E.; Gaitán, M.; Sebastián, S; León, A.
Pubblicato in: Datatèxtil, 2020, Pagina/e 75-77, ISSN 1139-028X
Editore: Centre de Documentació i Museu Tèxtil

[Towards the Preservation and Dissemination of Historical Silk Weaving Techniques in the Digital Era](#)

Autori: Gaitán, Alba, León, Pérez, Sevilla, Portalés
Pubblicato in: Heritage, Numero 2/3, 2019, Pagina/e 1892-1911, ISSN 2571-9408
Editore: MDPI
DOI: 10.3390/heritage2030115

Book chapters (3)

[SILKNOWViz: Spatio-Temporal Data Ontology Viewer](#)

Autori: Javier Sevilla, Cristina Portalés, Jesús Gimeno, Jorge Sebastián
Pubblicato in: Computational Science – ICCS 2019 - 19th International Conference, Faro, Portugal, June 12–14, 2019, Proceedings, Part V, Numero

11540, 2019, Pagina/e 97-109, ISBN 978-3-030-22749-4

Editore: Springer International Publishing

DOI: 10.1007/978-3-030-22750-0_8

[A Proposal to Model Ancient Silk Weaving Techniques and Extracting Information from Digital Imagery - Ongoing Results of the SILKNOW Project](#) 

Autori: Cristina Portalés, Javier Sevilla, Manolo Pérez, Arabella León

Pubblicato in: Computational Science – ICCS 2019 - 19th International Conference, Faro, Portugal, June 12–14, 2019, Proceedings, Part V, Numero 11540, 2019, Pagina/e 733-740, ISBN 978-3-030-22749-4

Editore: Springer International Publishing

DOI: 10.1007/978-3-030-22750-0_72

SILKNOW. Designing a thesaurus about historical silk for small and medium-sized textile museums

Autori: León, A., Gaitán, M., Sebastián, J., Pagán, E. A., & Insa, I.

Pubblicato in: Science and Digital Technology for Cultural Heritage. Interdisciplinary Approach to Diagnosis, Vulnerability, Risk Assessment and Graphic Information Models, 2019, Pagina/e 187, ISBN 9780429345470

Editore: Taylor and Francis

Other (1)



SILKNOW – Multilingual Text Analysis for Silk Heritage

Autori: Mladenic, D.; Gaitán, M.; Troncy, R.

Pubblicato in: Numero 25 TH ACM SIGKDD CONFERENCE ON KNOWLEDGE DISCOVERY AND DATA MINING, 2019

Editore: Association for Computing Machinery New York NY United States

Set di dati

Set di dati mediante OpenAIRE (5)



[Adjunct Proceedings of the ACM International Conference on Interactive Media Experiences \(IMX\) 2020](#) 

Autori: Montagud, Mario; Cesar, Pablo; Fernández, Sergi; Garcia-Pineda, Miguel; Gutiérrez, Jesús; Cernigliaro, Gianluca; Vinoba Vinayagamoorthy; Timmerer, Christian

Pubblicato in: figshare

[Zero-Shot Information Extraction to Enhance a Knowledge Graph Describing Silk Textiles - English and Spanish neighborhood sub-graphs](#) 

Autori: Schleider, Thomas; Troncy, Rapha  

Pubblicato in: Zenodo

[SILKNOW Multimodal Cultural Heritage Dataset](#) 

Autori: Rei, Luis

Pubblicato in: Zenodo

[SILKNOW Knowledge Graph](#) 

Autori: Schleider, Thomas; Ehrhart, Thibault; Lisena, Pasquale; Troncy, Rapha  

Pubblicato in: Zenodo

[SILKNOW Knowledge Graph](#) 

Autori: Thomas Schleider; Thibault Ehrhart; Pasquale Lisena; Raphaël Troncy

Pubblicato in: Zenodo

Altri prodotti di ricerca

Altri prodotti di ricerca tramite OpenAire (13)



[SILKNOW Text Classifier Models](#) 

Autori: Rei, Luis

Pubblicato in: Zenodo

[Assessing the semantic similarity of images of silk fabrics using convolutional neural networks](#) 

Autori: Clermont, D.; Dorozynski, Mareike; Wittich, Dennis; Rottensteiner, Franz; Paparoditis, N.; Mallet, C.; Lafarge, F.; Remondino, F.; Toschi, I.; Fuse, T.

Pubblicato in: Katlenburg-Lindau : Copernicus Publications

[Addressing Class Imbalance in Multi-Class Image Classification by Means of Auxiliary Feature Space Restrictions](#) 

Autori: Dorozynski, M.; Rottensteiner, F.; Yilmaz, A.; Wegner, J.D.; Qin, R.; Remondino, F.; Fuse, T.; Toschi, I.

Pubblicato in: Katlenburg-Lindau : Copernicus Publications

[SILKNOW Image Classification - final version WP6 - Multi-Task Classification](#) 

Autori: Dorozynski, Mareike; Rottensteiner, Franz

Pubblicato in: Zenodo

[SILKNOW Image Classification - Pre-trained model](#)

Autori: Clermont, Dominic; Rottensteiner, Franz

Pubblicato in: Zenodo

[SILKNOW Image Retrieval - preliminary version - Scenario: semantic only](#)

Autori: Dorozynski, Mareike; Clermont, Dominic; Rottensteiner, Franz

Pubblicato in: Zenodo

[A proposal to model ancient silk weaving techniques and extracting information from digital imagery - ongoing results of the SILKNOW Project](#)

Autori: Portalés, Cristina; Sevilla Peris, Javier; Pérez Aixendri, Manolo; León, Arabella

[Deep Descriptor Learning with Auxiliary Classification Loss for Retrieving Images of Silk Fabrics in the Context of Preserving European Silk Heritage](#)

Autori: Dorozynski, Mareike; Rottensteiner, Franz

Pubblicato in: Basel : MDPI

[SILKNOW Image Classification - final version WP4 - Multi-Task Classification](#)

Autori: Dorozynski, Mareike; Rottensteiner, Franz

Pubblicato in: Zenodo

[SILKNOW Image Retrieval - final version WP4 - Scenario: visual only](#)

Autori: Dorozynski, Mareike; Rottensteiner, Franz

Pubblicato in: Zenodo

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Vedi tutti i {{ totale }} risultati

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Permalink: <https://cordis.europa.eu/project/id/769504/results/it>

European Union, 2025