

Museums & Heritage | Conservation

Factum Foundation captured every inch of the seven Raphael Cartoons in high-resolution digital images in summer 2019



History of the cartoons

The *Raphael Cartoons* (1515-16) are Raphael's full-scale painted designs on paper for the *Acts of the Apostles* tapestry series woven by Pieter van Aelst, depicting the lives of saints Peter and Paul. The set of ten was commissioned by Pope Leo X to hang in the Sistine Chapel on feast days. Seven cartoons were shipped to England in 1623 by the future Charles I to serve as models for new tapestries made by the royal Mortlake factory; the remaining three were lost. William III began displaying the cartoons as independent works of art in the late 1600s. Queen Victoria lent them in 1865 to the South Kensington Museum, now the Victoria and Albert Museum.

layers of the cartoons. The technology lays bare the "dramatic" texture of the works, Lowe says, which "make a [Anselm] Kiefer painting look flat". Each cartoon measures roughly 5m by 3.5m, made up of around 200 sheets of paper glued together. The 3D scans of the collaged surfaces "take you back 500 years, when the last people to see that were Raphael and his team of apprentices", Debenedetti says. "Emotionally, it's something we've never been able to offer visitors before."

Raphael's large studio worked fast to create the series of ten cartoons (three had been lost by the time they came to England in 1623) in just 18 months. Factum's greyscale infrared images show preparatory drawings in black chalk or charcoal that are not visible to the naked eye, including the pentimenti when, for instance, a hand was sketched in different positions before being finalised, and "the typical flurry of lines of Raphael's graphic style", Debenedetti says. "You will be able to observe the artist at work, building up the picture."

Other interactive smartphone features include a timeline of the cartoons' history, a "spot the difference" game for families to compare the cartoons with the Vatican tapestries, and explanations of the religious iconography – intended to affirm the leadership of the pope as heir to Peter and Paul, the founding fathers of the Christian Church.

Debenedetti hopes that mobile access will transform the way visitors engage with the cartoons in the gallery. "The public is eager for more interaction," she says. "The only way was to provide a digital offer that would guide you to go back and forth between the information and the work itself." Some of the interpretation, including Factum's browsers, will also be available to view on home computers via the V&A's website.

Despite the age, fragility and consistent display of the cartoons, conservators found them to be in "amazing condition" last summer, Debenedetti says. However, she acknowledges that they "might not survive forever, so it's our duty to record them in the best possible way".

Factum's digital data offers a preservation tool for future generations. They also open up intriguing possibilities to replicate works that are too vulnerable to travel. With permission from the V&A and the Royal Collection Trust, Factum 3D-printed a facsimile of one cartoon, *The Sacrifice at Lystra*, for the major Raphael exhibition held in Rome earlier this year. The technology represents a "new kind of sharing", Lowe says, "for people all over world to see these paintings".

Raphael Cartoons are ready for their close-up at V&A

High-resolution scans of Renaissance treasures go online, revealing fine details of the master's creative process

ART & TECHNOLOGY

By Hannah McGivern

LONDON. Raphael's seven surviving tapestry cartoons for the Sistine Chapel were photographed for the first time in 1858. Lowered from a window of Hampton Court Palace, where they had been on and off display for more than 150 years, the *Raphael Cartoons* (1515-16) were documented by daylight on glass plate negatives over several months. The delicate task was commissioned by Prince Albert, whose

passions for Raphael and photography led him to amass a study collection of 5,000 reproductions of the master's works.

In August and September 2019, the cartoons were recorded once again with cutting-edge technology, this time with high-resolution colour photography, infrared and 3D scanning. Factum Foundation led the five-week project behind the closed doors of the Raphael Court at the Victoria and Albert Museum (V&A) in London – home to the cartoons since Queen Victoria decided to lend them in memory of her husband. It was "like a military operation", says Factum's founder, Adam Lowe, as the recording had

to be coordinated with V&A conservators leading condition checks and Momart technicians removing the vast glass frames from two cartoons at a time.

The high-resolution images captured will now be available to browse online as part of the museum's new digital interpretation of the cartoons, designed by Spiral Productions. A host of digital features will launch on 14 November, coinciding with the reopening of the Raphael Court, in honour of the 500th anniversary of the artist's death.

A nine-month refurbishment has made the cartoons "more visible and legible" in the gallery, says the project's curator, Ana Debenedetti, with a deep blue wall colour to enhance Raphael's "beautiful palette" and new LED lighting to minimise reflections on the glass. "It was about time" to redecorate, she says. The old lighting was installed during a 1996 renovation and had gone out of production, making it impossible to replace broken bulbs.

Hung on high and behind glass, Raphael's scenes from the lives of saints Peter and Paul can nevertheless be hard to see. But gallery visitors will be able to scan QR codes with their smartphones to access an "incredible level of detail" in Factum's images of and beneath the painted surface, Debenedetti says. A digital feature exploring the 16th-century creative process will allow users to "zoom to see the pinholes", revealing how the tapestry designs were transferred to a duplicate set of templates for Pieter van Aelst's weaving workshop in Brussels.

Factum provided the V&A with its online browsers, which visualise the colour, infrared and 3D

Maeght Foundation's Miró Labyrinth meanders towards full restoration

By Georgina Adam

ST PAUL DE VENCE. The Maeght Foundation is one of the south of France's most famous art destinations: built by the dealers Marguerite and Aimé Maeght in 1964, it was the country's first private museum and houses a premier collection of Modern art by Pierre Bonnard, Joan Miró and Alexander Calder, among others.

A highlight is the Miró Labyrinth, conceived by the artist and the father-and-son Spanish ceramists the Artigas, between 1961 and 1981. The terraced labyrinth winds among pine trees in the foundation's grounds, dotted with 20 works of art in ceramic, marble, concrete and iron.

But time has wrought its damage, both visible and structural. With €65,000 raised from the friends of the foundation and other sources, specialist conservators completed the restoration of the 14 ceramics in late September. The works were cleaned with biocides, consolidated with acrylic resin, then



The Miró Labyrinth was constructed over 20 years by the artist and father-and-son ceramists

tinted with acrylic paint and finished with a polyurethane varnish.

"The next phase is to restore the concrete and iron pieces, notably the arch and the pitchfork," says Anne Bourgois, the foundation's development

director. This is planned to start in early 2021, supported by a new fundraising appeal via social media. The concrete arch will be cleaned to remove algae and treated with biocides before it is steam cleaned, says Bourgois. The coating on the iron-and-bronze pitchfork, which has dulled with age, will be replaced with a clear and matte finish, restoring the contrast between the two materials.

A third metal work, *Totem (Personnage)* (1970), has corroded because its base stands in water and has lost some of its thickness, endangering its stability. It will be measured with ultrasound before a reinforcement strategy is decided.

Further down the line are plans to conserve the foundation's collection of 7,000 works on paper, including rare, large-scale Miró lithographs made in the Maeghts' printing press, as well as gouaches, etchings and posters. However, "there is no question" of touching the external Giacometti courtyard, featuring examples of the sculptures *L'Homme qui Marche* and *Grande Femme Debout*. "Alberto

Giacometti's own wish was that they should remain like that, and weather over time," Bourgois says.

The foundation has no public funding for operating costs although it does receive public subsidies. Last year, the Alpes-Maritimes department funded the €150,000 restoration of some of the curved roofs of the iconic Josep Lluís Sert building. The Sud region is providing €50,000 annually towards a three-year plan for the preservation and renewal of the pine trees, which are now 100 years old.

The bitterly divided Maeght family – Aimé and Marguerite's son Adrien, whose children include Isabelle and Yoyo – have bankrolled the foundation in the past. Now the Covid-19 crisis has hit hard, since 70% of income comes from ticket sales. "While we saw a notable increase in visitors in July and August, September to December are likely to be very difficult, since a lot of our visitors are foreign and they can't travel at the moment," says Bourgois. However, an international council was recently established to bolster support for the foundation.