



# SILKNOW

Weaving our past into the future

## European history is woven in silk.

It is not only a remembrance from a distant and luxurious past, beautiful and wonderful, but alien to most of us. Silk is a living heritage, very much alive in artisans, traditional and new techniques, lifestyles, fashions, etc. It has traced the world, and especially the Europe, we live in today. The commercial silk routes boosted some of the biggest cities and established important connections among them. Ideas, designs, crafts, materials, people, traveled throughout Europe via these networks. Moreover, silk has always been important in the development of new technologies. In fact, perforated cards were invented for Jacquard looms, long before the first computers used them to storage information and instructions.

However, silk textiles are a seriously endangered heritage, mostly because of their very physical nature, more fragile than other, more conventional cultural assets (painting, architecture, sculpture). Secondly, there is also an associated intangible heritage -artisanal weaving techniques- at risk of disappearing. Traditional crafts related to it have almost disappeared. Old

artisans find no replacement among younger generations. At the same time, however, textiles and fashion are sparking a growing interest as both a cultural phenomenon and a creative industry. They are at the heart of the creative economy, generating income, preserving identity, culture and values.

SILKNOW is designed to recover that European heritage, usually forgotten in spite of its great historical importance. For us, silk is so much more than just textiles, it is the thread that brings ideas, creativity and life stories together.

Let's weave our past into the future!



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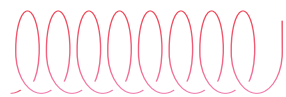


## What is SILKNOW?

We are a multidisciplinary team of 9 partners from 6 countries, working from April 2018 until March 2021 in order to improve the understanding, conservation and dissemination of European silk heritage from the 15th to the 19th century. Based on data from records in existing catalogues and by applying next-generation ICT, we will preserve silk heritage thanks to digital modelling of weaving techniques (a “Virtual Loom”), automatic design recognition and advanced search abilities within textile collections.

## What results are we expecting to achieve?

- \* To provide many European museums, custodians of an immense textile heritage, with ICT resources that allow them to open their hidden collections to worldwide audiences. For instance, a thesaurus that standardizes silk vocabulary, a “Virtual Loom” that helps to understand how a piece of fabric was woven, and a spatio-temporal map to discover the many connections among silk textiles.
- \* To contribute with guidelines for the management of digital data in textile heritage institutions, particularly among those of small-to-medium size.
- \* To spark creative efforts by modern designers, putting silk heritage within the reach of today’s consumers.
- \* To pave the way for further Research & Development + Innovation in 3D printing for the textile industries.
- \* To connect media outlets with fresh and interesting content, improving public knowledge of the Western Silk Roads.



# SILKNOW

This project is intended for everyone who cares for silk heritage or simply wants to learn about it...  
**these are some of the benefits you can get from SILKNOW:**

### MUSEUMS & COLLECTIONS

- » Will be able to offer replicas of their old and fragile textile pieces.
- » Will improve their digital preservation strategies by better curating digital data through interoperable standards.
- » Will standardize vocabulary related to silk and thus, their cataloguing.

*If you want to share your data with us, you could benefit from all these tools. Otherwise, you can benefit, too! SILKNOW will open museums’ hidden collections of silk textiles.*

### CREATIVE INDUSTRIES

- » Fashion and graphic designers will be able to find inspiration for their own collections in silk heritage motifs.
- » The Virtual Loom will allow textile manufacturers to recover ancient traditional weaving techniques.
- » 3D printing techniques can be used for innovative textile production.

*Fashion, textile industries, 3D-printing companies, traditional crafts, etc. are facing a digital transition that is calling for new business models. SILKNOW will foster creativity and favour economic development.*

### EDUCATION

- » The “Virtual Loom” will let researchers and students know how a fabric was woven.
- » Spatio-temporal visualizations will allow to trace unexpected connections across various countries, centuries, motifs, designers, techniques, etc.
- » As silk is such a broad and transnational subject, related vocabulary will be applied in language-learning education.

*SILKNOW will improve the knowledge of European silk textiles in different levels: design schools, universities, language centers... we will be happy to hear about your teaching needs!*

#### More info:

🌐 [www.silknow.eu](http://www.silknow.eu) ✉ [silknow@uv.es](mailto:silknow@uv.es) 🐦 [silknow\\_eu](https://twitter.com/silknow_eu) 📘 [silknow](https://www.facebook.com/silknow) 📷 [silknow.eu](https://www.instagram.com/silknow.eu)

### TOURISM MARKETERS

- » Will offer new thematic routes related to the Western Silk Roads.
- » Will be able to provide innovative tourism services, enriched through digital content.
- » Will add value to festivities, traditions, crafts, that are part of the living silk heritage.

*SILKNOW contributes to SDG’s growing awareness of culture as the fourth pillar of sustainable development.*

### ICT SECTOR

- » The project will implement advanced text analytics in order to retrieve automatically data given a high-level concept.
- » It will provide better knowledge of spatio-temporal data models that can be applied to many different industries, such as logistics or urban planning.
- » New deep learning techniques, based on Convolutional Neural Networks, will be applied in order to automatically classify insufficiently tagged data.
- » Ancient weaving techniques will be cloned, building mathematical models, providing interactive visualizations and 3D-printed simulations.

*Our innovative ICT tools will not only allow to study and preserve European cultural heritage, but they will open new research in other fields.*

