Factum Foundation x ARCHiVe

APRIL 2021 - APRIL 2022
ACTIVITY REPORT

A document prepared for the Helen Hamlyn Trust
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DIGITISATION

01. 3D recording of the Teatro Verde

Dates: recording in January 2022; processing in progress
Location: Island of San Giorgio Maggiore, Venice

The 3D recording of the island of San Giorgio Maggiore is one of ARCHiVe’s main projects. Factum Foundation is committed to demonstrating that it is possible to create a digital record of this monumental complex, from the urban and architectural elements to the interiors and specific artifacts within the Giorgio Cini collection. The digitisation project of the island should also be understood as a first step towards the digitisation of the entire city of Venice – an ambitious task that will require active support from institutions and individuals, with ARCHiVe’s leadership. The Teatro Verde was not included in the first digitisation campaign that took place in July 2020 (see previous report for details). The Teatro Verde, designed by architect Luigi Vietti and inaugurated in 1954, has been partially restored during the Winter of 2022, and recently reopened to the public.
The 3D recording was carried out in late January 2022 by a team from Factum Foundation, with the goal of documenting its current condition as part of its preservation. It employed a LiDAR 3D scanning system, in order to obtain accurate data that could give way to the creation of 3D models, orthophotos and, eventually, architectural drawings. The information obtained with the LiDAR scanner can also be combined with photogrammetric recording, to complete certain areas with higher surface resolution. Aerial drone-based recording was also carried out as part of this survey. Once the data is fully processed it can be used to assist in further preservation initiatives of the Teatro Verde.

Additionally, some preliminary results of the recording were provided to artist Mattia Casalegno, to be included in his new film La maschera del Tempo, produced by the Giorgio Cini Foundation. Including Factum Foundation’s 3D information, the work explores the sustainability and unique identity of the Teatro Verde.
**02. 3D recording of the Vatican Chapels**

**Dates:** recording in January 2022; processing in progress  
**Location:** Island of San Giorgio Maggiore, Venice

For the first Holy See Pavilion at the 16th International Architecture Exhibition of the Venice Biennale in 2018, internationally renowned architects were invited to design ten chapels in the forested park of the Cini Foundation on the island of San Giorgio Maggiore.

The project was inspired by the 1920 *Woodland Chapel* created by Erik Gunnar Asplund for Stockholm’s cemetery. With his *Skogskapellet* Asplund defined the chapel as a “place of orientation, encounter and meditation, seemingly formed by chance or natural forces inside a vast forest, seen as the physical suggestion of the labyrinthine progress of life”.

This digitisation project is part of the ongoing initiative for documenting in 3D the whole island of San Giorgio, from the exterior of its buildings to the interiors and objects contained in them. This ambitious, multi-scale project intends to demonstrate the importance of digital documentation as an active tool to preserve Venice’s cultural heritage, with the potential of being applied to a global scope.

Factum Foundation’s Pedro Miró used LiDAR scanning and photogrammetry to record the Chapels and their context.
03. 3D and colour recording of a 15th C. Franco-Flemish tapestry

Dates: recording in February-March 2022; processing in progress
Location: Island of San Giorgio Maggiore, Venice

ARCHiVe has completed the first high-resolution digital recording of one of the great tapestries owned by the Giorgio Cini collection: The Entry into Palestine of the Army of Vespasian. Dated between 1470 and 1480, this Franco-Flemish tapestry created from cartoons by the Master of Coëtivy, is one of the two earliest and most significant works in the whole collection, and part of a series about the destruction of Jerusalem. The tapestry was recently identified as the right half of another textile work within the collection of the Musée des Arts Décoratifs in Lyon, making its recording, conservation and restoration a priority for the Fondazione Giorgio Cini.

The digital documentation of the tapestry's surface is an essential step towards understanding its material structure. ARCHiVe carried out the complete documentation of the tapestry's shape, texture and colour, thanks to a combination of 3D and 2D non-contact scanning technology - specifically developed for the field of art and cultural heritage.
Over a period of three weeks in March 2022, a team from Factum Foundation in collaboration with the Giorgio Cini Foundation obtained 3D data of the full tapestry's front side with a spatial resolution of 100 microns (or 10,000 points/cm²) as well as colour information of both front and back with a resolution around 500 dpi at 1:1 scale. This highly-detailed information will allow looking at the tapestry's surface under a new light, unearthing aspects that are usually ignored. Thanks to the 3D information it will be possible to generate shaded renders to visualise the topography of the fabric without the colour, so the variations in texture and depth can be better understood, measured and analysed.

The relief data was obtained with Factum Foundation's Lucida 3D Scanner, a system specifically designed for capturing the surface of paintings and other low-relief objects - and part of ARCHiVe's permanent equipment. The colour information was acquired through composite photography. The layer of the colour will then be registered onto the layer of the relief, in order to create a multi-layered file through which it will be possible to explore this unique surface online, from any device. This will serve to experts, scholars and the general public to appreciate this work of art as never before. The obtained digital data can also be used in the future for an eventual facsimile reproduction, among other applications.
Shaded render of one scanning tile (48 x 48 cm) of 3D data of the tapestry, obtained with the Lucida system. A total of about 100 tiles were needed to complete the whole front area.

Close-up view where it is possible to distinguish the individual threads that form the fabric, and their inner tensions.
04. Water tide monitoring with Divirod

Dates: First sensor installed in August 2021; Second sensor installed in February 2022
Location: Island of San Giorgio Maggiore, Venice
In collaboration with: Divirod (https://www.divirod.com/)

Divirod have developed a passive radar sensor that uses satellites and locally recorded data to generate accurate hydrological models. The software uses harmonic recordings to create dynamic representations of tide, wave activity and wind speed to predict erosion and flooding. Divirod have provided various of their advanced sensors to monitor the relationship between land and water on the island, with the data being accessible in real-time on desktop and mobile devices. The installation of the 1st sensor in late August is part of ARCHiVe’s work to document and study both cultural heritage and natural changes on and around the island.

The advanced sensor installed in Venice detects the unique signature of satellite signals bouncing off the water of the Lagoon. This provides a local, accurate and dynamic image of the relationship between a fixed point on the land and the water. The data is uploaded to the cloud in real-time, where a machine learning software developed by Divirod aggregates and processes it.

The more sensors are installed, the greater our understanding of the relationship between the land and the water: a slow-moving but still dynamic body, versus a dynamic fluid that is animated by many forces, from gravity and the wind to the energy released by the passing of large boats. The accurate hydrological models generated from the harmonic recordings are used to create constantly updating representations of tide, wave activity and wind speed, to predict erosion and flooding.
A second sensor was installed in February 2022 on the North-Eastern point of the island. As the sensors start to log vast quantities of dynamic information, factum Foundation and Divirod will be working with the Cini Foundation to find new applications and develop tools that will help provide answers to practical needs. A third sensor will soon be installed oriented South.
05. Aerial (drone-based) 3D recording of the island of San Giorgio

Dates: Summer 2022
Location: Island of San Giorgio Maggiore, Venice
In collaboration with: Arctic Drone Labs (https://www.arcticdronelabs.com/)

In order to complete the recording campaign that was carried out in July 2020, plans are being made to carry out an aerial 3D digitisation of the island of San Giorgio. The survey will be done in collaboration with Arctic Drone Labs, with whom Factum Foundation has worked to record Alvar Aalto’s Silo in Oulu (Finland) - more information about the AaltoSiilo project here: https://aaltosiilo.com/en/.

The task is expected to take two-three days to complete and will focus on capturing all those areas that were not captured two years ago: mainly the roofs and other higher elements in the buildings which couldn’t be scanned from floor level. The experience will be shared by Arctic Drone Labs and Factum Foundation as part of the Archive Online Academy 2022, to take place in the Fall.
06. 3D and colour recording of the Palazzo Cini art collection

Dates: from Summer 2022, TBC
Location: Palazzo Cini a San Vio, Venice

The Palazzo Cini Gallery is a refined museum house created in 1984. It contains a significant part of the historic art collection of a leading 20th-century Italian collector: the industrialist and philanthropist Vittorio Cini (1885-1977).

The collection consists of 13th- to 16th-century Tuscan paintings, sculptures and art objects, such as the outstanding group of Renaissance enamelled copper items, a group of Gothic ivories and the Cozzi porcelain table service laid out in the Neo-Rococo oval room, designed by Tomaso Buzzi. In 1989 an extraordinary collection of Ferrarese Renaissance paintings was added to the initial collection, courtesy of the Ylda Cini Guglielmi di Vulci heirs. In 2015 her heirs further enhanced the Gallery with a new group of art works and furnishings, also once in the original Vittorio Cini collection. For more information, visit: https://www.palazzocini.it/en/

Factum Foundation already worked in Palazzo Cini a San Vio in 2012, to record in 3D and colour three panels by Ercole de’ Roberti: Saint George, Saint Jerome and Saint Catherine of Alexandria, which belonged to the Politico Griffoni.

The 3D and colour recording of a selection of masterpieces from the art collection in Palazzo Cini a San Vio has been agreed with the Director of the Giorgio Cini Foundation’s Istituto di Storia dell’Arte. Plans are being made to start recording in the next months.
07. 3D and colour recording of palm leaf manuscripts

Dates: from January 2022 to January 2023
Location: Bodleian Libraries, Oxford
In collaboration with: Bodleian Libraries (https://www.bodleian.ox.ac.uk/home)

Factum Foundation is once again working in partnership with the Bodleian Libraries in Oxford to develop the new ARCHiOx initiative (Analysing and Recording Cultural Heritage in Oxford), funded by The Helen Hamlyn Trust. The twelve-month research project will initially focus on the recording of marks on selected items from the Bodleian Libraries’ unique special collections. A link will be established with ARCHiVe’s team, to share technical knowledge and expertise that could benefit the various projects in progress.

The ARCHiOx Project will use both a prototype photographic system, the ‘Selene’ Stereo Photometric scanner (developed by Jorge Cano) and the Lucida 3D Scanner (developed by artist-engineer Manuel Franquelo and the team at Factum) to document relief surfaces of some of the Bodleian’s most celebrated artefacts. This relatively unexplored path to mapping and digitisation should in turn present fascinating new avenues of exploration and research, as it reveals aspects of the item hitherto unrealised or recorded.

ARCHiOx will provide a free exchange of knowledge and approaches between the academic and technical team at the Bodleian Libraries and Factum Foundation’s experts, as we explore and demonstrate the potential of applying non-contact digital technologies to the study of materials held by the Bodleian Libraries.
On February 4th, 2022, the Selene Photometric Scanner was installed at the Bodleian Libraries after four days of setting up and testing. The results, both in terms of colour and data, are remarkable.

It is the first time that high-resolution data has been recorded at the Bodleian. The implications for the material culture of the book are significant and the hope is that many departments and college libraries will realise the importance of surface recording. Image and form are merged to reveal more about the objects in their care. The Photometric Stereo recording started with the Rawlinson collection of printing plates and the Sanskrit palm-leaf manuscripts. This will be followed by the re-recording of the Gough map and the 3D digitisation of the Aramaic Arshama Seals. Suggestions are already emerging about the importance of this process for finding and visualising palimpsests and recording pre-Colombian manuscripts in the collection.

The relationship between digital recording, non-contact restoration and online/offline access has never presented more opportunities. Hopefully, it will result in an addition of high-resolution recording as part of the IIIF protocols. Factum is convinced that the photometric-stereo system will rapidly become a central part of digital recording in museums and libraries around the world.

New technologies seldom emerge fully formed, but after over 20 years of working to record the subtle surfaces of different objects, we built this system to be fast, objective and easy to use.

This is a groundbreaking initiative. I can’t wait to see the results that emerge over the next 12 months. Thanks to Helen Hamlyn and her advisors, Richard Ovenden and the great team at the Bodleian Libraries and everyone at Factum who commits so much time and energy to the understanding and preservation of cultural artefacts.
The first research area for the project will focus on Sanskrit palm-leaf manuscripts. This work will allow greater understanding and exploration of printing, binding and handwriting techniques, presenting new and unexplored research paths, as well as preserving their likeness as a digital image.
Close-up views of one of the palm leaf manuscripts recorded with the new ‘Selene’ Stereo Photometric scanner, showing colour and relief information. ‘Selene’ will allow to make visible those marks and incisions that have lost the ink, thus making the texts ‘readable’ again.
08. 3D and colour recording of copper plates

Dates: from January 2022 to January 2023
Location: Bodleian Libraries, Oxford
In collaboration with: Bodleian Libraries (https://www.bodleian.ox.ac.uk/home)

Another primary area of research in the ARCHiOx project will be focused on recording a series of 18th century copperplate prints - including those designed by Romantic poet, William Blake. Scratches and markings made by the tools, as well as the effects of ageing and handling will now be recorded in great detail thanks to the ‘Selene’ Stereo Photometric scanner. In most cases, the same objects will also be recorded with the Lucida 3D Scanner, in order to obtain an additional record of its shape characteristics.
Bodleian Libraries’s John Barrett preparing a copper plate to be scanned with the ‘Selene’ Stereo Photometric system.

Factum Foundation’s Celestia Anstruther operating ARCHiOx’s Lucida 3D Scanner to record a copper plate.
Close-up views of the colour and relief data of copper plates, obtained with ARCHiOx’s Stereo Photometric scanner.
09. 3D and colour recording of a Dürer sketch

**Dates:** April 7th, 2022  
**Location:** Bodleian Libraries, Oxford  
**In collaboration with:** Bodleian Libraries (https://www.bodleian.ox.ac.uk/home) and Agnews Gallery (https://www.agnewsgallery.com/)

In collaboration with Agnews Gallery (London), a recently discovered original sketch titled *The Virgin and Child with a Flower on a grassy Bench* (c. 1503, pen and black ink on fine linen paper, 16 x 16 cm) attributed to Albrecht Dürer will be digitised within the new ARCHiOx imaging studio in Oxford. Using Factum Foundation’s new “Selene” Stereo Photometric scanner the sketch’s surface will be captured in both 3D and colour, front and back, with an image resolution around 1000 ppi at 1:1 scale. The obtained data will provide an accurate record of the sketch’s condition, and, thanks to the detailed inspection, it might reveal some unknown aspects of it.
10. 3D and colour recording of the Gough Map of Great Britain

Dates: planned for June 6th-10th, 2022
Location: Bodleian Libraries, Oxford
In collaboration with: Bodleian Libraries (https://www.bodleian.ox.ac.uk/home)

The Gough Map (115 x 56 cm) is internationally renowned as one of the earliest maps to show Britain in a geographically recognizable form. But still questions remain of how the map was made, who made it, when and why. In 2015 Factum Foundation carried out a complete 3D recording of the Map’s surface (both front and back) with the Lucida 3D Scanner, as part of a series of technical studies of that were being done at the Bodleian Libraries to understand better the Map’s history and materiality.

The first 3D scanning of the Gough Map was carried out by Factum Foundation in January 2015.

The 3D data allowed to obtain a topographical and texture map of this unique object, which has provided new evidence about its role and meaning. The recording allowed to create a multi-layered application to inspect both 3D and colour data in high resolution, accessed with this link: http://www.highres.factum-arte.org/Bodleian_HTML/Gough_Map/shared/viewer.html
The recording carried out in 2015 made possible to see the Map’s surface relief with or without the colour layer. The 3D scan was done with a spatial resolution of 100 microns or 254 ppi at 1:1 scale. The new Stereo Photometric recording will obtain relief data with a resolution of about 1000 ppi at 1:1 scale, significantly increasing the analysis possibilities.
The 3D scan allowed to detect and visualize better the pouncing marks that are present on the Map’s surface, which can be key to understanding its function. A more detailed surface analysis will be possible thanks to the ‘Selene’ scanner, to take place in June 2022.
11. 3D and colour recording and reproduction of the Selden Map of China

Dates: Spring/Summer 2022, TBC  
Location: Bodleian Libraries, Oxford  
In collaboration with: Bodleian Libraries (https://www.bodleian.ox.ac.uk/home)

Since the installation of ARCHiOx new scanning equipment in the Bodleian Libraries’ Imaging Services department in January 2022, a great deal of interest has emerged among curators and researchers. The capacity of digital technology to document and, eventually, reproduce in the highest detail the relief of flat artifacts is triggering new ideas and projects within the institution.

The Selden Map of China, another of the great historic maps that belong to the Bodleian Libraries, is becoming the centre of a new initiative to explore possibilities of reproduction as a facsimile. In 2015 Factum Foundation carried out a recording of the Map with the Lucida 3D Scanner. This information can be inspected in this link:  
http://www.highres.factum-arte.org/Bodleian_HTML/Selden_Map/shared/viewer.html

The obtained relief data, in combination with the colour information captured after its last restoration process, can be used to create a facsimile to have on display while the original is safely preserved. This will allow improved access to the Map, facilitating a deeper engagement by experts and general public alike.
Detail of the Selden Map showing colour (above) and relief data (below) obtain in 2015.

Additionally, thanks to the new ARCHiOx equipment, an improved 3D and colour recording can be carried out using the ‘Selene’ Stereo Photometric system, which will provide information in even higher resolution for further analysis and research applications.

The “Selene” Photometric Stereo will be able to obtain relief and colour information of the Map in higher resolution.
12. 3D recording of nine busts of Michelangelo by Daniele da Volterra

**Dates:** Summer/Fall 2021  
**In collaboration with:** Galleria dell’Accademia ([https://www.galleriaaccademiafirenze.it/en/](https://www.galleriaaccademiafirenze.it/en/))

Daniele da Volterra, a close collaborator and friend of Michelangelo, inherited the house of the artist in Rome after his death. In two years, he produced a number of bronze casts of the Renaissance master, which are often thought to have derived from Michelangelo’s deathmask.

The exhibition 'The Bronze Effigy of Michelangelo by Daniele da Volterra' (15 February - 19 June, 2022), curated by Cecilie Hollberg at the Gallerie dell'Accademia in Florence, reunites for the first time nine bronze busts from various collections around the world.

Each of the busts was recorded by Factum Foundation’s experts using strictly non-contact technologies: a structured light scanner (Breuckmann Smartscan3D-HE) and photogrammetry. The use of both techniques, even on shiny surfaces such as bronze, is capable of obtaining an extremely accurate relief of the surfaces once the two sets of data have been combined into a 3D model using specialised software.

Pedro Miró recording the bust inside the Museo Nazionale del Bargello (Florence) with a structured light 3D scanner.
The first busts to be digitised were those in Florence (Gallerie dell'Accademia, Casa Buonarroti and Museo del Bargello), followed by those in the collections of the Museo della Città "Luigi Tonini" in Rimini, the Castello Sforzesco in Milan and the Musei Capitolini in Rome; the team then worked on the busts in the Musée Jacquemart-André and the Louvre in Paris, finishing with the one in the Ashmolean Museum in Oxford. Coordination and collaboration with the respective institutions enabled the work to be completed in just over two weeks. In January 2022, the bust inside the Musée Bonnat in Bayonne was also added to the recordings.

These accurate recordings have not only made possible the reproduction of the busts using 3D printing technologies but also, they have triggered an innovative research project involving digital measuring and comparison among the obtained 3D models.

RESEARCH & DEVELOPMENT
➔ For more information about the comparative analysis that followed the recording of the busts go to page 86 of this document.

ONLINE & OFFLINE DISSEMINATION
➔ For more information about the exhibition “The Bronze Effigy of Michelangelo by Daniele da Volterra” (February 15th - June 19th, 2022) go to page 88 of this document.
13. Colour recording of Titian’s La Sapienza at Biblioteca Marciana

Dates: June 16th, 2021
Location: Biblioteca Marciana
In collaboration with: Biblioteca Marciana, Venice
(https://www.venice-museum.com/biblioteca-marciana.php)

For the exhibition 'Tizians Frauenbild' (5th October 2021 – 16th January, 2022) that took place at the Kunsthistorisches Museum, Wien, Factum Foundation carried out the recording of Titian’s La Sapienza (c. 1560) at the Biblioteca Marciana. The painting was recorded on June 16th in Venice using composite photography by Gabriel Scarpa, with the aim of making a reproduction that was on display on the vaulted ceiling, during the time the original was in Wien for the exhibition. The exhibition was also announced at Palazzo Reale, Milan (23rd February - 5th June 2022).

Factum Foundation’s Gabriel Scarpa recording the colour of Titian's La Sapienza with panoramic photography.
Reproduction of Titian’s La Sapienza based on the high resolution colour recording.

The obtained colour information can be inspected in the following link: https://www.highres.factum-arte.org/Sapienza_Tiziano/shared/viewer.html
14. 3D and colour recording of a painting by the workshop of Botticelli

Dates: June 2021
Location: Open Care, Milan
In collaboration with: Open Care, Milan (https://www.opencare.it/en/)
and Biblioteca Ambrosiana, Milan (https://www.ambrosiana.it/en/)

The Bando Lucida 2020, organized by Factum Foundation/ARCHiVe in collaboration with Open Care, selected a painting in need of treatment, to be restored and 3D scanned as a way to promote the use of digital technologies within preservation. The winner of the competition was *Assumption of Mary and Saints* by the workshops of Sandro Botticelli.
The relief data of the panel’s surface obtained with the Lucida 3D Scanner was combined by Factum Foundation with the colour (before and after restoration) and the UV analysis. This data can be inspected with the online multi-layered browser in this link: https://www.highres.factum-arte.org/Boticelli/shared/viewer.html
Detail of the colour before restoration (above) and 3D relief data (below).
15. 3D and colour recording of three rooms at Palazzo Te, Mantua

Dates: late January to early February, 2022
Location: Palazzo Te, Mantua
In collaboration with: Palazzo Te (https://www.centropalazzote.it/)

Factum Foundation, ARCHiVe and Fondazione Palazzo Te have partnered up to carry out a vast high-resolution digitisation project inside three rooms within Palazzo Te. The palace, built as a place of leisure for the Gonzaga family in the mid-16th century, was designed and frescoed by Giulio Pippi, better known as Giulio Romano.

From late January to early February 2022 a team of digitisation specialists from ARCHiVe and Factum Foundation recorded in high resolution the Chamber of the Giants, the Chamber of Cupid and Psyche and the Hall of the Horses.
The data, acquired using LiDAR, photogrammetry and composite photography, will belong to Fondazione Palazzo Te and help with the documentation, preservation, study and dissemination of the rooms, also enabling future diverse and innovative exhibition projects.

A brilliant pupil of Raphael, with whom he worked on the Vatican Rooms and many other works, Giulio Romano moved to Mantua shortly after the death of his teacher in 1520. Arriving in Mantua in 1524 as the official court artist of Marquis (later Duke) Federico II Gonzaga, he received the commission to "build a small residence to which he [the marquis] could retire sometimes to feast, or dine for pleasure" (G. Vasari, Lives of the Artists).

According to biographer Giorgio Vasari, the elaborate model that Giulio Romano presented to the marquis was enough for him to immediately begin construction, and the finished palace soon became a source of inspiration for artists and architects alike, thanks to its innovative designs and frescoed rooms.
16. 3D and colour recording of a 16th C. leather wallpaper for Palazzo Te, Mantua

Date: January 10th, 2022
Location: Musée des Arts Décoratifs, Paris
In collaboration with: Musée des Arts Décoratifs, Paris (https://madparis.fr/en) and Palazzo Te (https://www.centropalazzote.it/)

For the exhibition “Le pareti delle meraviglie” (26th March - 26th June, 2022), curated by Augusto Morari and dedicated to the elaborate leather wallpaper that used to decorate Palazzo Te, a team from Factum Foundation recorded in 3D and colour the *Leather wall covering with flower vases* inside the Musée des Arts Décoratifs in Paris.

The Lucida 3D Scanner recording the surface of the leather wallpaper in Paris in January 2022.
The corame was recorded using the Lucida 3D Scanner and photogrammetry to acquire its subtle relief surface, while composite photography was used to accurately obtain the colour data. A physical recreation from the data recorded in Paris is now on display inside the Sala dei Venti at Palazzo Te during the exhibition.

The panel of ‘printed’ corame (left) installed inside the Camera dei Venti with a fragment of an original (right).
TRAINING INITIATIVES

17. AOA 2021: online lecture on “Recording the island of San Giorgio”

Dates: September 27th, 2021
Location: ARCHiVe + online streaming
Speakers: Adam Lowe, Frederic Kaplan

➔ https://www.youtube.com/watch?v=48QSue_JEUk&list=PLfxAcbSlhgNYM6VP94MTcZ-owCkOTq4Y&index=7

Between September and December 2021 ARCHiVe carried out an online training program called ARCHiVe Online Academy. The meetings were aimed at scholars, researchers and those who want to improve their skills in the field of digital enhancement of cultural heritage. The lessons had free access and had a limited number of places; they were broadcast live on the Zoom platform but can also be followed in deferred on the Youtube channel of the Giorgio Cini Foundation.

A special presentation was dedicated to the 3D digitisation of the island of San Giorgio Maggiore, to celebrate the 70th anniversary of the Giorgio Cini Foundation. The lecture was given by Adam Lowe and Frederic Kaplan on 27th September 2021, after an introduction by Renata Codello.
18. AOA 2021: online course on “Three-dimensional Digitisation”

Dates: October 13th, 14th, 27th, 28th; November 4th, 18th, 2021
Location: Factum Foundation + online streaming
Speakers: Carlos Bayod with Factum Foundation experts

The AOA 2021 course on “Three-dimensional Digitisation”, entirely curated and taught by Factum Foundation focused on expanding and deepening into the concepts and practices of 3D digitisation and reproduction for Cultural Heritage applications. Two types of lessons were presented: classes focusing on theoretical aspects and case studies, followed by practical workshops demonstrating the application of a particular technology that has been discussed in the previous class.

Each of the 6 lessons had a duration of 2 hours, making a total of 12 teaching hours, covering the following topics:

**Lesson 1: “Recording the relief of paintings”**

Dates: October 13th, 2021
Teachers: Carlos Bayod

➡️ [https://www.youtube.com/watch?v=r7ORiDvGh5Q&list=PLfxAcbSlhgNYM6VP94MTcZ-oeWCkOTq4Y&index=1](https://www.youtube.com/watch?v=r7ORiDvGh5Q&list=PLfxAcbSlhgNYM6VP94MTcZ-oeWCkOTq4Y&index=1)

![Image of painting relief](image1.jpg)

**Lesson 2: “The Lucida 3D Scanner”**

Dates: October 14th, 2021
Teachers: Carlos Bayod, Guandalina Damone

➡️ [https://www.youtube.com/watch?v=b1oroao7ck9c&list=PLfxAcbSlhgNYM6VP94MTcZ-oeWCkOTq4Y&index=6](https://www.youtube.com/watch?v=b1oroao7ck9c&list=PLfxAcbSlhgNYM6VP94MTcZ-oeWCkOTq4Y&index=6)

![Image of Lucida 3D Scanner](image2.jpg)
Lesson 3: “Recording (and reproducing) surface and shape”
Dates: October 27th, 2021
Teachers: Carlos Bayod

➡️ https://www.youtube.com/watch?v=mbTMH8BZyJw&list=PLfxAcbSlhgNYM6VP94MTcZ-oewCkOTq4Y&index=2

Lesson 4: “Close-range photogrammetry”
Date: October 28th, 2021
Teachers: Carlos Bayod, Otto Lowe

➡️ https://www.youtube.com/watch?v=uLyD3xlMRoQ&list=PLfxAcbSlhgNYM6VP94MTCZ-oewCkOTq4Y&index=3

Lesson 5: “Stereo-photometric recording”
Date: November 4th, 2021
Teachers: Carlos Bayod, Jorge Cano

➡️ https://www.youtube.com/watch?v=Y0HYh4OSlYc&list=PLfxAcbSlhgNYM6VP94MTCZ-oewCkOTq4Y&index=4
Lesson 6: “Digital restoration an analysis”

Dates: November 11th, 2021
Teachers: Carlos Bayod, Irene Gaume

➔ https://www.youtube.com/watch?v=m3IsIPVplQ&list=PLfxAcbSlhgNYM6VP94MTcZ-oewCkOTqY&index=5

The next program of the ARCHiVe Online Academy is already being discusses to incorporate new areas of knowledge, including aerial (drone-based) 3D recording and AI applied to analysis of paintings’ texture, among other subjects.

From top-left clockwise: Factum Foundation’s Carlos Bayod, Otto Lowe, Irene Gaume, Jorge Cano
19. Medialab Matadero Madrid: lecture on “ARCHiVe”

Dates: March 23rd, 2022
Speaker: Carlos Bayod
In collaboration with: Medialab Matadero Madrid (https://www.medialab-matadero.es/)

➡️ https://www.youtube.com/watch?v=25KEIFVukp4

“Medios Sintientes” is the first of a series of LAB(s) that Medialab at Matadero will deploy throughout 2022 and 2023. Conceived as interdisciplinary laboratories for collaborative research and production, each LAB will offer a quarterly program of Collaborative Prototyping Labs, Artistic Projects, Transversal Workshops and Seminars, and Public Events related to Medialab’s main lines of research.

“Medios Sintientes” looks with special attention at the set of human sensing infrastructures and how they render our bodies, cities and the entire planet in multiple and diverse ways. But it also looks at the Earth itself as a medium, as a data-capturing device capable of recording an enormous amount of information through its multiple non-anthropogenic sensoriums. What new readings of the world will these sensory systems deploy in the coming decades? Can these new readings act as frameworks from which to propose better social and/or environmental dynamics? And, if so, how can we use them to enhance our collective agency?

Factum Foundation was invited to give an online talk as part of the “Medios Sintientes” webinar to explain the work developed by ARCHiVe to digitise the island of San Giorgio Maggiore and Venice’s Cultural Heritage, in the shadow of the current uncertain time.

Slide showing a 3D render of a plaster wall section at the Palladian Cloister of San Giorgio Maggiore, comparing the recording carried out by Factum Foundation in 2020 (left) and 2021 (right).
20. Università Roma Tre: class on “3D scanning for preservation”

**Dates:** March 29th, 2022  
**Speaker:** Carlos Bayod  
**In collaboration with:** Università Roma Tre ([https://www.uniroma3.it/](https://www.uniroma3.it/))

By invitation of Professor Mario Micheli, Carlos Bayod taught a class as part of Università Roma Tre’s Masters in Art History. With a duration of 2 hours, the class focused on showing case studies in which the application of digital technology can be an essential tool for cultural preservation. The focus was put on the work developed by ARCHiVe since 2018, highlighting the combination of digital recording projects with training initiatives, research & development and dissemination.

Slides showing a training session in ARCHiVe with graduate students, using the Lucida 3D Scanner on a painting
21. Palazzo Te, Mantua: 30 hours workshop

Dates: September 12th-16th, 2022

Teachers: Carlos Bayod with Factum Foundation and ARCHiVe experts

In collaboration with: Palazzo Te (https://www.centropalazzote.it/)

ARCHiVe will collaborate with Fondazione Palazzo Te in Mantua to promote training in digital technology as a way to help the conservation, study and dissemination of Cultural Heritage. This initiative will develop a training workshop focused on the application of non-contact, high resolution digital technology to the documentation of specific art and architecture elements in Palazzo Te. The aim of the workshop is to introduce students and professionals to the techniques and methods of digital preservation, which Factum Foundation has been pioneering through a number of international projects in collaboration with the main museums, universities and cultural institutions.

The workshop will be based on a learning-by-doing approach. Participants will be introduced to the practical and theoretical principles of digital preservation, and will be part of a multidisciplinary team planning and carrying out a real digitisation project in Palazzo Te. Different 2D and 3D recording systems will be employed to capture the shape, surface and colour of a selection of spaces and decorative elements, producing an archive of data that could be invaluable for further work including art historical research, virtual restoration or re-materialization for exhibition purposes.

The workshop is open to students and professionals of different disciplines, from both humanities and technical fields: architecture, engineering, digital arts, art history, art conservation and restoration, fine arts, museum studies, cultural studies, heritage management, tourism, urban and landscape design, photography, communication, graphic design, software development, painting, sculpture, etc. No previous experience in digital recording is needed. Attendance is limited to 12 participants.

For more information, visit: https://www.centropalazzote.it/fare-arte-2022-factum-foundation/
22. Development of the new Stereo Photometric scanner

Dates: 2017 - 2022, ongoing development
Location: Factum Foundation, Madrid

Since 2017, Factum Foundation has been developing a new relief scanning system and workflow designed specifically for the fine texture of flat or semi-flat surfaces such as paintings, murals or sculptural bas-reliefs. While the Lucida 3D Scanner still produces the highest quality in capturing relief, the Photometric Stereo scanner has the additional advantage of acquiring both surface information and colour at the same time, achieving much higher image resolution.

The scanner is based on a technique known as stereo photometry: by using 2D images taken under several different lighting angles, it is possible to extract very detailed information about the surface of an object, by interpreting the shadows on the surface created by the different lights. In the current configuration, four flash units are being used.

The system integrates various inputs from non-contact recording technologies, such as photogrammetry, and Factum Foundation's expertise in the field of innovation. The four flashes are the same type conceived by Manuel Franquelo for the Veronica Chorographic Scanner and synchronised via a custom electronic board (designed by Jorge Cano) to a mirrorless camera. The motorised unit is capable of adjusting the position of the scanner over the object, creating a fast and portable device that is easy to operate.
The “Selene” Stereo Photometric scanner was installed in January 2022 at the Bodleian Libraries in Oxford as a primary recording tool within the ARCHiOx project. For more information, go to page 19 of this document.
Comparison of a textured copper plate detail: original sample (top); Lucida 3D Scanner (middle); “Selene” Stereo Photometric scanner (bottom). The “Selene” system can read finer incised marks than the Lucida.
Digitisation test on a printed panel: detail of the colour data (above) and the texture data (below), obtained with the “Selene” Stereo Photometric scanner.
Digitisation test on a copper plate at the Bodleian Libraries, Oxford: detail of the colour data (above) and the texture data (below), obtained with the “Selene” Stereo Photometric scanner.
**23. Italgas: building and installation of a new Replica scanner in Turin**

*Dates:* installation in October 2021  
*Location:* Italgas headquarters, Turin  
*In collaboration with:* Italgas (https://www.italgas.it/)

Italgas, Italy’s main gas provider founded in 1837, partnered with ARCHiVe in 2020 for a project to record and share online its historical archive: a multi-layered and complex collection of documents, pictures, historical papers and essays, scientific journals and texts. A custom Replica 360 Recto/Verso scanner, a recording system developed by Factum Arte and Foundation, was installed in a dedicated space within the Italgas headquarters in Turin in October 2021.
The Replica 360 Recto/Verso Scanner was originally designed for the rapid digitisation of the vast photo-archive belonging to the Fondazione Giorgio Cini and has been successfully in use since its installation in Venice in 2018. It is designed as a rotary table that moves continuously during a digitisation session run by two operators, simultaneously photographing both sides of single-page documents and automatically downloading the images onto a computer.

After a training session carried out by the Factum team, the digitisation work with the Replica scanner started at the end of 2021 within the framework of Heritage Lab Italgas.

For more information about the Replica 360 Recto/Verso scanner, visit: https://www.factum-arte.com/pag/1355/replica-360-recto-verso-scanner
24. Upgrading the Replica scanner in ARCHiVe

Dates: March 28th-31st, 2022
Location: ARCHiVe, Venice

A team from Factum Foudnation carried out a general maintenance and component upgrades of the Replica 360 Recto/Verso scanner that was installed in ARCHiVe in 2018, consisting of:

- Installation of a structural frame with a black cloth to encase the flashes of the lower camera. This reduces reflections and ambient light on the photo and shields the flashes to the eyes of the operators.
- Installation of black backplates above and below the tables of the respective top and bottom cameras. These make the background of the photographs completely black. Previously background of the images the floor or the ceiling could be seen in the background of the images.
- New flashes were installed. They have an upgraded housing to be lighter.
- Changed tethering cables from USB 2.0 to USB 3.0 to fix a camera disconnecting issue.
- Fixed some software bugs that were causing occasional failures.

Since April 1st the updated version of the Replica scanner is operative in ARCHiVe.
25. Adapting the Lucida 3D Scanner for large tapestries

 Dates: February 2022
 Location: ARCHiVe, Venice

 The digitisation of the first historic tapestry from the Giorgio Cini collection required to adapt the Lucida 3D Scanner’s structural frame to recording large horizontal areas. Lucida was mainly designed for scanning paintings vertically, mounted on an easel or on the wall. The conservation requirements of the Cini tapestry did not allow to be positioned vertically, so the recording had to be done with the tapestry lying flat, on top of a cloth for protection. The Lucida components were re-designed and re-arranged to allow a usable span of 4.5 m, enough for the tapestry’s width.
The structure was then adapted to be used for the composite photography recording, varying the capture distance. A specially designed pulley system allowed the photographer to slide the camera (with its mounted flash unit) along the beam from one fixed position.

DIGITISATION

 ➔ For more information about the 3D and colour recording of the 15th C. Franco-Flemish tapestry from the Giorgio Cini collection, go to page 13 of this document.
26. Raphael Cartoons & tapestries

Dates: 2019 - 2022, ongoing research
Location: V&A, London: Palazzo Ducale, Mantua; Musée Condé, Chantilly, France
In collaboration with: Arnold Nesselrath

After recording in the seven Cartoons by Raphael at the Victoria & Albert Museum in London in 2019 and the tapestry depicting The Sacrifice at Lystra in Mantua’s Palazzo Ducale in 2020, three cartoon fragments from the Musée Condé at the Château de Chantilly have been digitised in 3D, colour and infrared on 11th and 12th January 2022.

The three details from the cartoon Christ’s Charge to Peter present interesting variations from the Cartoon in London, and the high-resolution digital data will help further studies on the subject. A multi-layered browser was created to allow inspection of the different data that was obtained in Chantilly, in registration with its correspondent cartoon recorded at the V&A Museum in London.

The browser can be accessed through this link:
https://www.highres.factum-arte.org/Raphael_Cartoon_Chantilly/shared/viewer.html

The Lucida 3D Scanner recording the surface of one of the three cartoon fragments at Chantilly.
Raphael’s *Christ’s Charge to Peter*: central section of the cartoon in London, 3D and colour overlay (top); cartoon fragment in Chantilly, 3D and colour overlay (middle); cartoon in Chantilly, infrared (bottom).
Raphael’s Christ’s Charge to Peter: cartoon fragment in Chantilly, 3D and colour overlay (top); relief (bottom).
Raphael’s *Christ’s Charge to Peter*, detail: cartoon fragment in Chantilly, 3D and colour overlay (top); relief (bottom).
Raphael’s *Christ’s Charge to Peter*, detail: cartoon fragment in Chantilly, 3D and colour overlay (top); relief (bottom).
27. “The hand of the artist”, with Case Western Reserve University

Dates: 2018 - 2022, ongoing research
Location: various locations
In collaboration with: Case Western Reserve University, Cleveland, OH

The ongoing research about the analysis of the surface of paintings with Artificial Intelligence, carried out in collaboration with Case Western Reserve University, has advanced in the last year in various fronts. First, the team at Cleveland have been analyzing the 3D data of El Greco’s paintings recorded by Factum Foundation in Toledo: The Portrait of Cardinal Tavera and The Baptism of Christ. In both cases, the application of pattern recognition software is starting to give promising results: a series of maps are being generated of the surface of paintings, differentiating possible “hands” based on the gesture that gave shape to the brushstrokes.

El Greco’s The Baptism of Christ, detail: 3D relief and colour data overlay (top); 3D relief data (bottom).
The work in progress was shared in a scientific paper written by the Cleveland team published in November 2021, titled “Discerning the painter’s hand: machine learning on surface topography”, which can be accessed through this link: https://rdcu.be/cBiwi

Also in November, a team from Factum Foundation / ARCHiVe travelled to Cleveland to record another painting by El Greco, Christ on the Cross, at the Cleveland Museum of Art. The relief data was acquired with the Lucida 3D Scanner, while the colour was captured with panoramic composite photography.
The result of this recording can be inspected in its multi-layered browser:
https://www.highres.factum-arte.org/Christ_on_the_Cross_Greco/shared/viewer.html
The obtained information has been provided to the working group at Case Western Reserve University to be analyzed. Further results will be shared soon. Another version of the *Crucifixion* will soon be recorded in the Spanish Gallery at Bishop Auckland, UK.

The implications of this project for the art world are wide-reaching and game-changing. Connoisseurs will soon have a new tool to assist with thorny attribution questions for many paintings. This project is one of several under the umbrella of art.lab.cle, all of which are transdisciplinary collaborations using 21st-century technology which will have a major impact on our understanding of art.
As a continuation to the work in Cleveland, the Lucida 3D Scanner was used to record the surface of a painting, located in Toledo’s Museo de Santa Cruz, which is a copy of Caravaggio’s 
*Crucifixion of St. Andrew*. The original Caravaggio, located in the Cleveland Museum of Art, was recently the subject of an in-depth technical study and restoration process by conservator Dean Yoder. An eventual comparison between the copy in Toledo and the original in Cleveland could provide a perfect case study for the AI study in progress. The surface data of the painting recorded in Toledo can be accessed in this link:

https://www.highres.factum-arte.org/Crucifixion_of_Saint_Andrew_Toledo/shared/viewer.html
28. Analyzing the portraits of Michelangelo by Volterra

Dates: 2021 - 2022, ongoing research
Location: Factum Foundation, Madrid
In collaboration with: Cecile Holberg and Mario Micheli

The recording the series of bronze busts of Michelangelo by Daniele da Volterra in 2021 triggered a new phase of in-depth comparative analysis on the 3D models. During several months of work with Cecilie Hollberg (Gallerie dell'Accademia) and Mario Micheli (Università Roma 3) in the studios of Factum Foundation in Madrid, the busts were digitally "mapped" in their key points and correspondences, overlaid and compared in a unique research work that combined for the first time digital expertise with academic rigour to help identify the original busts in Daniele da Volterra's studio, and the “genealogy” of the other variants.

After mapping the focal points, each bust was aligned according to a common imaginary line.
Some shape studies and differences between couples of busts.
ONLINE & OFFLINE DISSEMINATION

29. “The Bronze Effigy of Michelangelo by Daniele da Volterra” exhibition in Florence

Dates: February 15th - June 19th, 2022
Location: Galleria dell’Accademia, Florence
In collaboration with: Cecile Hollberg

The exhibition “The Bronze Effigy of Michelangelo by Daniele da Volterra”, curated by Cecile Hollberg at the Gallerie dell'Accademia in Florence, reunites for the first time nine bronze busts from various collections around the world. Direct comparison has revealed both similarities and differences, and much debate still surrounds the “genealogy” between the different casts: it is hoped that the exhibition will focus the debate and produce some informed responses.

The high-resolution 3D models that Factum Foundation obtained after recording the original busts in their different locations were printed at 1/3 of the original as well as life-size, to allow for comparisons prior to viewing the original busts inside the Gallerie dell’Accademia. Both 3D printed versions, together with the digital data, are on display in the exhibition. In addition, 3D models can also serve as a valuable 'snapshot' of the surface conservation condition of the work, and the digital data remains property of the respective institutions for all uses, in line with Factum Foundation’s core missions.
The exhibition display inside the Gallerie dell’Accademia in Florence.
30. “In Ictu Oculi - In the Blink of an Eye” exhibition in Bishop Auckland

Dates: from October 2021
Location: Bishop Auckland, UK
In collaboration with: The Auckland Project (https://aucklandproject.org/)

Led by Jonathan Ruffer, the Auckland Project is working to regenerate large sections of the town of Bishop Auckland, which for hundreds of years was the seat of the powerful bishopric of Durham. The project has Spanish art at its core: Ruffer first conceived of his plan to buy Castle Auckland and other properties in the town when a series of works by Francisco de Zurbarán (twelve of the thirteen paintings making up the series Jacob and his Twelve Sons), which had been in the castle since 1756, were put up for sale and threatened with removal from Bishop Auckland.

Part of the redevelopment is the new Spanish Gallery, the first museum in the UK to be devoted to Spanish art. Ruffer commissioned Factum Foundation and Skene Catling de la Peña to rethink the concept and role of a museum for the top floor. The result, “In Ictu Oculi - In the Blink of an Eye. Transience and Eternity in the Spanish Golden Age”, is a space filled with great objects, all with their own specific history, biography and meaning in their original location, but with the potential to unlock a profound understanding of Spanish art when put together in dialogue with each other.
The original pieces were all chosen, digitally recorded using non-contact technologies and re-embodied as physical facsimiles for installation in Bishop Auckland to reveal some of the defining characteristics of this period of Spanish art and its context. A New World vellum map, paintings - portraits, biblical scenes, two vanitas and a baptism - sit alongside Renaissance wall tiles, carved architectural plasterwork or yesería, elaborate, geometric-patterned timber ceilings, sculptures, a tabernacle and a tomb. All have been made in Madrid over three years of delicate negotiations with major cultural institutions in Spain and intense digital and physical work. The outcome is a portal into Spanish Renaissance and early Baroque thinking and a collection of mutually beneficial collaborations that redefine sharing, connoisseurship and preservation.

One of the aims is to create a new narrative through juxtaposition by which objects can be seen as if for the first time. Great art grants the power to see through the eyes and perceptions of others. “In Ictu Oculi - In the Blink of an Eye” celebrates a uniquely Iberian view of the world, and the ability of art to compress and transcend time and place.

All photos in pages 90-93 © James Morris
**31. MEFA’s Falconry Digital Archive**

**Dates:** 2020 - 2022, ongoing project  
**Location:** ARCHiVe, Venice  
**In collaboration with:** MEFA - Middle East Falconry Archive  
([https://www.middleeastfalconryarchive.ae/about/](https://www.middleeastfalconryarchive.ae/about/))

In June 2020 Factum Foundation signed a contract with the Mohammed Bin Zayed Raptor Conservation Fund (MBZRCF) to digitise 56 medieval and early modern manuscripts (now up to a possible 74), all in Arabic and all relating to falconry, in libraries mainly across Europe, the Middle East and North Africa, and to display them in an online archive, the Middle East Falconry Archive (MEFA). Factum Foundation participates in this project from ARCHiVe space in Venice.

![Image of a page from a manuscript]

Staatsbibliothek zu Berlin, *Ms. Ahlwardt 5541*, fols 186ab

MEFA is the digital home and a vital repository for the heritage of Arabic falconry literature, with the goal to safeguard and explore the deep roots of the heritage of Arab falconry. By assembling digital records and researching the manuscripts in their historical contexts, it works to safeguard the intangible traditions, stories, and knowledge of falconry.

To date, MEFA has identified more than 60 manuscripts in Arabic alone, containing texts on falconry written between the eighth and sixteenth centuries across the Middle East. Some of the famous passages were copied 20 times, while others are stored in a single copy. The manuscripts are preserved in libraries across the Middle East, Europe, the US and South Asia. MEFA is collaborating with these libraries to digitise or obtain digital copies of these manuscripts, allowing them to be brought together into a single digital home for the heritage of Arabic falconry literature. The digital records of each manuscript are supported by both technical information for academics and engaging educational information for all falconry heritage enthusiasts.
MEFA is an ongoing research and archival project. Digital manuscripts will be added progressively and by 2023 MEFA aims to include digital records of the approximately 60 manuscripts identified thus far.

Staatbibliothek zu Berlin, Ms. Ahlwardt 5541, 23 and 24

The digitised manuscripts can be seen and compared in the IIIF platform Mirador
32. A V&A cartoon facsimile for the National Gallery, London

Dates: April 9th - July 31st, 2022
Location: The National Gallery, London
In collaboration with: The National Gallery (https://www.nationalgallery.org.uk/)

The series of seven Cartoons by Raphael at the V&A Museum in London was recorded in 3D, colour and infrared in 2019. The obtained information, which was processed by the Factum Foundation team in ARCHiVe, is available online, allowing a close inspection of their complex surface (with a detail that is not possible in front of the originals) through this link: https://www.vam.ac.uk/collections/raphael-cartoons

This research and documentation project is also making possible to recreate the cartoons as exact facsimiles, at 1:1 scale, for exhibition and dissemination purposes. The first cartoon that was reproduced, The Sacrifice at Lystra, was on display in the great exhibition about Raphael in the Scuderie del Quirinale, in 2020. A second cartoon, Paul Preaching at Athens, has been reproduced for the upcoming exhibition about Raphael that will open on 9th April 2022 at The National Gallery in London.

![Image of Raphael's Paul Preaching at Athens](image-url)

Raphael, Paul Preaching at Athens, about 1515-1516, cartoon for a tapestry, 343 x 443 cm
The following images show the different steps of the process of making the facsimile of *Paul Preaching at Athens*: from stitching the tens of 3D scanning tiles that contain the relief information, to the *Elevated Printing* of the data, moulding, casting, colour printing, final retouches and, finally, its installation at the National Gallery in London.
The facsimile of *Paul Preaching at Athens* installed at The National Gallery, London.

**RESEARCH & DEVELOPMENT**

⇒ For more information about the in-progress research project on the series of cartoons and tapestries by Raphael, go to page 72 of this document.
33. Facsimiles of Rembrandt and Bosch for “Human Brains” exhibition in Venice

Dates: from April 20th, 2022
Location: Ca’ Corner della Regina, Venice
In collaboration with: Fondazione Prada (https://www.fondazioneprada.org/?lang=en)

Factum Foundation has carried out the recording and facsimile production of two paintings for the upcoming exhibition “Human Brains”, that will take place in Venice from April 20th, 2022.

“Human Brains” is a multidisciplinary path dedicated to brain studies and presented by Fondazione Prada between November 2020 and November 2022. This program of exhibitions, online activities and public meetings focused on neuroscience represents an intense cultural challenge for an institution like Fondazione Prada.

The two paintings selected by the Fondazione Prada are:

- Rembrandt's Anatomy Lesson of Dr. Deijman, 100x134 cm, Amsterdam Museum
- Bosch's The Extraction of the Stone of Madness, 48x35 cm, Museo del Prado
34. Short film with interviews about ARCHiVe

Dates: Spring 2022
Location: ARCHiVe, Venice

In the Spring of 2022, coinciding with the recording of the tapestry and other works in progress, Factum Foundation is filming a video documentary about ARCHiVe, interviewing the team onsite that is making it possible. The core of the film is to highlight the importance of digital preservation for the future of Venice and its cultural treasures. The interviews will be combined with scenes of the various projects that are being developed on the island of San Giogio, so ARCHiVe’s activities can be explained to both experts and general public.

Stills from the video (editing in progress), from top-left, clockwise: Renata Codello; Chiara Casarin; Costanza Blaskovic; Costanza Blaskovic operating a book scanner; Ilenia Maschietto.