

InsightART

— We measure the DNA of your art



InsightART
Cutting edge X-ray imaging
technology meets the world of art

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InsightART is revolutionising the art world with next-generation X-ray imaging technology

"InsightART strives to safeguard the world's artistic heritage. We've developed a state-of-the-art platform, RToo, designed to assist art restoration experts and to unmask forgeries. InsightART makes the lives of art professionals easier by saving time and boosting results."



Josef Uher
(founder & CTO |
particle physicist)



Cutting-edge technology for art professionals

Reasons to choose InsightART

1. Our detectors are based on CERN technology and are used by NASA researchers.
2. From art specialists to art specialists – we automate the art imaging process.
3. Our technology automates and standardises the image post-production process.
4. RToo provides pseudo-colour X-ray scans revealing differences in material composition.
5. The possibility of both 2D and 3D imaging of scanned objects.

Featured by:



Forbes



business incubation centre
Prague



Showcase

Fig. 1 La Crau with a View of Montmajour, signed Vincent.

Fig. 2 X-ray indicates that there could be another painting underneath.

Fig. 3 Colour X-ray shows it to be a female nude.

Fig. 4 Image of a female nude discovered in the lower layers.

Fig. 5 a), b), c)—Van Gogh's studies of a female nude from 1886–87.

Fig. 6 The image shows a striking similarity to female nudes by Vincent van Gogh from the same period. The scan provided significant evidence to authenticate the painting.



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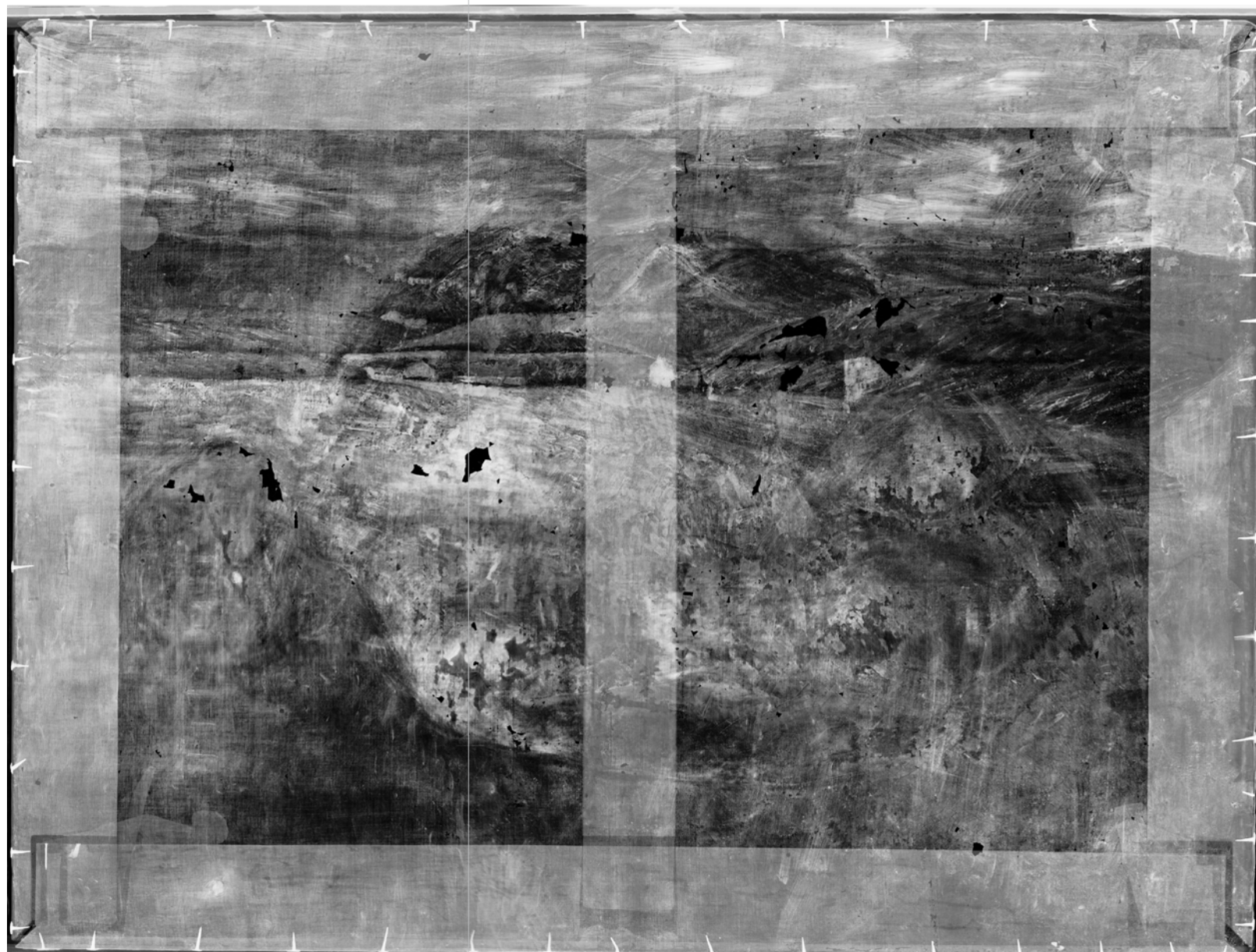
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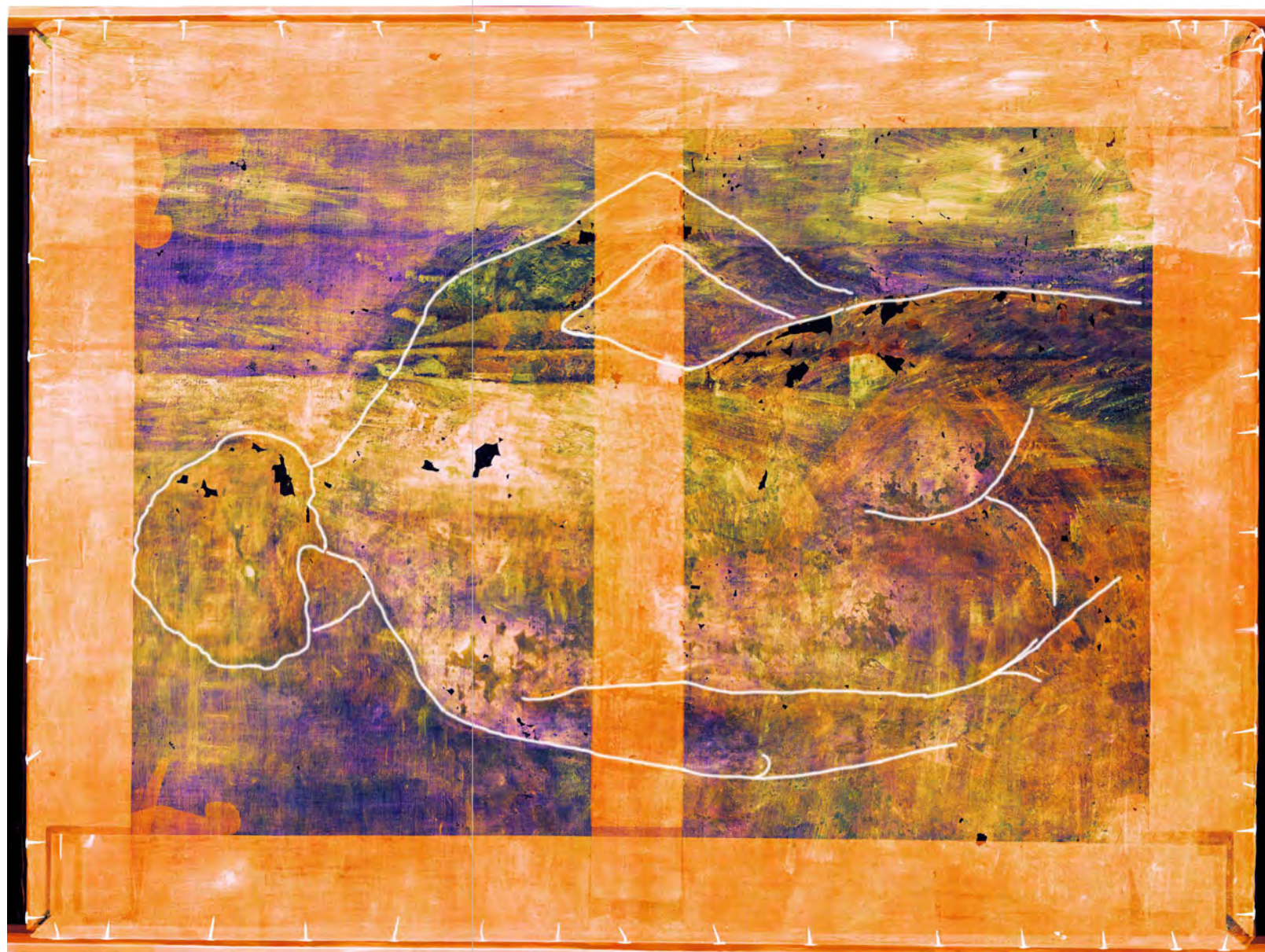
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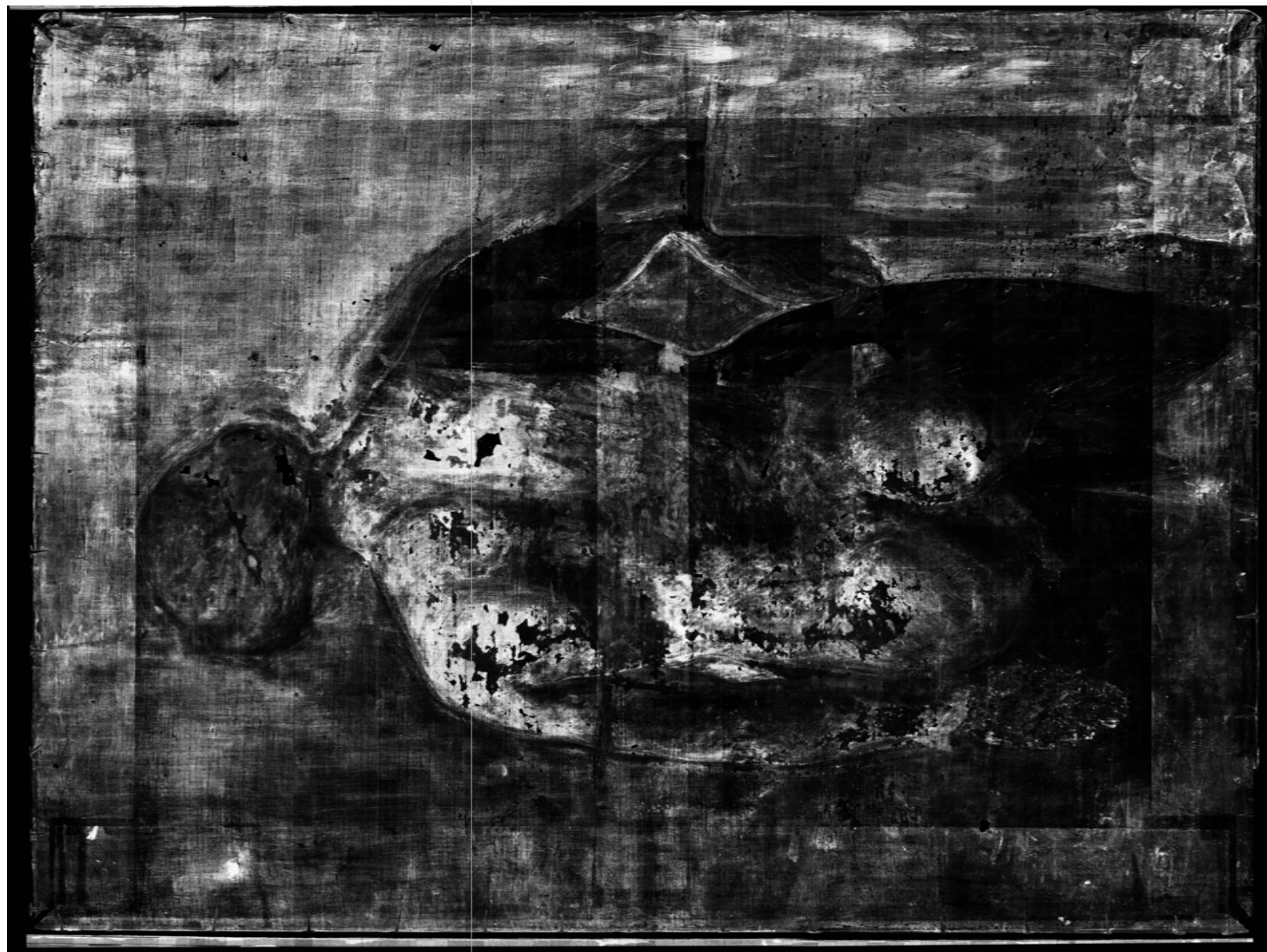
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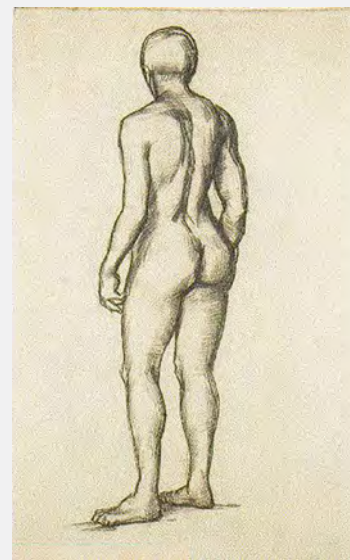
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a)



b)



c)

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Our product

InsightART's main product is the RToo scanner—your “Swiss knife” for art inspection.

	RToo	X-ray tube + film	X-ray tube + Imaging plate	X-ray tube + Flat panel Varex 1207	Medical CT
Large area 2D X-ray images	✓	✓	✓	Custom mechanics required	-
2D image size in single exposure or scan	90x120 cm	typical 30x40 cm	typical 24x30 cm	12x7 cm	-
CT	✓	-	-	-	✓
Number of grey levels	Unlimited	Limited	Limited	Limited	Limited
Resolution [mm]	0.05	0.03	0.05	0.0748	0.5
Spectral imaging	✓	-	-	-	-
Multimodal imaging	✓	-	-	-	-
Online images	✓	-	-	✓	-
Chemical processing	-	✓	-	-	-
Digital data readout	✓	-	✓	✓	✓
Automated digitisation	✓	-	-	✓	✓

InsightART makes life easier

Our platform scans and delivers a full-scale, fully digital high-resolution image with unprecedented contrast range and no need for further adjustments. Simply place the artwork in the robotic scanner, choose your settings from the easy-to-use interface, and let the technology work for you.

NO MORE:



Long hours spent exposing and developing films or scanning imaging plates

FULLY DIGITAL AND AUTOMATED SCANNING



Long hours spent stitching together exposed images on the computer

FULLY AUTOMATED POST-PRODUCTION



Imperfect seams between exposed image tiles

FULL-AREA COMPACT PICTURE

Robotic Scanner RToo!

Your “Swiss knife”
for art inspection

Our multimodal RToo scanner is equipped with specially designed robotic arms that allow for unprecedented FLEXIBILITY, enabling RToo to **scan not only 2D but also 3D objects** including statues, sculptures and antiques.



Statues



Sculptures

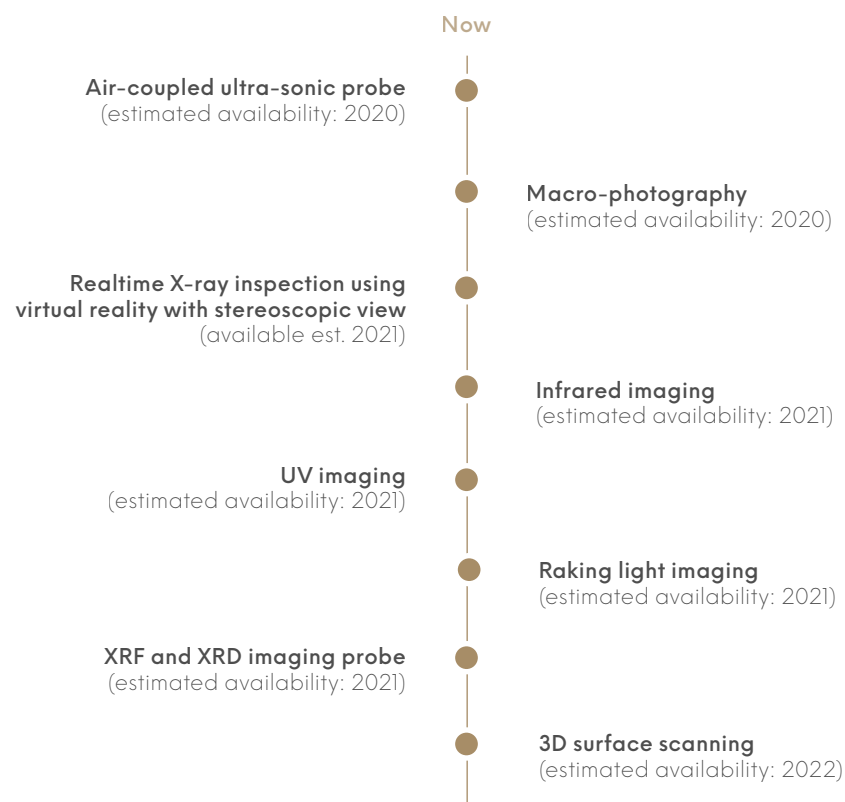


Antiques



COMING SOON: Computed tomography (CT) and more

Our experts are working on the next steps of RToo's evolution to further enhance its position as the all-in-one "Swiss knife" for art inspection. Simply add new modules to make your RToo more powerful, rather than purchasing a brand-new, expensive machine!



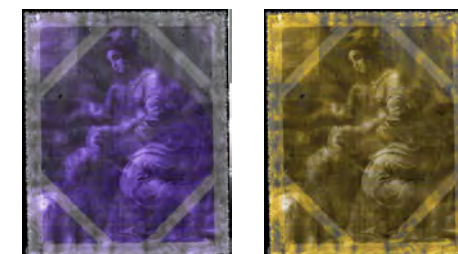
Artwork scans



**A/
Landscape attributed
to Vincent van Gogh**
The X-ray image reveals
a painting of a female nude
strikingly similar to van Gogh's
nudes from the same period,
which provides strong evidence
for the painting's authenticity.



**B/
Raphael – Madonna and Child**
X-ray showing the micro-structure
of the work, which helps in
subsequent art restoration.



1. services

Artworks Scanning Service



Superior quality full-scale and fully digital X-ray images of art objects in unprecedented contrast and detail.

InsightART offers the service of X-raying artworks – **paintings, statues or antiques.**

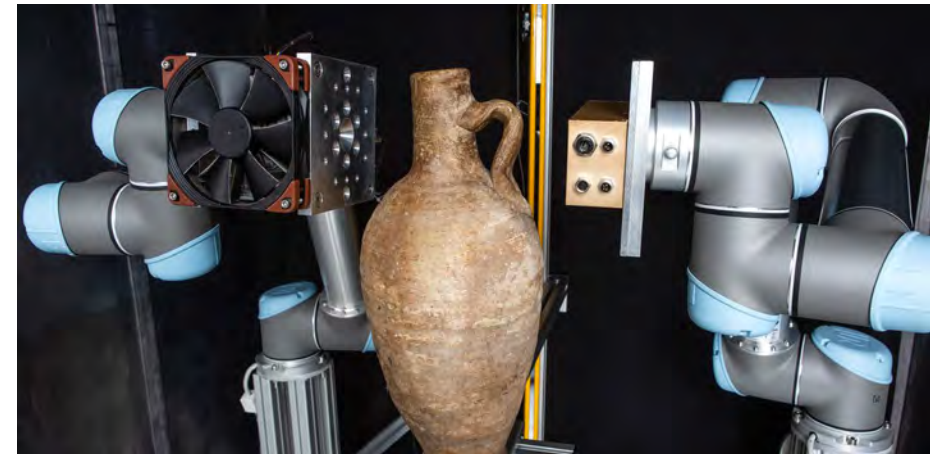
We currently operate a full-service laboratory in **Prague.**

Deliverables:

- a full-area high-resolution black-and-white scan
- a full-area high-resolution colourised scan showing material composition
- report describing the performed measurement and technology

2. hardware

RToo – modular robotic X-ray imaging system with broad expandability



The robotic RToo X-ray scanner system includes:

- Photon counting X-ray imaging detector **Widepix 1x5 MPX3**, resolution of 55 μm
- Collaborative robotic arms Universal Robots **UR-5**
- X-ray tube **Oxford Instruments Apogee**
- Mechanics for robot support
- **X-ray shielded cabinet**
- **Laser Curtain**
- Control PC or Mac
- Scanner control and **data processing software**

Delivery:

6 months from the date we receive your order

Advisory board

As part of our on-going efforts to find the best solutions for art analysis, we are excited to cooperate with leading experts in the fields of art authentication and scientific research.



MAURIZIO SERACINI

Since the mid-1970s Maurizio Seracini has pioneered the use of multi-spectral diagnostic imaging, analytical diagnostics and other advanced technologies to study art and architecture.



OTTO M. URBAN

Otto M. Urban is an art historian specialising in modern and contemporary European art. In 2017 he became curator of the 19th Century Art Collection at the National Gallery in Prague.



MONSIGNOR TIMOTHY VERDON

Monsignor Timothy Verdon is Director of the Opera del Duomo Museum in Florence, Italy. He has served as Consultant to the Vatican Cultural Heritage Commission and is a Fellow at the Harvard University Center for Italian Renaissance Studies.



JIŘÍ FAJT

Jiří Fajt is an art historian specialising in the medieval and early modern art of Central and Eastern Europe. He is the author of numerous publications on art history and has curated many international exhibitions.

Our partners

Advacam

Our parent company, is the developer of photon-counting detectors based on next-generation imaging technology.

Radalytica

Our sister company, provides us with robotic systems. They focus on the implementation of technologies in non-destructive testing (NDT), medicine and other specialised areas.

Air Ventures

is a CEE-based Venture capital group with extensive experience investing in successful innovative high-tech start-ups.

ESA BIC

InsightART is one of the few companies in Central Europe cooperating with ESA BIC.



rd radalytica®



"It has super-sensitive detectors
developed at CERN."

"The machine can X-ray in colour
and also reveal the layers of paint on
canvas."

„...with robotic arms they are hoping
to scan more than just paintings.
Sculptures, pottery even entire pieces
of furniture."

BBC STUDIOS



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