

PRESS KIT

EMBARGOED UNTIL NOVEMBER 11, 2024

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** AI-generated 3D rendering
of St. Peter's Basilica*

LA BASILICA DI SAN PIETRO

AI-ENHANCED EXPERIENCE



BASILICA DI
SAN PIETRO



iconem

Project Name

LA BASILICA DI SAN PIETRO

AI-Enhanced Experience

Exhibition Name

Pétros ení:

An Immersive Experience of the Vatican Basilica

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Project Overview + Purpose

PROJECT OVERVIEW

In November 2024, The Vatican, in partnership with Microsoft, will unveil La Basilica di San Pietro, an initiative that merges AI technology with the spiritual and cultural history of St. Peter's Basilica. The project will feature two AI-enabled immersive exhibitions and an interactive website, providing global unprecedented access to one of the world's most iconic religious landmarks.

Brad Smith, Vice Chair & President of Microsoft, said: *“Technology like AI propels us into the future, but it can also play a pivotal role in preserving our past. This project is a powerful example of how innovation can connect people to history.”*

At the heart of the project is the creation of a digital twin of St. Peter's Basilica, developed in collaboration with Iconem, a leader in digital preservation. Using advanced photogrammetry and AI, this ultra precise 3D replica allows people worldwide to explore the Basilica's history and architecture in immersive ways.

Yves Ubelmann, Founder & CEO of Iconem, added: *“It's like an investigation of the 2,000-year history through one unique monument, and we can see new connections between its past and future. Our mission is to capture the essence of these historic sites and preserve them for future generations.”*

The digital twin also plays a vital role in restoration efforts, helping to identify physical vulnerabilities that have provided new insights into its structure and architecture ensuring its historical, cultural, and spiritual significance endures for future generations.

Cardinal Mauro Gambetti, Archpriest of St. Peter's Basilica, emphasized the importance of preservation, stating: *“Centuries of degradation, combined with the daily influx of over 50,000 visitors, have impacted the Basilica's structure. Changes in temperature and humidity caused by this microclimate have led to subtle deterioration.”*

La Basilica di San Pietro reflects a shared vision of how technology, particularly AI, can be harnessed to preserve collective history while advancing accessibility and education. Timed with the 2025 Holy Year Jubilee, this initiative enhances global engagement, ensuring St. Peter's Basilica remains accessible and meaningful for generations to come.

PROJECT PURPOSE

Key Messages

Preserving Cultural Heritage: La Basilica di San Pietro project merges AI and photogrammetry to digitally preserve St. Peter's Basilica, ensuring its historical, cultural, and spiritual significance endures for future generations.

Global Accessibility: Through the digital twin, people worldwide can explore and engage with the Basilica's rich history and architecture, regardless of their physical location.

Immersive Website: The project includes an interactive website that allows global visitors to experience the Basilica virtually, providing access to its history, art, and architecture through detailed 3D models and educational content.

Educational Impact: This project offers global educators, historians, and students an unparalleled opportunity to study the Basilica using innovative technology.

Project Highlights

Digital Twin Technology: Advanced AI and photogrammetry techniques have created a detailed digital replica of St. Peter's Basilica, allowing users to explore its intricate mosaics, frescoes, and sculptures in ways that were previously impossible.

Pétros ení Exhibition: This immersive AI-powered exhibition at St. Peter's Basilica provides visitors with a unique blend of historical insight and digital exploration, showcasing key architectural and cultural aspects of the Basilica. It offers a cutting-edge experience that combines physical and digital interaction, deepening the connection to the site's history.

New Discoveries: The project has uncovered structural vulnerabilities, such as missing mosaic tiles and fissures, that provide valuable data for future restoration efforts.

Innovative Collaboration: The project is a groundbreaking partnership between the Vatican, Microsoft, and Iconem, combining expertise in technology, cultural heritage, and preservation.



Key Partners

KEY PARTNERS

The Vatican

Custodian of St. Peter's Basilica

The Vatican oversees the collaboration with partners to ensure the preservation of St. Peter's Basilica's cultural, spiritual, and historical significance. As the project's anchor, they provide access to this world-renowned landmark, ensuring its global impact is recognized through digital and immersive experiences.

Microsoft

Technology Partner & AI Solutions Provider

Microsoft plays a central role in La Basilica di San Pietro project, providing AI technology to process and analyze the vast amount of photogrammetry data used in creating the Basilica's digital twin. Through the AI for Good Lab, Microsoft contributed advanced tools that help identify structural vulnerabilities and ensure long-term preservation. This collaboration underscores Microsoft's commitment to empowering communities and preserving cultural heritage for future generations. [Website](#)

Iconem

Digital Preservation & Photogrammetry Experts

Iconem is responsible for leading the creation of the Basilica's digital twin, using cutting-edge photogrammetry techniques to capture over 400,000 images of the Basilica. In addition to its digital preservation work, Iconem coordinated the content and artistic direction of the Pétros ení exhibition, ensuring the historical accuracy and visual impact of the immersive experience. [Website](#)



The Process: Capturing, Preserving, and Sharing

THE PROCESS: CAPTURING, PRESERVING, AND SHARING ST. PETER'S BASILICA

1. Photogrammetry & Digital Scanning

Iconem led the creation of the digital twin by capturing over 400,000 high-resolution images using advanced photogrammetry techniques. Their team spent three weeks scanning the Basilica using various devices, including drones, cameras and lasers. This data was used to create an ultra-precise 3D model, known as the digital twin of St. Peter's Basilica. AI-generated imagery, derived from the photogrammetry data, enhances visualization of both the interior and exterior of the Basilica, helping experts and the public alike explore the site's intricate details.

2. AI-Powered Data Processing

Microsoft's AI for Good Lab processes the vast data from Iconem's photogrammetry, refining the digital twin with millimeter-level accuracy. AI algorithms fill in gaps, enhance details, and create a seamless virtual reconstruction. Additionally, AI helps detect and map structural vulnerabilities in the Basilica, such as cracks and missing mosaic tiles, to guide future preservation efforts.

3. Technological Standards and Innovation

This project sets a new standard in digital preservation by using dynamic tiling to display the 3D model of St. Peter's Basilica at maximum resolution without overloading computing systems. The model's vast complexity—captured by Iconem through photogrammetry—allows users to interact with the Basilica's details in real time. This innovative method could serve as a future model for virtual heritage site preservation, redefining how digital environments are navigated and experienced.

4. Creation of the Digital Twin

The heart of the project is the creation of the digital twin—a virtual, highly accurate replica of St. Peter's Basilica. This allows global audiences to explore the Basilica in ways that were previously impossible, regardless of location. The digital twin also serves as a vital tool for historians, architects, and conservators, providing unprecedented detail for study and preservation.

THE PROCESS: CAPTURING, PRESERVING, AND SHARING ST. PETER'S BASILICA

5. Interactive Kiosks and Digital Platforms

At the Vatican, visitors will engage with the Basilica's history and architecture through AI-powered interactive kiosks. These kiosks will allow users to explore detailed visualizations of specific areas and learn about their significance. Virtual experiences will also be accessible through an interactive website, offering educational tools and immersive content to a global audience about the Basilica's historical, cultural, and spiritual legacy.

6. New Discoveries and Restoration Insights

Throughout the project, key discoveries have emerged that are critical to guiding future restoration and preservation efforts. Using Iconem's photogrammetry and AI analysis, the digital twin revealed:

Missing Mosaic Tiles: Photogrammetry revealed previously hidden or lost mosaic tiles, enriching the Basilica's artistic narrative.

Structural Vulnerabilities: AI analysis identified cracks and fissures invisible to the naked eye, providing essential data for restoration and long-term preservation work. These insights will continue to inform ongoing preservation efforts as the project evolves.

Ornate Ceiling Discovery: During renovations, Vatican teams uncovered an ornate ceiling featuring colored bricks arranged in an Archimedean spiral, a typical Roman brickwork style from the period. This unexpected finding adds to the Basilica's rich architectural history and will contribute to the ongoing restoration efforts.

These findings contribute to the ongoing preservation of the Basilica, and as the project evolves, more insights may emerge to enhance our understanding of this historic site.



Key Voices

KEY VOICES



Brad Smith

*Vice Chair and President
Microsoft*

Brad Smith is a key advocate for La Basilica di San Pietro project, leading Microsoft's efforts to leverage AI for cultural preservation. As Vice Chair and President of Microsoft, Brad champions the ethical use of AI to protect global heritage sites, ensuring they remain accessible for future generations. His leadership underscores Microsoft's commitment to using cutting-edge technology to connect people to history and culture, empowering audiences worldwide to engage with one of the world's most iconic landmarks, St. Peter's Basilica.

Quotes

"As technology like AI propels us into the future, it can also play an important role in preserving our past."

"Our cultural heritage as individuals, communities, and countries provides a link to where we came from and informs us about where we want to go."

"What we're really talking about is creating a culture, a culture that really places artificial intelligence into a central role of serving the common good of all people and protecting our common home."

"It's helping all of us recognize the common bond in every part of humanity."

KEY VOICES

**Cardinal Mauro Gambetti**

*Archpriest of St. Peter's Papal Basilica in the Vatican
Vicar General of His Holiness for the Vatican City
President of the Fabbrica di San Pietro
Fabbrica di San Pietro, Vatican*

Cardinal Mauro Gambetti is the visionary behind La Basilica di San Pietro project. He holds a degree in mechanical engineering from the University of Bologna and was later ordained as a Franciscan monk. As Archpriest of St. Peter's Basilica, he oversees the preservation of one of

**Yves Ubelmann**

*Co-Founder & CEO
Iconem*

Yves Ubelmann is the founder and CEO of Iconem, specializing in the digitization of endangered cultural heritage sites. Trained as an architect, Yves developed new approaches to photogrammetry during his work in Syria, Iran, and Afghanistan, and has since led the 3D digitization of sites like the Giza Pyramids and Pompeii. For La Basilica di San Pietro, Yves oversaw the creation of a highly detailed digital twin, capturing over 400,000 images of St. Peter's Basilica.

Quotes:

"It's like an investigation of the 2,000-year history through one unique monument, and we can see a lot of new connections between the past of the monument and maybe the future of the monument as well."

"Our mission is to capture the essence of these historic sites and preserve them for future generations."

"The goal of my work is to preserve this common ground for all of us..."

OTHER VOICES



Eng. Alberto Capitanucci
Head of the Technical Area
Fabbrica di San Pietro, Vatican

Alberto Capitanucci leads the technical team responsible for the conservation and maintenance of St. Peter's Basilica. He oversees major restoration efforts ensuring the preservation of this iconic structure. His work focuses on addressing challenges caused by centuries of environmental impact, as well as managing the wear from thousands of daily visitors.



Andrea Louis
Software Engineer and Technical Project Manager
Iconem

Andrea Louis is a developer at Iconem, specializing in the creation of digital tools to enhance accessibility for scientific communities and museums. She also serves as a technical project manager, focusing on photogrammetry—capturing and documenting historical sites. Andrea has played a pivotal role in the 3D documentation and preservation of St. Peter's Basilica for La Basilica di San Pietro project.



Carol Ann Browne
Vice President and Chief of Staff
Microsoft

Carol Ann Browne plays a pivotal role in shaping Microsoft's global strategy, leading initiatives that leverage technology for societal impact. In her role as a key voice in La Basilica di San Pietro, Carol Ann emphasizes the importance of cross-sector collaboration and how Microsoft's innovations in AI are helping to preserve cultural heritage. Through her leadership, she brings a strategic vision that ensures Microsoft's technology is used to foster accessibility and educational outreach.

OTHER VOICES

**Elina Thoumieux**

*Exhibitions Project Manager
Iconem*

With a master's degree in Management of Cultural Organizations from the University of Paris-Dauphine, Elina specializes in the production and coordination of exhibitions. After working in the art projects department at the Galeries Lafayette group, she joined Iconem in 2022 as the exhibition project manager. Elina has played a key role in overseeing the coordination and production of the Pétros ení exhibits for the La Basilica di San Pietro project, ensuring that the immersive experience reflects both the historical and digital elements of the Basilica.

**Father Enzo Fortunato**

*Franciscan Friar
Communications Director of St Peter's Papal Basilica
Fabbrica di San Pietro, Vatican*

Father Enzo Fortunato is a Franciscan friar, journalist, and author, recognized for his extensive work in religious communication. As the Director of Communications at St. Peter's Basilica, he has modernized the Church's communication efforts, promoting messages of peace, dialogue, and cultural preservation. Father Enzo is also an accomplished writer and media contributor, regularly engaging with Italian media on matters of spirituality and cultural heritage. His contributions to La Basilica di San Pietro project reflect his deep commitment to preserving the spiritual and historical significance of sacred sites for future generations.

**Father Francesco Occhetta, S.J.**

*Jesuit
General Secretary of the Fratelli tutti foundation
Coordinator of the "Pétros ení" project
Fabbrica di San Pietro, Vatican*

Father Francesco Occhetta, S.J., serves as the General Secretary of the Fratelli Tutti Foundation, working closely with Cardinal Mauro Gambetti. With a background in social ethics and moral theology, Father Occhetta is dedicated to fostering human fraternity and cultural dialogue. In La Basilica di San Pietro project, Father Occhetta plays a central role in bringing the Basilica's history and heritage to life through immersive experiences such as the Pétros ení exhibition, making it accessible to a global audience.

OTHER VOICES



Father Paolo Benanti

Franciscan Friar

Professor of AI Ethics

Pontifical Gregorian University, Roma

Father Paolo Benanti is a leading expert in technology ethics, combining his engineering background with theological insight. After transitioning from engineering to theology, he now advises the Vatican and Pope Francis on ethical technology use. Father Benanti ensures that initiatives like La Basilica di San Pietro leverage innovation to serve the common good and preserve humanity's shared cultural heritage.

Quotes:

“The power that we have in our hands needs a purpose, needs a direction, and this direction has to be universal.”

“Our work is guided by a deep sense of responsibility to preserve our heritage with integrity and respect.”

“Just as bricks can be used to build walls or bridges, we choose to build



Juan M. Lavista Ferres

CVP and Chief Data Scientist

Director of the AI for Good Lab

Microsoft

Juan Lavista Ferres leads Microsoft's AI for Good Lab, where he spearheads the use of artificial intelligence and data science to address global challenges, including cultural preservation. In La Basilica di San Pietro project, Juan plays a pivotal role in overseeing the AI and data science used to create and refine the Basilica's digital twin. His team applies cutting-edge AI technology to process photogrammetry data, ensuring the Basilica's intricate architecture is captured with precision, and that the digital twin serves as an essential tool for long-term preservation and accessibility.

OTHER VOICES

**Martynas Birškys**

*Founder and Creative Director
Dadada Studios
Exhibit Designer*

Martynas Birškys is the founder and creative director of DADADA Studio, a boutique agency specializing in brand and experiential design for cultural institutions. With notable projects for the Warsaw Ghetto Museum and the President's House of Lithuania, Martynas brings extensive experience in blending design with cultural heritage.

**Dr. Mico Capasso**

*Knowledge Designer & Exhibit Narrative Consultant
Fabbrica di San Pietro, Vatican*

Mico Capasso is a Doctor of Philosophy specializing in literary criticism, hermeneutics, and aesthetics. As the Director General of Fondazione Meridies, Capasso has led cultural initiatives that explore the intersection of philosophy and the arts. Known for his critical reflections on modern literature, he has hosted numerous philosophical debates, including those focused on the works of Samuel Beckett. For La Basilica di San Pietro project, Capasso plays a key role in shaping the exhibit narrative and storytelling, ensuring that the cultural and spiritual history of St. Peter's Basilica is thoughtfully conveyed through both historical and philosophical lenses.

**Dr. Pietro Zander**

*Head of the Necropolis and Artistic Heritage Section
Fabbrica di San Pietro, Vatican*

Dr. Pietro Zander is an Italian archaeologist and Head of the Necropolis & Artistic Heritage Section of the Fabbrica di San Pietro in the Vatican. He oversees the preservation of St. Peter's Basilica's necropolis and ancient tombs, ensuring that archaeological findings and historical sites are protected while incorporating modern techniques to support long-term preservation.

OTHER VOICES

**Shawn Wright**

*Partner Director of Design | Emerging Technologies
Microsoft*

Shawn Wright, serving as Partner Design Leader within Microsoft’s Emerging Technology team, spearheads the identification of innovative design patterns to enhance customer value and business. Boasting over 25 years of experience in design and various industries—including game development and innovation—he currently concentrates on rapid prototyping using AI, XR, robotics, and Digital Twins to drive forward Microsoft’s strategy for Industrial Transformation.

**Rokas Kilčiauskas**

*Architect and Founding Partner
Processoffice*

Rokas Kilčiauskas is an architect and associate professor at the Vilnius Academy of Arts, where he also served as head of the Interior Architecture Department from 2013 to 2023. As a co-founder of the architectural firm “Processoffice,” Rokas has contributed to significant projects, including the reconstruction of the Latvian National Museum of Art and the State Knowledge Center at the Presidential Palace of Lithuania. He is also known for his work in exhibition design, creating exhibits for national museums and galleries in Lithuania, and for his involvement in the Lithuanian national pavilion “Museum” at the Venice Biennale of Art.

**Elizabetta Curzel**

*Project Manager
Fabbrica di San Pietro, Vatican*

After a master’s degree in architecture (Polytechnic University of Milan) and a two-year master’s degree in Cultural Heritage Management (Ca’ Foscari University), for the past two decades she has worked as a journalist in science and cultural popularization. She is dedicated to knowledge management and projects that produce social impact. As a project manager for the Pétros ení project, St. Pietro’s Fabbrica side, she facilitated the collaboration between the Vatican, Microsoft, Iconem and Dadada studio and was a consultant for technical, artistic, scientific and historical work groups with the aim of bringing the original project idea to its fulfillment.



Global Education + Real-World Impact

EXPANDING GLOBAL ACCESS AND EDUCATION THROUGH TECHNOLOGY

Virtual Visitors: Through the interactive website and the digital twin, audiences worldwide can engage with the Basilica, regardless of their physical location. This ensures that people who may never visit the Vatican in person can still experience the Basilica's history, architecture, and spiritual importance. Additionally, visitors can explore parts of the Basilica that are typically not open to the public, offering a unique, in-depth perspective of this sacred site.

Educational Impact: The digital model is also a powerful educational tool, enabling educators, historians, and students worldwide to remotely study the Basilica. By making this resource globally accessible, it transforms St. Peter's Basilica into a learning asset for audiences everywhere.

REAL-WORLD IMPACT: LONG-TERM PRESERVATION AND THE 2025 JUBILEE

The technological innovations applied to St. Peter's Basilica have long-lasting implications for both its preservation and its global audience.

Preservation for Future Generations: The project has uncovered new insights, such as missing mosaic tiles and structural vulnerabilities, which will directly inform future restoration efforts. This data is crucial in guiding the Vatican's long-term plans for the Basilica's physical preservation.

Tying to the 2025 Jubilee: This project is timed for launch just before the upcoming 2025 Holy Year Jubilee, where millions of pilgrims are expected to visit. The digital twin and virtual experiences will provide deeper engagement for visitors, helping them connect more meaningfully with the Basilica's rich history.



Exhibition Overview: Péttros ení

EXHIBITION OVERVIEW: PÉTROS ENÍ

Pétros ení (meaning “Peter is here”) is the title of the immersive exhibitions at St. Peter’s Basilica. Inspired by an inscription from the 1940s excavations, believed to mark St. Peter’s tomb, the name reflects the Basilica’s enduring presence. The Pétros ení exhibition, designed by Dadada Studios, blends historical insight with digital reconstructions of the Basilica, offering visitors a unique experience of the Basilica’s art and architecture through interactive digital platforms and physical spaces.

1. Pétros ení – Public Exhibit

Format: Individual visit

Focus: Fragmented attention, on-the-go experience

Purpose: Provides a unique visual introduction to the Basilica

Experience: This immersive on-site experience is accessible to all, encouraging visitors to engage with the Basilica’s history at their own pace. It highlights key visual and historical elements of the Basilica, with opportunities for deeper exploration via interactive digital components enhanced by AI.

2. Pétros ení – Octagons (Online Reservation-Only Exhibit)

The **Octagons** exhibit is a specialized, reservation-only, ticketed experience designed for a more focused and curated journey through select artifacts and significant spaces within St. Peter’s Basilica.

Format: Guided tour, long observance

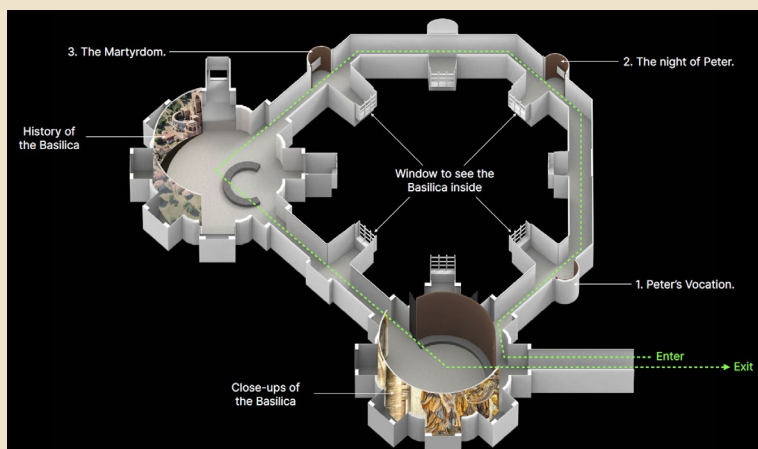
Experience: Provides visitors with a deeper, more intimate exploration of the Basilica’s architecture and history, offering time for reflection and a better understanding of the intricate details that define this sacred site.

Visitor Flow: Managed via an online booking system.

Total Time: Approximately 45 minutes

Capacity: 60 visitors per session, allowing up to 600 visitors daily

Support: 2-3 gallery hosts to assist visitors



EXHIBITION OVERVIEW: PÉTROS ENÍ

Thematic Octagons

Art and Architecture: Showcases the Basilica's artistic and architectural marvels.

Historical Moments: Highlights key historical events and their influence on the Basilica's development.

Religious Significance: Explores the role of the Basilica in the Catholic faith and its spiritual importance.

Technological Preservation: Highlights the innovative tools used for the Basilica's digital preservation, including advanced data capture techniques, detailed 3D modeling, and artificial intelligence.

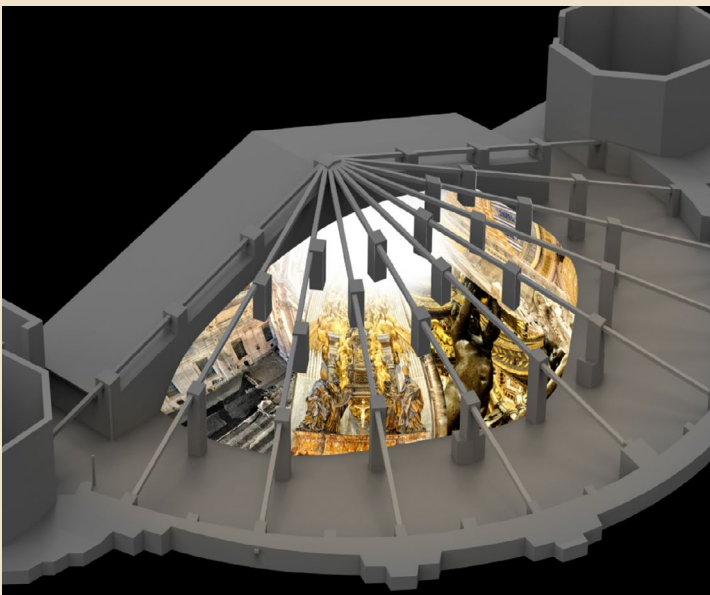
Cultural Impact: Reflects on the Basilica's cultural influence throughout the centuries and its global significance.

Global Accessibility of Péteros ení

The Péteros ení exhibit offers both on-site and digital access, ensuring St. Peter's Basilica can be experienced by a global audience:

On-Site Experience: Visitors can engage with interactive kiosks and thematic displays focused on art, history, and technology, providing in-depth exploration of the Basilica's significance.

Digital Access: A digital twin, created through AI and photogrammetry, will be accessible via an interactive website, allowing virtual visitors worldwide to explore the Basilica's architectural details and cultural heritage, regardless of location.





The Website +
Coming Soon

LA BASILICA DI SAN PIETRO WEBSITE

URL of the Interactive Website: virtual.basilicasanpietro.va

Key Features of the Website:

Immersive 3D Tours: An AI-powered 3D model offers unprecedented access to St. Peter's Basilica, allowing virtual exploration of areas like the Cupola, underground necropolis, and Confessio. Users can experience these spaces with clarity and perspective that surpass what is possible during a physical visit.

Narration and Soundscapes: Guided by Azure Narration Services, the site offers chapters narrating the life of St. Peter and the Basilica's architectural evolution. Immersive soundscapes enhance the experience, bringing the Basilica's history to life.

Unparalleled Detail: The AI-driven platform allows users to zoom in on intricate details of mosaics, sculptures, and the Chair of Peter, revealing features that are difficult to access or view in person. The virtual experience provides a new perspective on the Basilica's treasures.

Global Accessibility: The site is designed with accessibility in mind, offering multilingual support and inclusive features that accommodate users of all abilities. Azure Translation Services ensure a seamless experience for a global audience.

Optimized User Experience: Accessible on both desktop and mobile devices, the website provides a smooth, intuitive interface with high-quality visuals, allowing users to easily navigate and explore the Basilica's most significant features.

COMING SOON

Minecraft Education Experience

In January 2025, La Basilica di San Pietro project will expand its digital engagement with the release of a new Minecraft Education experience. This interactive platform will allow players to explore a virtual version of St. Peter's Basilica, further broadening global accessibility to this iconic site. By merging cultural heritage with gaming, the Minecraft Education collaboration is designed to reach new and younger audiences, reinforcing the project's commitment to education and digital engagement.



Timing Details

TIMING DETAILS

Key Dates

November 2024

Exhibition Launch: November 2024

Digital Twin/Website Launch: November 2024 (coincides with exhibition opening)

November 9, 10, 2024

Private Press Preview: Pétros ení exhibit

November 11, 2024

Public Launch: Pétros ení exhibit and digital platform

Social Media Campaign Launch: To coincide with exhibition opening

End of November/Early December 2024

Sponsored Influencer Videos: Go live

Documentary Release

January 2025

Minecraft Education Experience



FAQ

FAQ

1. What is La Basilica di San Pietro project?

La Basilica di San Pietro is a collaborative effort between the Vatican, Microsoft, and Iconem, aimed at digitally preserving and making St. Peter's Basilica accessible globally. It combines advanced photogrammetry, AI, and digital preservation to create a digital twin, launch two immersive exhibitions, and offer an interactive website for virtual exploration.

2. What is photogrammetry, and how does it relate to this project?

Photogrammetry involves capturing thousands of images from multiple angles to create a 3D digital model. In this project, Iconem captured over 400,000 high-resolution images of St. Peter's Basilica, which were then processed by AI to form a detailed digital twin, providing access for both virtual exploration and preservation insights.

3. What is the digital twin, and why is it significant?

The digital twin is a 3D model of the Basilica, created using photogrammetry and AI. It allows virtual visitors to explore the Basilica in detail and serves as a valuable tool for ongoing preservation and education.

4. How is AI used in this project?

Microsoft's AI for Good Lab processes the vast amount of photogrammetry data captured by Iconem to digitally document the interior and exterior of St. Peter's Basilica. By analyzing hundreds of thousands of high-resolution, geotagged images, AI compares these scans with archival records to identify structural weaknesses and other signs of degradation. These insights not only enhance digital preservation but also uncover hidden architectural features and details about the materials used to construct the Basilica. This deeper understanding aids historians and architects in planning restoration efforts, ensuring the Basilica endures for future generations.

5. What technological innovations set this project apart?

This project sets a new standard in digital preservation by using dynamic tiling, which allows the 3D model of the Basilica to be displayed at maximum resolution without overloading computing systems. This method enables real-time interaction with the Basilica's detailed architecture and could become a model for future virtual heritage preservation projects.

6. When will the project be launched?

The public exhibitions and digital platform will launch in November 2024, ahead of the 2025 Holy Year Jubilee. St. Peter's Basilica welcomes millions of visitors each year, and this project ensures that even those unable to visit in person can experience its history and architecture virtually.



Fact Sheet: La Basilica di San Pietro

FACT SHEET: LA BASILICA DI SAN PIETRO

Project Overview

Partners: The Vatican, Microsoft, Iconem, Dadada, Trifilm

Launch: November 2024

Key Features

Digital Twin of St. Peter's Basilica

Pétros ení immersive exhibitions

Interactive website for global access

Objective: To digitally preserve and democratize access to St. Peter's Basilica, leveraging cutting-edge technologies like AI and photogrammetry. This project ensures the Basilica's cultural and historical significance endures for future generations and is accessible to a global audience.

Technological Innovation

Digital Twin: Created using AI and photogrammetry, offering precise digital preservation of the Basilica's architecture.

AI Role: AI is used to process data and identify structural vulnerabilities, such as cracks and missing mosaics. Iconem and Microsoft's AI for Good Lab are key partners in this effort.

Global Accessibility

On-site: Interactive kiosks provide an in-depth exploration of the Basilica's history and architecture.

Digital Access: Virtual tours and educational resources will be accessible worldwide via the interactive website, enabling users to explore the Basilica remotely.

Key Discoveries

Missing Mosaics: Uncovered through photogrammetry, providing new insights into the Basilica's artwork.

Structural Weaknesses: AI analysis identified cracks and fissures, which inform future restoration efforts.

FACT SHEET: LA BASILICA DI SAN PIETRO

Global Education Impact:

The digital twin and virtual tools offer a valuable resource for educators, historians, and students, making the Basilica's history and architecture globally accessible.

Key Dates:

Exhibition Launch: November 2024

Press Preview: November 9–10, 2024

Public Launch: November 11, 2024

Documentary Release: End of November/Early December 2024



Media Coverage Guidelines + Press Assets

MEDIA COVERAGE GUIDELINES

Embargo Dates:

November 11, 2024: No media content (articles, images, video) can be released before this date.

Contact Information for Press Inquiries:

Contact: Brian Wesolowski

Email: bwesolowski@microsoft.com

Permissions for Using Images and Video Footage:

Press outlets must seek explicit approval for usage of any visuals (images, videos, etc.) from Brian Wesolowski before publishing.

For interviews with key figures involved in La Basilica di San Pietro project, please contact Brian Wesolowski at bwesolowski@microsoft.com.

PRESS ASSETS

Explore the Visual Aids and Graphics folder for downloadable assets to support coverage:

Project Videos: Short explainer and teaser videos offering an overview of the Pétros ení exhibition and the digital preservation of St. Peter's Basilica. [Link to Educational Video](#) [Link to Teaser Video](#)

High-Resolution Photos: Behind-the-scenes images from the scanning process at St. Peter's Basilica, featuring key project figures. [Link to Photos](#)

AI-Generated Artistic Images: High-resolution artistic renderings showcasing key architectural elements of the Basilica, including the Baldachin, statues, marble sarcophagi, and aerial views. [Link to Images](#)

AI-Generated Photos: Photogrammetry-based images of the Basilica's interiors and exteriors, including statues, mosaics, ceiling decorations, and aerial views. [Link to Photos](#)

X-ray Style AI Renderings: A collection of high-quality images featuring x-ray style visualizations of the Basilica's structure, including aerial views and progress shots of the digital twin creation. [Link to Renderings](#)

Pétros ení Exhibition Renderings: Visualizations of the exhibition's layout, including floor plans, octagonal rooms, and immersive spaces. [Link to Renderings](#)

Logos: Official logos for The Vatican, Microsoft, Iconem and Dadada. [Link to Logos](#)

**LA BASILICA
DI SAN PIETRO
AI-ENHANCED EXPERIENCE**