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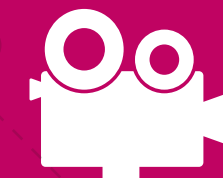
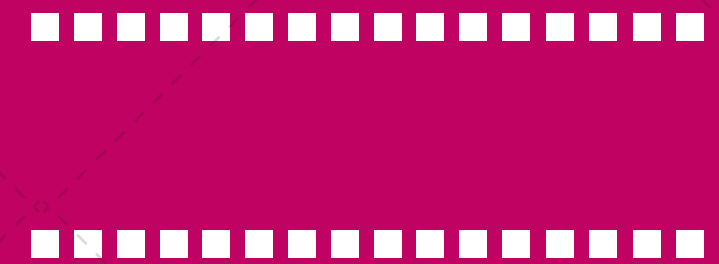
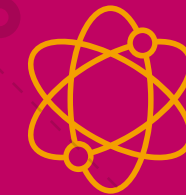


2025 Typical Cases on Protecting and Promoting the Diversity of Cultural Expressions in the Digital Environment



International Centre for Creativity and Sustainable Development under the auspices of UNESCO  
联合国教科文组织  
国际创意与可持续发展中心

# Typical Cases on Protecting and Promoting the Diversity of Cultural Expressions in the Digital Environment



2025



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Centre  
Under the auspices  
of UNESCO



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**2025**



# Preface



2025 marks the 20th anniversary of the issuance of the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions (the Convention). To actively respond to the Convention's continued focus on the coordinated development of the digital environment and cultural diversity, the International Centre for Creativity and Sustainable Development under the auspices of UNESCO (ICCSD) launched a case collection titled "Protecting and Promoting the Diversity of Cultural Expressions in the Digital Environment" in 2024, which was well received. In 2025, ICCSD launched a new round of case solicitation, aiming to showcase innovative practices of digital technology empowering cultural diversity worldwide with a broader perspective and more systematic organization.

This call for cases closely aligns with the core concerns of UNESCO's Monitoring Framework for the Convention on the Protection and Promotion of the Diversity of Cultural Expressions (the Monitoring Framework) and is organized around three key tracks: Technology Empowering the Development of Cultural Industries, Technology Empowering the Protection of Cultural Heritage, and Technology Empowering the Inheritance and Innovation of Intangible Cultural Heritage. ICCSD partnered with nine supporting organizations including the World Trade Point Federation, UNESCO Category 2 Centres and the Professional Committee of Cultural Creativity of Tsinghua University Alumni

Association, as well as numerous universities and research institutions, and conducted an extensive global call for cases on the theme of cultural innovation.

A total of 146 cases were collected from 13 countries and 23 provinces, municipalities, autonomous regions and special administrative regions of China. Following a rigorous evaluation process including preliminary document review, initial expert assessment, re-examination and verification, and final expert evaluation, 40 typical cases were jointly selected by 12 renowned domestic and international experts from various fields of cultural creativity. The evaluation conducted a comprehensive assessment across dimensions such as innovativeness, impact, sustainability, international adaptability and regional balance, as well as replicability and scalability, to ensure the representativeness and exemplary value of the selected cases.

The outcomes of this case call present distinct characteristics of the times:

First, 35% of the typical cases involve the application of AIGC technology, and 70% adopt a combination of two or more cutting-edge technologies to form systematic solutions, demonstrating the structural reshaping of cultural expressions by cutting-edge digital technologies.

Second, high-tech enterprises either applied for or participated in as much as 45% of the typical cases. Well-known tech enterprises including ByteDance, Alibaba Cloud, iFlytek, Sinaverse and New Dimension Imagination have deeply engaged in cultural innovation projects, making technological strength a core force for empowering cultural expression and protection.

Third, international typical cases cover multiple countries such as Italy, Austria, Egypt and Thailand. Cross-border joint application by multiple entities has become a prominent feature of international typical cases, which fully embodies the global collaboration and regional progress in the protection and development of cultural diversity in the digital environment.

Fourth, empowered by digital technologies, the typical cases have effectively supported 13 United Nations Sustainable Development Goals (SDGs) including No Poverty, Quality Education, Gender Equality and Reduced Inequalities, covering 76% of the SDGs. The integration of culture and technology has thus become a vital force for advancing the achievement of the 2030 Agenda for Sustainable Development.

The case collection team believes that these cases vividly confirm the forward-looking judgment of the Monitoring Framework: digital technology has evolved from serving as a tool for cultural presentation to deeply integrating into the entire value chain of cultural creativity, production, communication, transaction and protection,

generating systematic effects on the protection of cultural resources, the upgrading of cultural formats and the development of new quality productive forces. The rapid application of cutting-edge technologies such as the metaverse and generative artificial intelligence is reshaping the development landscape of the diversity of cultural expressions, fostering a number of practical models with international perspectives and innovative traits.

We hope that through the compilation and sharing of this case collection, we can provide up-to-date and concrete practical experience for the global efforts to protect and promote cultural diversity in the digital environment and advance the exchanges and mutual learning of achievements in the integration and innovation of science, technology and culture among all countries. Facing new challenges, and guided by the principles of development, openness and inclusiveness, we strive to provide sustained momentum for building a sustainable future for cultural diversity.

# SAFEGUARDING AND PROMOTING CULTURAL DIVERSITY IN THE DIGITAL ENVIRONMENT TO SUPPORT GLOBAL SUSTAINABLE DEVELOPMENT

HANS D'ORVILLE

Former UNESCO ADG for Strategic Planning  
Chairman of ICCSD Advisory Committee

In March 2025, the International Centre for Creativity and Sustainable Development (ICCSD) under the auspices of UNESCO, officially released a highly innovative publication. It brings together case studies collected in 2024 from China and abroad on safeguarding and promoting cultural diversity to advance sustainable development in the digital environment. This distinctive achievement has been widely recognized and praised, receiving high commendation from the leaders of UNESCO's Culture Sector. Coinciding with the 20th anniversary of the adoption of the Convention on the Protection and Promotion of the Diversity of Cultural Expressions, the publication carries particular significance. Visual materials from one of the featured cases were also selected as part of the visual identity for the 18th session of the Intergovernmental Committee of the 2005 Convention, significantly boosting global attention to the Convention and bringing additional international visibility to the publication. In 2025, a set of thematic videos was released alongside the first edition, showcasing content related to the digital human "Huanhuan" featured in 20 selected exemplary cases.

But being a very first edition, it pointed to a number of adjustments in the selection process, thematic amendments, broadening international involvement and different methodologies for

future such processes leading to global publications. Hence, this second edition provided a more focused and indeed scientific approach in the solicitation and selection of case studies.

Thus, the 2025 case collection plan comprised three core directions formulated in response to the future coordinated development trend of UNESCO's three major cultural conventions, namely the Convention Concerning the Protection of the World Cultural and Natural Heritage, the Convention for the Safeguarding of the Intangible Cultural Heritage, and the Convention on the Protection and Promotion of the Diversity of Cultural Expressions. These directions were as follows:

- Technology empowering the development of the cultural industry;
- Technology empowering the protection of cultural heritage; and
- Technology empowering the inheritance and innovation of intangible cultural heritage.

The international call for cases was launched in late November 2025 via the official ICCSD website. In December 2025, this initiative was successfully recognized as a global celebration event for the 20th anniversary of the Convention on the Protection and Promotion of the Diversity of Cultural Expressions. It has also received support and promotion from other Category 2 Centres of UNESCO, the Ars Electronica Center Linz, Austria, the World Trade Point Federation, and other institutions. The number of submissions ultimately exceeded well over 100 case studies by the deadline of end-January 2026. While the majority of case submissions were from China, international submissions came also from Thailand, Laos, Austria, Hungary, the Mekong region, Egypt, Italy, Serbia and other regions. This clearly was a solid beginning to internationalize the project.

Six core selection dimensions were then defined: innovation, influence, sustainability, compliance and authenticity, international adaptability and regional balance, as well as replicability and promotability. This division allowed benchmarking value for eventual promotion. After a preliminary review, some 50% of the submitted cases were included in the final selection, the results of which are before you in the second edition of the Case Studies. This is an exciting and compelling result,

indeed a solid handbook for future reference and inspiration.

Altogether, 146 case submissions were received from 13 countries. The supporting materials for the various cases included not only written documents and explanations, but also videos, digital materials, AI and immersive technologies, 3D mapping, photos and documents. A group of 12 Chinese and international experts and personalities was empaneled as judges to evaluate and select the ultimate 40 model cases. Overall, the submissions were of an impressive quality making it difficult to select the ultimate "winners". The publication before the reader is a very impressive multidimensional and representative collection.

Clearly, the entire process and the ultimate publication was a great success and the entire ICCSD team, deserves high praise and commendation, which has conceived and organized this process and study. ICCSD can be proud to present to UNESCO this second such study in a row as a tangible contribution for the work of the Culture Sector, highlighting the impact of relevant UNESCO's conventions for the real world.

*Hans d'Orville*

Paris, March 2026

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# Technology Empowering the Development of Cultural Industries



With the extensive application of cutting-edge digital technologies such as artificial intelligence, virtual reality and immersive interaction in the cultural industry, traditional cultural formats including exhibitions and conventions, performing arts, gaming and design are undergoing rapid iteration, while new cultural formats such as immersive experience, AI-generated content and digital art are emerging rapidly. The global cultural industry is evolving from scenario-based innovation to ecosystem reshaping, and a systemic transformation is well underway.

A total of 14 typical cases in the “Technology Empowering the Development of Cultural Industries” track have been selected through this case collection, covering four countries in Asia and Europe—China, Laos, Serbia and Austria—as well as seven provincial-level administrative regions in China. These cases exhibit distinct characteristics of systematic technological integration: AI empowers content creation and intelligent production and broadcasting, XR (extended reality) builds immersive experience spaces, digital twin technology creates virtual-real integrated cultural and tourism scenarios, and digital platforms drive the innovative transformation of cultural resources. They vividly demonstrate how digital technologies are reshaping the production modes, dissemination channels and consumption experiences of cultural content, propelling the cultural industry to leap from traditional formats to a new ecology of digital and intelligent integration, and providing valuable reference models for the innovative integration of technology and culture across the globe.





# Serbia · Construction of Full-Process Intelligent Production and Broadcasting Cloud Platform for Television



## Project Source

Chengdu Sobey Digital Technology Co., Ltd.



## Case Description

Centered on an intelligent production and broadcasting cloud-based platform, the case adopts a hybrid cloud architecture and microservice design to build an efficient, modern content production center for PinkTV in Serbia. The platform integrates end-to-end tools such as web-based rapid editing, professional non-linear editing, intelligent content management, and automated broadcasting, fully supporting its integrated production and distribution from television to new media platforms.

In response to the Serbian market's heavy reliance on imported English programs, the platform deeply integrates a multilingual AI engine, providing high-precision speech transcription, automatic subtitle generation, speaker recognition, facial recognition, and object recognition functions for Serbian and English. It also supports cross-departmental remote collaboration and process management within a unified resource library, effectively empowering PinkTV to achieve digital transformation and enhance its content production efficiency and operational competitiveness in the highly centralized market.

## Solutions and Innovation

Under the framework of the Belt and Road Initiative, which promotes connectivity and digital economy cooperation, Serbia's radio and television industry presents a clear window for technological upgrading. The market is highly centralized, with national mainstream channels dominating—among them, PinkTV is one of the major commercial channels. Meanwhile, the industry's infrastructure is in urgent need of digital transformation, with approximately two-thirds of TV users nationwide still relying primarily on analog terrestrial signals. This stark contrast between technical conditions and top media groups' internal demand to consolidate market advantages and improve content production efficiency lays a practical foundation for high-level technological cooperation and empowering local cultural industry development through technological innovation.

Adopting a hybrid cloud and microservice design, the platform balances security, controllability, and elastic scalability, flexibly adapting to local infrastructure while reserving space for future upgrades. It achieves high-accuracy speech transcription and automatic subtitle generation; further, through speaker recognition, it automatically distinguishes speakers in complex scenarios and generates character-specific subtitles. Combined with facial and object recognition technologies, it intelligently tags characters and scene elements, converting massive media resources into efficiently retrievable and reusable digital assets, significantly improving production efficiency.

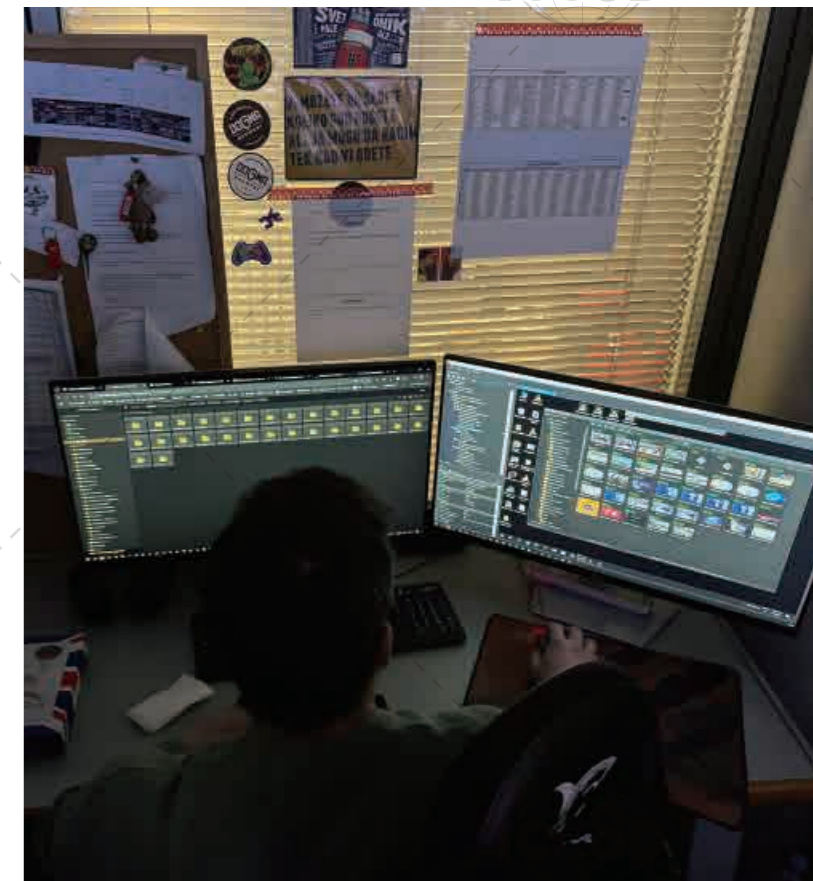


## Social Effects

With a mature, replicable Chinese technological solution, this case provides a complete digital transformation model for countries along the Belt and Road and those with similar media infrastructure. It verifies that cloud production and broadcasting platforms and AI technologies can efficiently and cost-effectively help overseas mainstream media overcome technical bottlenecks, achieve production process reengineering and leapfrog improvements in competitiveness, demonstrating a feasible path for technology to empower the balanced development of the global media industry.

## Expert Comments

Centered on the seamless integration of XDCAM Air and Hive systems, the project develops a end-to-end intelligent production and broadcasting cloud platform, providing an efficient and reliable technical solution for the intelligent upgrading of overseas media.





# Beijing, China · Construction of Ewin Digital Art Center (EDCC)



## Project Source

Creative Ewin (Beijing) Culture & Technology Co., Ltd.



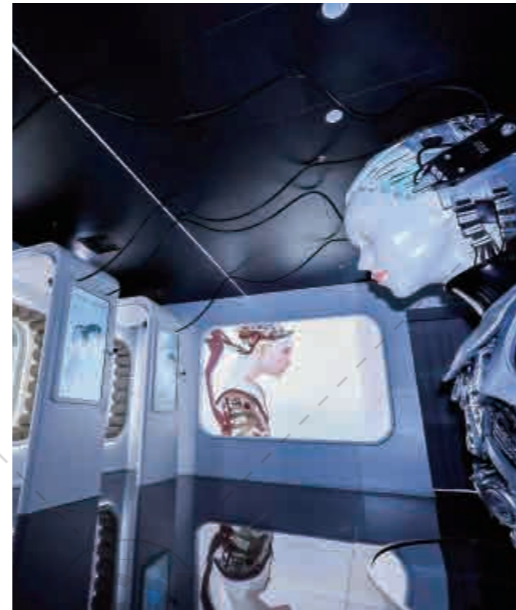
## Case Description

Located on the 4<sup>th</sup> and 5<sup>th</sup> floors of the South Building of Beijing Department Store on Wangfujing Street, Beijing, this case officially opened to the public on October 15, 2024. Covering a total area of 4,008 square meters, the venue includes a permanent digital art exhibition area, IP special exhibition area, cultural and creative products zone, coffee shop, and Industry Alliance Innovation Center, integrating multiple functions. The case's permanent exhibition Spiritual Realm · Future Inspiration World adopts technological means such as 8K display, radar, somatosensory technology, AR/VR/XR, and brainwave sensing devices to create a number of interactive art works. Prehistoric Rock Paintings uses radar-based interactive devices to present the "digital reproduction" of Chinese and Western cave paintings; Stepping into Paintings employs somatosensory interactive imaging devices, where audiences' walking and activities in the space trigger somatosensory devices and bring real-time changes to the scenes in the space; Transcendental Body captures audience images in real time through AR — when audiences stand in front of the LED interactive screen, authorize the camera to collect facial features and input cyborg style requirements, AI can generate the audience's cyborg image on the screen. It utilizes LEDs, 8K screens and screen casting to build a unique multi-sensory space of Beijing's cultural aesthetics.

## Solutions and Innovation

This case can promote the integrated innovation of cutting-edge technologies and digital cultural content, focusing on advancing the R&D and industrial application of technologies such as digital art big data, AI image processing, super-resolution image processing technology, somatosensory body recognition, radar recognition, VR\XR\AR, cloud computing, 5G+8K, new displays, eye protection mechanisms and metaverse. It promotes the construction of an open and shared digital art big data platform, gathering public cultural institutions such as museums, art galleries, libraries and cultural centers, as well as a large number of digital art content creators, to carry out digital archiving, secondary creation and cloud-based storage of art content.

Through sensing technology, display technology, virtual engines, artificial intelligence and other means, the case creates a hybrid virtual-physical metaverse space consisting of human civilization landscapes of the past (to understand the history of civilization), the diverse supercontinent wonders of all things (to understand artists' creations), and the infinitely co-created new world of the future (to explore one's own creativity). The exhibition form combining online and offline interactive experiences provides the public (especially teenagers and children) with a full-sensory experience integrating artistry, technology and education, building a vibrant and infinitely rich world of inspiration.



## Social Effects

Since its opening in September 2024, the digital art center has achieved a cumulative flow of over 330,000 visits, hosted more than 200 study tour activities for primary and secondary school students, covering over 10,000 teenagers, and was approved as the Beijing Primary and Secondary School Students' Social Practice Innovation Education Base.

In 2019, the H.629.1 International Standard for Digital Art Display, led by the case's implementation team, was approved and released by the International Telecommunication Union (ITU). In 2020, the H.629.1 International Standard Industry Alliance for Digital Art Display was established. To date, it has established strategic cooperation with more than 40 cultural and museum institutions such as the Palace Museum and the National Museum of China, as well as local governments, and created more than 50 benchmark digital experience scenarios and 400,000 ubiquitous experience scenarios.

## Expert Comments

Centered on the seamless integration of XDCAM Air and Hive systems, the project develops a end-to-end intelligent production and broadcasting cloud platform, providing an efficient and reliable technical solution for the intelligent upgrading of overseas media.



北京中关村学院 x 中关村人工智能研究院 ICAIS 2025 国际人工智能科学家大会 INTERNATIONAL CONFERENCE ON AI SCIENTISTS

# 碳硅融合高端圆桌：AI与人类共话未来科学

## High-Level Roundtable: AI and Humans on Future Science

主持人/Host	对话嘉宾/Panelist		
<b>刘铁岩</b> Prof. Tie-yan Liu 北京中关村学院院长 President of Zhongguancun Academy Chairman of Zhongguancun Institute of Artificial Intelligence	<b>亚利耶·瓦谢尔</b> Prof. Arieh Warshel 2013年诺贝尔化学奖获得者 Nobel Laureate in Chemistry (2013)	<b>托马斯·萨金特</b> Prof. Thomas J. Sargent 2011年诺贝尔经济学奖获得者 Nobel Laureate in Economic Sciences (2011)	<b>李勇</b> Prof. Yong Li 北京中关村学院科研部副部长 清华大学电子工程系长聘教授 Deputy Head of the Department of Research, Zhongguancun Academy Dept. of Electronic Engineering, Tsinghua University

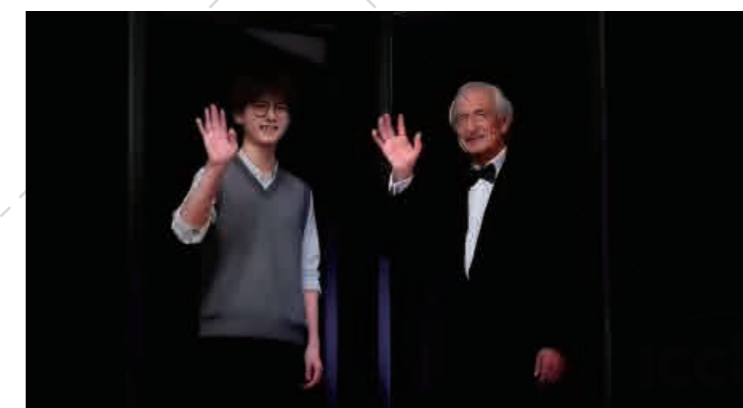
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# China Beijing · MeetaVista Glasses-free 3D Embodied AI Digital Human (Scientist)



Project Source  
 MeetaVista (Beijing) Technology Co., Ltd.



## Case Description

This case builds a hardware–software integrated AI spatial interaction system relying on innovative light–field level Glasses–free 3D display. Integrating five core technologies—large language models (LLMs), AI agents, Glasses–free 3D display, photorealistic modeling, and real–time rendering—it forms an integrated "Cognition–Presentation–Interaction" system. It has achieved commercial implementation in fields such as advertising, retail, cultural tourism and education, and provides immersive display solutions for leading brands across multiple industries at home and abroad.

## Solutions and Innovation

Traditional 2D digital humans offer a limited interactive experience. As demand for intelligent interaction escalates across various sectors, there is an urgent need for immersive and tangible solutions. The Glasses–free 3D embodied digital human technology represented by this case enables the three–dimensional and natural interaction of AI digital humans, breaks the limitations of cross–regional interaction, and realizes remote "presence" in the form of digital humans. It mitigates pain points in service scenarios, including high labor costs and limited operating hours, by providing 24/7 standardized intelligent services.

The self–developed light–field level Glasses–free 3D display technology of this case achieves high–definition stereoscopic image presentation with fully independent intellectual property rights. Combined with deep learning algorithms and a real–time rendering engine, it reaches industry benchmark levels in indicators such as image brightness, resolution, viewing angle and fluency. The technology is deeply integrated with AI multimodal perception capabilities, supporting natural interactions such as gestures, voice, and eye movements—it can intelligently identify user intentions, dynamically present information such as character narration, product disassembly, process demonstration, and scene restoration, and adjust content in real time to adapt to audience behaviors.

Based on the self–developed multi–viewpoint optical field reconstruction technology, the terminal breaks the reliance of traditional 3D on auxiliary equipment such as glasses and helmets, realizing Glasses–free 3D display with 4K ultra–high–definition resolution, 120° ultra–wide viewing angle, and 60–80 cm depth of field, supporting simultaneous viewing by multiple people from multiple angles. The built–in AI agent of the terminal possesses real–time rendering and natural language understanding capabilities, enabling scenario–based and personalized interactions.



## Social Effects

Currently, this case has been applied in key domestic cultural and museum venues: audiences can complete in–depth interactions with digital content through gestures and voice without touching exhibits, which not only ensures the safety of cultural relics but also realizes the "living presentation" of historical relics. The core products of the case have achieved large–scale implementation in scenarios such as AI + retail, AI + education, and AI + cultural tourism, serving leading clients including luxury groups and exhibition enterprises.

As China's first glasses–free 3D embodied digital human capable of real–time cross–regional on–stage dialogue, it was successfully deployed at the ICAIS 2025 conference,

engaging in on–stage interaction with Nobel Prize laureates. It has been covered by authoritative media such as CCTV's News Network, establishing itself as a benchmark in the field of human–computer interaction.

This case provides a "Glasses–free 3D + Embodied Interaction" technical paradigm for the industry, which can effectively promote the upgrading of digital humans toward stereoscopy and interactivity. With the emergence and development of new cultural formats such as immersive experiences in the digital environment and generative AI creation, the technical support provided by this case can create replicable solutions for multiple scenarios and accelerate the digital transformation of various fields.

## Expert Comments

This project integrates core technologies such as glasses–free 3D and AI agents to build an embodied digital human system, innovates the models of cultural presentation and interaction, and enables the living display of cultural resources. Its implementation across diverse cultural scenarios addresses the pain points of the industry and establishes a technical paradigm, setting a benchmark for technology empowering the development of the cultural industry and boosting the digital transformation of the sector.



# 声纹影纪

皮影戏视听典藏

Digital collection of intangible cultural heritage:  
Chinese shadow puppetry

Beijing, China ·  
China Audio Network:  
Practical Exploration  
on the Digital  
Protection and  
Inheritance of Audio  
Cultural Heritage



## Project Source

Huayun Culture and Technology Co., Ltd.  
Zhongke Huijin Digital Technology (Beijing) Co. Ltd.



陕北音乐数字典藏

陕北音乐数字典藏

## Case Description

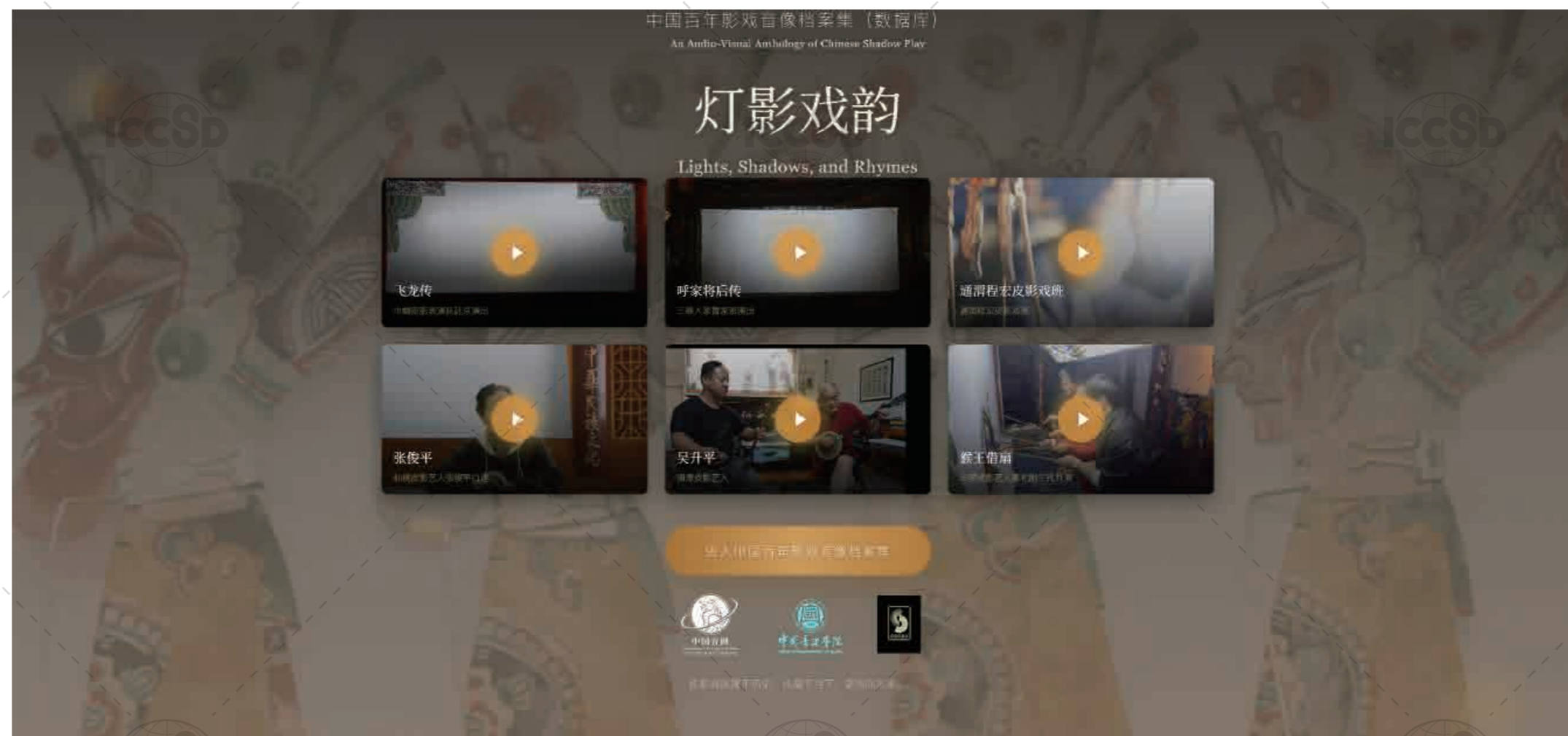
"China Audio Network" is built around a century's worth of precious Chinese historical recordings, integrating the traditional Chinese music system. It covers various categories of audio documents preserved in multiple media such as wax cylinders, records, open-reel tapes, and cassette tapes since the beginning of audio recording in the late Qing Dynasty, including Chinese opera, folk art, ethnic instrumental music, song and dance, religion, and social documentation. As a large-scale resource library for the protection of China's intangible cultural heritage (ICH), it is also a high-quality digital publishing project approved by the National Press and Publication Administration. It consists of ten sub-databases: Red Cultural Gene Database, Chinese Opera Database, Chinese Folk Art Database, Ethnic Song Database, Song and Dance Music Database, Ethnic Instrumental Music Database, ICH Special Database, Grassland Music Database, Audio Network Lecture Hall, and Music Score Database.

## Solutions and Innovation

Amid the rapid advancement of the digital era, numerous audio cultural heritage items carrying national memories and historical value, such as old records and historical recordings, are facing a grave crisis. Physical carriers are aging over time and have stringent storage requirements, leading to an increasing risk of damage and loss. In addition, traditional music cultural resources are scattered, and public access to these resources is quite limited. To safeguard cultural diversity and ensure the continuation of the national music heritage, it is imperative to systematically rescue, integrate and revitalize these precious resources with modern technologies.

This case establishes a deeply integrated model of "technology, culture, and service". In cultural inheritance, it not only focuses on rescue restoration to revitalize old records and historical recordings degraded over time, but also conducts scholarly organization, cataloguing and verification in accordance with authoritative standards to ensure the standardization and academic rigor of resources. Meanwhile, it actively promotes industrial application, transforming cultural resources into products and services for the public, and realizing the organic unity of cultural value and market value.

Supported by this model, the case has successfully addressed many challenges in the inheritance of audio cultural heritage, such as resource vulnerability, scattered distribution, difficulty in access and retrieval, effectively promoting the dynamic dissemination and efficient utilization of resources. Through creative transformation and integration of modern technologies, the case contributes to enhancing the contemporary appeal of traditional culture and increasing public participation, breathing new vitality into cultural heritage.



## Social Effects

This case has built the most comprehensive and largest digital resource library of traditional music in China, covering nearly 1,000 universities, libraries and cultural institutions across the country, providing robust data support for traditional music research, education and dissemination. In terms of technology application, it has boldly explored resource presentation forms in diverse scenarios, using cutting-edge digital technologies such as GIS, large AI models and knowledge graphs to present traditional music in innovative and interactive ways, all of which have been launched or delivered for use.

Globally, it provides a complete and replicable solution of "digital rescue — systematic integration — creative transformation — sustainable operation" for regions and institutions facing audio-visual archive protection challenges. Using digital technology as a powerful tool, it effectively protects endangered cultural heritage, moves beyond the traditional single preservation model and promotes the transformation of cultural heritage into a sustainable cultural industry. Through its own practice, it has contributed solid and effective Chinese experience to the protection of cultural expression diversity in the digital era, becoming a benchmark model for the global cultural heritage protection field.

## Expert Comments

Centered on the seamless integration of XDCAM Air and Hive systems, the project develops a end-to-end intelligent production and broadcasting cloud platform, providing an efficient and reliable technical solution for the intelligent upgrading of overseas media.



# Fujian, China · Innovative Practice of Collaborative Protection of Fujian Tulou, Hakka and Southern Fujian Intangible Cultural Heritage Linked by Tencent Games



## Project Source

Shenzhen Tencent Computer System Co., Ltd.  
People's Government of Yongding District, Longyan City,  
Fujian Province  
Zhangzhou Media Group



## Case Description

Leveraging its platform product matrix, user base, advanced technologies such as the proprietary AI game engine GiiNEX, and diverse game IP portfolio, Tencent Games launched this collaborative protection project in conjunction with local institutions including the People's Government of Yongding District, Longyan City, Fujian Province, and Zhangzhou Media Group, as well as ICH inheritors from both regions. Aligned with UNESCO's "people-centered" and holistic protection concepts, the case constructs a three-dimensional model of "online digital activation – offline scenario-based experience – collaborative industrial ecosystem development", realizing in-depth integration of material heritage with the intangible cultural heritage of the Hakka and Southern Fujian ethnic groups. It promotes the living inheritance of heritage and local sustainable development, providing a replicable model for the collaborative protection of dual-ethnic heritage in the Asia-Pacific region.

Based on three major game IPs — Moonlight Blade, Hero Kill, and Star Dream — the project covers nearly 20 ICH items across all three categories defined in the 2003 Convention for the Safeguarding of Intangible Cultural Heritage, encompassing the distinctive features of both the Hakka and Southern Fujian ethnic groups. It builds a closed loop of "digital activation – content co-creation – scenario linkage – industrial empowerment" covering Yongding and Zhangzhou, enabling the coordinated revitalization of both tangible and intangible cultural heritage across the two regions.

## Solutions and Innovation

The case innovatively proposes a "three-in-one" collaborative protection methodology, providing a scientific framework for dual-ethnic heritage protection:

First, the IP-driven cross-regional integration method. Taking the three major game IPs as links, it breaks the geographical boundaries between Yongding and Zhangzhou, as well as the protection barriers between material heritage and the dual-ethnic ICH. Through co-creating integrated content, players can understand the symbiotic relationship between the two ethnic heritages through interaction, balancing cultural authenticity and communication appeal.

Second, the technology-empowered living presentation method. Utilizing digital technologies such as 3D scanning, game engines, and AI automatic generation, it not only establishes online digital archives for cultural heritage such as Tulou and Guandi Temples, solving the problem of accurate display of physical textures, but also makes ICH "visible and interactive" in virtual scenarios and material spaces, activating the vitality of living inheritance.

Third, the multi-stakeholder collaborative governance method. A joint project team consisting of the government, Tencent, ICH inheritors, and community residents has been established to coordinate heritage restoration, ICH inheritance, industrial operation and other work in both regions. This ensures that protection plans are in line with local realities, making communities and inheritors the main bodies of protection and practicing UNESCO's "people-centered" concept.



## Social Effects

Relying on the influence of game IPs, the case has achieved a cumulative communication reach of over 100 million person-times. According to data from Ctrip.com, 86% of Moonlight Blade users actively pay attention to project-related information when searching for "Yongding". In 2024, the Yongding Tulou Scenic Area received 5.0419 million tourists, a year-on-year increase of 8.16%, with Huanxing Lou generating annual income exceeding 15 million yuan; in 2025, the number of tourists in the Dongshan Guandi Cultural Industry Park reached 803,000, a year-on-year increase of 8.6%. The implementation of the project has added nearly 100 jobs locally, with an average annual income increase of over 10,000 yuan per person, driving the development of related industries such as transportation and services, creating a path to prosperity for residents in the region, and realizing a virtuous cycle of "protection, promotion, and income generation".

The case has been selected as an Excellent Case of Digital Innovation Demonstration in Culture and Tourism (2023), a Typical Innovative Practice of "Integrating Intangible Cultural Heritage into Modern Life" (2024), and a Typical Practice Case of "Creative Transformation and Innovative Development" in National Folk Literature and Art (2025). It has also been successively covered by mainstream media such as People's Daily and Xinhua News Agency. For the first time, the case systematically summarizes the practical experience of the project in Yongding and Zhangzhou, responding to the 2025 case collection themed "Protecting and Promoting the Diversity of Cultural Expressions in the Digital Environment", and facilitating international cooperation and experience sharing in the global field of heritage protection.

The standardized implementation process of this case can be replicated in the protection practices of multi-ethnic and cross-regional heritage around the world, providing a Chinese solution of "digital empowerment for collaborative heritage protection" for other countries and regions, helping global heritage resources achieve sustainable living inheritance, and enhancing the international communication power and influence of multiculturalism.

## Expert Comments

Centered on the seamless integration of XDCAM Air and Hive systems, the project develops a end-to-end intelligent production and broadcasting cloud platform, providing an efficient and reliable technical solution for the intelligent upgrading of overseas media.



# Beijing, China · “The God of Shaolin Kung Fu” Digital Experience Project



## Project Source

Beijing Sinaverse Network Technology Co., Ltd.



## Case Description

As a national intangible cultural heritage (ICH), this case is set against the backdrop of the Shaolin Temple, integrating elements such as history, martial arts and Zen. Through an immersive experience, it presents the legendary story of King Kinnara protecting the temple, perfectly combining traditional culture with modern technology. The new experiential product enhances tourists' sense of participation, enriches the depth of cultural experience in on-site tours, protects and inherits Shaolin Temple's cultural heritage and martial arts spirit. It helps Shaolin culture achieve cross-circle communication, expand its influence, and explore a new model of integration between cultural tourism and technology.

## Solutions and Innovation

This case expands the visiting radius of Shaolin Temple's architecture and addresses the problems of high barriers to international communication, high experience thresholds, and high operating costs associated with traditional on-site Shaolin Kung Fu demonstrations. Through cutting-edge motion capture and spatial computing technologies, it restores real architectural scenes and lifelike Zen martial arts performances, breaking time and space limitations; using lightweight XR equipment as the carrier, audiences can enjoy an immersive experience without being physically present, eliminating the costs of cross-regional and cross-border research and study. The modular technical architecture achieves cost reduction and efficiency improvement; through multi-language adaptation, ICH culture is enabled to go global digitally at low cost, broadening international communication paths.

During the trial operation period, the average daily attendance reached 240 visitors, with a user satisfaction rate of 96%. Technically, reusable modules were developed: the reuse rate of architectural models and 3D scenes is 100%, providing digital assets for subsequent works and other types of performances; the reuse rate of XR equipment is 90%, enabling touring performances across China and even the world, reducing operating costs by 70% compared with traditional offline on-site performances (joint research by the temple and universities). It promotes the integration of Shaolin Temple's architecture and Shaolin Zen martial arts into the research and study system, forming replicable digital ICH experience courses and communication plans.



## Social Effects

As a benchmark project for the digital overseas expansion of ICH, the "ICH IP + cutting-edge technology + global communication" paradigm constructed by this case provides a replicable template for the dissemination of national-level ICH.

By replicating Shaolin research and study and promoting Shaolin Zen martial arts culture through immersive experiences, the case breaks geographical limitations to achieve the popularization of ICH knowledge, effectively helping global audiences deeply understand traditional Chinese culture and promoting cross-cultural educational exchanges.

Integrating innovative applications such as AIGC, 1:1 3D world replication, real-time spatial computing, and centimeter-level motion capture, it innovates ICH communication infrastructure, forms a replicable digital solution, and promotes the in-depth integration of technology and cultural inheritance.

Replacing traditional on-site performances with low-carbon digital experiences effectively reduces carbon emissions in the cultural and tourism industry, enriches the cross-cultural consumption supply of cities, and builds a cultural industry ecosystem with both ICH heritage and sustainable development.

## Expert Comments

Through immersive narration, the project reconstructs the Shaolin cultural experience, providing an innovative model for the youth-oriented communication of traditional martial arts culture.



# Beijing, China · Dance Poetry Drama “Only This Green and Blue”



## Project Source

China Oriental Performing Arts Group Co., Ltd.,  
The Palace Museum, People.cn Co., Ltd.



## Case Description

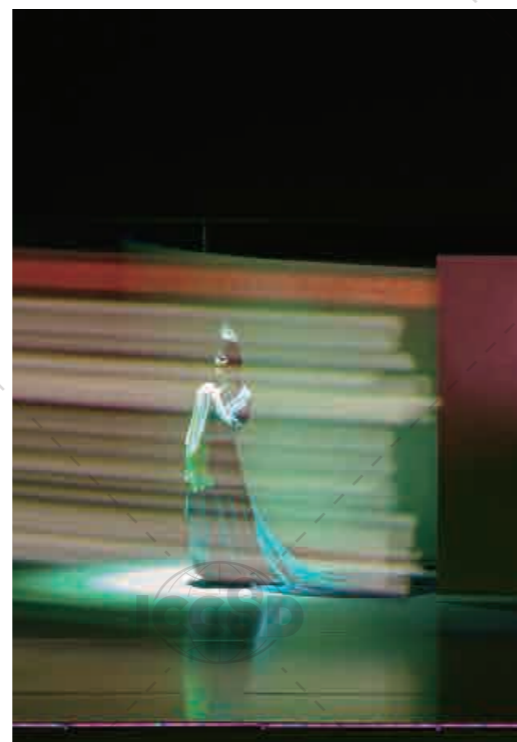
Inspired by "A Thousand Miles of Rivers and Mountains", one of China's top ten famous traditional paintings created by Wang Ximeng in the Northern Song Dynasty, this case addresses the gap between this national treasure and contemporary audiences—due to its preciousness, the painting is rarely exhibited to the public. The dance poetry drama "Only This Green and Blue" aims to break the limitations of traditional stages and static exhibitions, bringing this museum-held masterpiece to life through comprehensive digital intelligence and artistic means, building a cross-millennium dialogue across time and space, and exploring a new paradigm of integration of technology and humanity.

The case uses intelligent stage technology for dynamic extraction and secondary creation of the painting: through an "inner tank" multi-tier rotating stage driven by 18 motors, combined with LED-based multimedia projection and holographic gauze screen, the two-dimensional green-blue mountains and rivers are transformed into a three-dimensional space-time that can be lifted, translated and rotated. The technical team accurately calculated the movement curves of the actors' movements and the mechanical stage through data modeling, so that the dancers and the background images form corresponding movements, and finally dynamically "unfold the scroll" on the stage, creating an immersive aesthetic artistic conception of "heaven and earth rotating" and "people wandering in the painting".

## Solutions and Innovation

With "humanistic spirit as the core and digital intelligence technology as the wing", this case conducts creative translation, aiming to solve the problem of experience gap and inheritance fault between cultural heritage and contemporary audiences, especially young groups. Through academic research and artistic imagination, the case transforms the history, characters and craftsman spirit behind the painting into an emotional and warm story core (such as the cross-time communication between the Scroll Unfolding Man and Wang Ximeng); then, using intelligent stage technology, it converts static visual symbols into an immersive dynamic theater environment, allowing the audience to "enter" the painting and intuitively understand the oriental philosophy of "harmony between man and nature" and landscape aesthetics through sensory shock. Technology here is not for show, but a bridge serving humanistic expression and emotional resonance.

The highlights of this case lie in the in-depth integration of technology with aesthetics, narrative and experience, as well as cultural value and industrial ecosystem: on the one hand, intelligent technologies such as numerical control machinery and multimedia projection are transformed into a language to convey the "blank space" and "artistic charm" aesthetics of Song Dynasty paintings. Dancers are combined with projections through translucent gauze screens, transforming into undulating mountains, which is a successful digital translation of classical aesthetics; on the other hand, it pioneered the genre of "dance poetry drama", with seven chapters: "Unfolding the Scroll, Inquiring about Seal Script, Singing Silk, Seeking Stones, Practicing Brushes, Tempering Ink, Entering the Painting". It weakens linear plots, strengthens poetic expression and imagery presentation, leading the audience from "looking at the painting" to "understanding the emotion", and empathizing with the ancient craftsman spirit and the pure heart of the creator.



## Social Effects

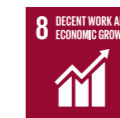
The case has achieved remarkable multi-dimensional achievements. Artistically, from its premiere in 2021 through September 2025, the drama has completed more than 800 performances, with tickets sold out wherever it goes, becoming a phenomenal cultural brand. Economically, it has derived more than 100 cultural and creative products, symphony concerts, digital collections, etc., forming a complete IP industrial chain with significant commercial linkage effects. In terms of communication, its influence has extended from the theater to the 2022 CCTV Spring Festival Gala, triggering a national "Green-Blue craze", and has become a calling card for Chinese culture to "go global" through overseas tours.

## Expert Comments

Based on the cultural genes of traditional calligraphy and painting, the project reconstructs the expression of classical aesthetics with contemporary dance vocabulary. It not only safeguards the spiritual core of cultural heritage but also highlights the artistic value and social influence of cultural inheritance.



Hubei, China ·  
 Longlasting  
 Civilization: Intelligent  
 Society VR  
 Experience Hall



Project Source

Longlasting Civilization (Wuhan) Intelligent Technology Co., Ltd.  
 PKU-WUHAN INSTITUTE FOR ARTIFICIAL INTELLIGENCE



## Case Description

Commissioned by the Administrative Committee of Wuhan Donghu New Technology Development Zone (Optics Valley of China) and built by the PKU-Wuhan Institute of Artificial Intelligence, this case is a key popular science exhibition hall project of the National Intelligent Social Governance Experiment Base. Supported by cutting-edge technologies such as AI large language models, AIGC (Generative Artificial Intelligence), XR (Extended Reality) large space, and LBE (Location-Based Entertainment) systems, the project explores specific paths for technology to empower the protection and inheritance of cultural heritage, innovate cultural consumption scenarios, and promote deep integration of culture and tourism by building a large-scale immersive intelligent social experience space, providing a practical model for intelligent social governance.

## Solutions and Innovation

First, conceptual innovation to create a new popular science paradigm. As China's first popular science exhibition hall themed on "human civilization evolution + intelligent social governance", it guides the public to deeply understand the great changes in social development and governance models through immersive interactive experiences, effectively improving personal scientific literacy and participation in social governance. It has now become a popular science research and study base for teenagers across the country.

Second, technological innovation to achieve key breakthroughs. The case deeply integrates cutting-edge technologies such as AI large language models, AIGC, XR, and LBE large space positioning to build an intelligent hybrid virtual-physical interactive scene. By integrating high-precision motion capture, gesture recognition, and somatosensory feedback, it greatly enhances immersion. At present, it has secured a number of key technology patents such as digital human animation capture, VR vibration feedback, and LBE multi-user synchronization.

Third, authoritative content to set an industry milestone. The case content combines scientific rigor with artistic expression. Its seven-series virtual reality films were approved for the film "Dragon Label" at one time in November 2025, setting a record for the largest number of single approvals in China's VR film history. Known as the current "longest series" of virtual reality films in the industry, it has established an "industry milestone".

## Social Effects

rooted in Hubei and expanding nationwide, the project is currently actively carrying out global overseas layout. As the core popular science project carrier of the National Intelligent Social Governance Experiment Base, its immersive "technology + humanity" experience has successfully transformed cutting-edge AI technology into perceptible spiritual and cultural products for the public, fully demonstrating its leading position and strong influence in the field of "culture + technology" integration.



Integrating new quality productive forces in its content, the case boasts strong replicability and commercial value. As of October 2025, the project has been successfully replicated and implemented in more than ten provinces and cities across the country, including Hubei, Anhui, Fujian, Jiangsu, Shandong, Yunnan, and Xinjiang, covering a total of over 100,000 participants with a maximum of over 1,000 visitors per day. Moreover,

## Expert Comments

As a benchmark for the integration of "technology + humanity + education", the project promotes the immersive innovation of civilization popular science and injects new momentum into the practice of cultural-tourism integration and intelligent social governance.



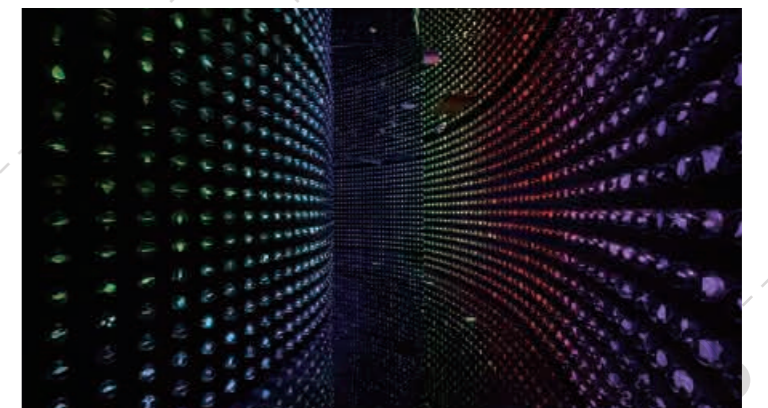


Tianjin, China ·  
 "Future Ocean"  
 Immersive Scenario  
 Experience Hall of the  
 National Marine  
 Museum of China



**Project Source**

National Marine Museum of China, Tianjin;  
 Shandong Goldon Digital Creativity Co., Ltd.;  
 Tianjin Bincheng Maritime Culture & Tourism Development Co., Ltd.



## Case Description

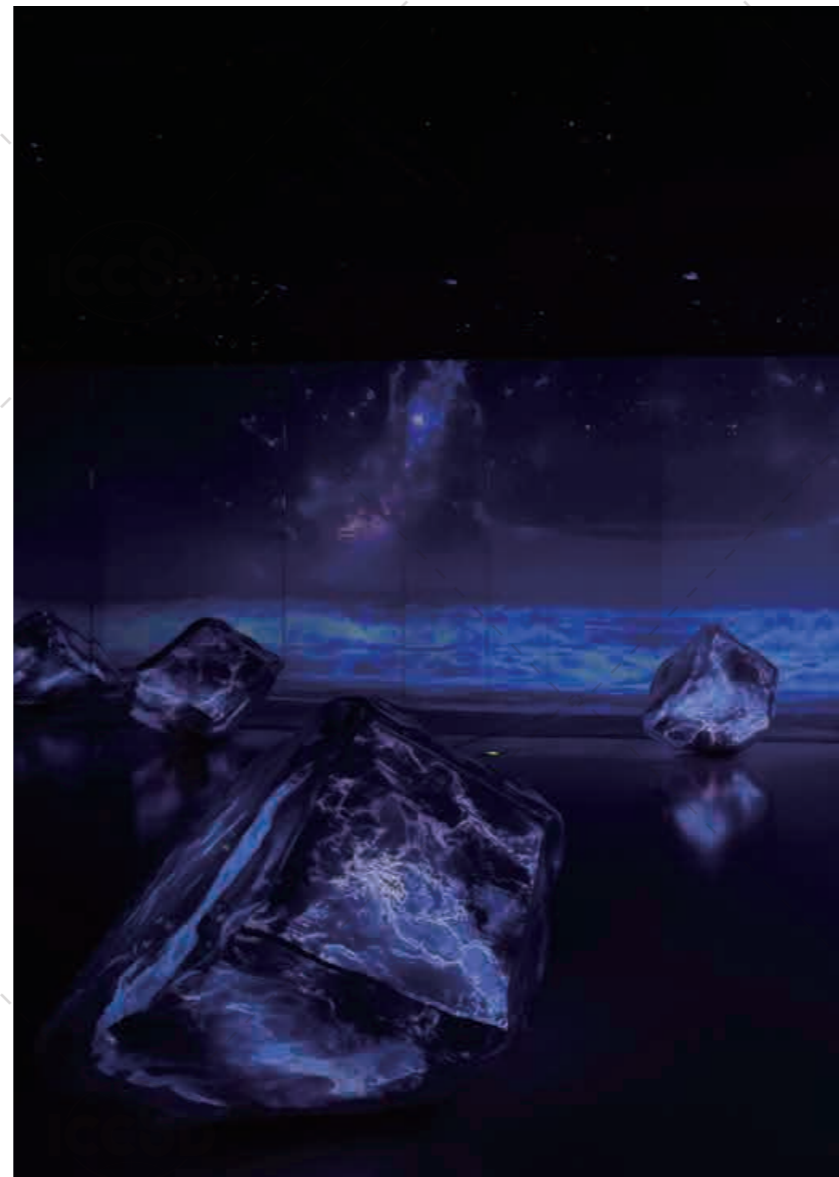
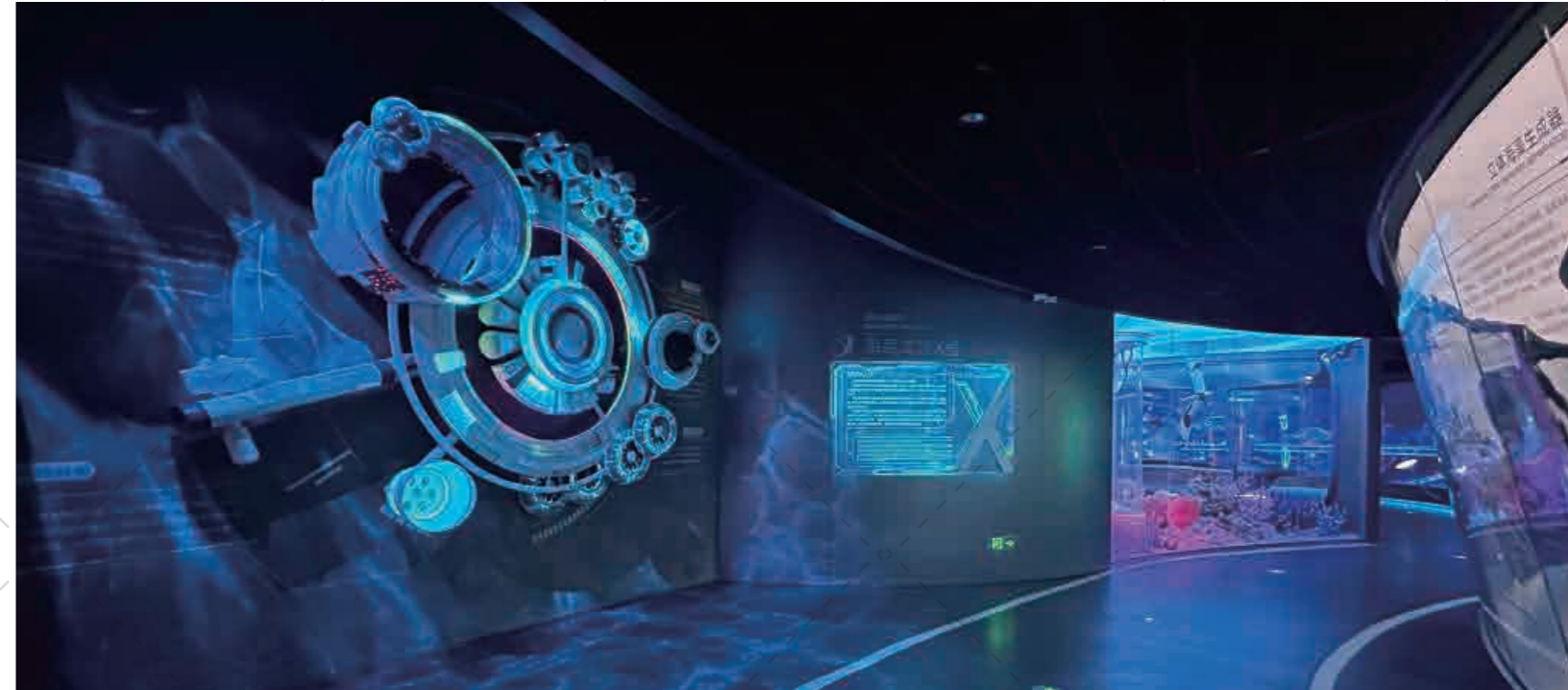
Covering an area of approximately 2,000 square meters, this case takes "foreseeing, exploring and coexisting" in the future ocean as its core concept. Through the dual main lines of "marine ecology" and "technological civilization", it presents the future prospect of the ocean with virtual-real integrated scenarios. Focusing on creating eight immersive scenarios such as deep-sea diving cabin, underwater future city, biological archive, underwater transportation station and floating ice theater, the case leads audiences to embark on a marine science and technology exploration journey a hundred years later. Meanwhile, it uses various innovative technologies such as AI digital humans, digital twins and artificial intelligence to let audiences become co-builders of marine ecology in the integration of virtual and real.

Taking AI and immersive technology as the link, the case integrates traditional Eastern philosophical thoughts with visions of the future ocean and transforms them into flowing light and shadow waves, intuitively presenting the profound artistic conception and spiritual core of Eastern ocean culture. Relying on artificial intelligence to deconstruct, reshape and innovatively interpret ancient and modern, Chinese and foreign ocean civilizations, it generates brand-new ocean life images with a strong sense of futurism. It enables the artistic spirits of Eastern and Western ocean cultures to dialogue and coexist in the digital space, and launches a cross-temporal, future-oriented dialogue on ocean civilizations in the virtual-real integrated art space.

## Solutions and Innovation

Traditional marine exhibitions are difficult to visualize future ecological topics, leading to superficial public understanding of marine protection; the interaction form is single, with separation of popular science and experience, making it hard to stimulate in-depth participation; the combination of ecological protection concepts and technological applications is loose, lacking intuitive presentation carriers; multi-scenario and multi-professional collaborative transformation involving design, construction, new technology application and integrated innovation faces high coordination difficulty.

Based on IPCC climate models and measured data, combined with multiple rounds of interdisciplinary expert reviews, the case converts abstract future marine topics into scientific and rigorous real-scene scenarios; innovates highly participatory exhibits such as AI interaction and gene editing cultivation, breaking the barrier between popular science and experience through immersive scenario integration; through intuitive digital image presentation, it turns abstract ecological protection concepts into perceptible and understandable practical cases. Adopting the EPC general contracting model to coordinate the whole process, coupled with closed-loop narrative logic, it ensures efficient multi-professional collaboration and realizes integrated design-construction implementation.



## Social Effects

This case is not only a benchmark model for the museum's "technology + popular science + ecology" upgrading, but also a vivid practice of the nation's Marine Power strategy. It undertakes the responsibility of enlightening people and inheriting civilization, embodies the vision of human-ocean symbiosis and mutual prosperity, and its demonstration value extends deeply to the field of marine cultural IP. Through collaborative innovation, social participation, cross-border integration and internet communication, it develops digital collections, popular science animations and cultural and creative derivatives, building a new path for cultural innovation and communication. This "exhibition innovation + strategy implementation + IP incubation" model provides a replicable reference for similar projects, helps the industrialization development of marine cultural IP, and strengthens the deep understanding and attention of the general public and decision-makers to marine protection. Supported by cutting-edge technologies, the case realizes replicable marine cultural popular science in a "water-free" way, facilitating residents in inland areas to experience the ocean more conveniently and possessing global promotion potential.

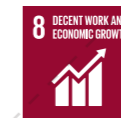
During the trial operation, the case invited industry experts to conduct on-site observations and gained high recognition; massive feedback collected through questionnaires shows that audiences are highly satisfied with the immersive experience and popular science value, deepening their understanding of marine protection. The project quickly formed a word-of-mouth effect, significantly enhancing the museum's social influence and becoming a benchmark case for marine culture communication and ecological civilization education.

## Expert Comments

This case leverages AI digital humans and immersive spatial computing technology to transform abstract marine ecological models into intuitive and interactive real scenes and carries out science popularization in a "water-free" way at the same time. This initiative has broken down the barriers between traditional science popularization and experiential activities and boasts great potential for IP industrialization incubation and global promotion. It is of great significance for implementing the maritime power strategy, raising the public's ecological awareness, and driving the cross-border upgrading of museum exhibition and display practices.



# Sichuan, China · Film and Television Silicon Valley (Enyang, Bazhong) Science Popularization Horizon



## Project Source

Chengdu Film and Television Silicon Valley  
Sichuan University of Media and Communications



## Case Description

To thoroughly implement the national strategic deployment for the integrated development of culture and technology and promote the transformation and application of high-tech achievements in radio and television as well as online audio-visual fields, the "Film and Television Silicon Valley (Enyang, Bazhong) Science Popularization Horizon" project was officially launched in February 2025. Constructed by Chengdu Film and Television Silicon Valley Group Co., Ltd. and supported by the core technologies of a Laboratory of the National Radio and Television Administration, the project is an important practice of the concept "Technology Empowers Industries and Serves People's Livelihood Needs". By integrating cutting-edge technologies such as ultra-high definition (UHD), VR/AR, XR, and AI, it builds an immersive digital space integrating science popularization education, cultural and tourism experience, and technological demonstration, setting an industry benchmark for the innovative application of radio and television and online audio-visual technologies in the cultural, tourism and science popularization fields.

## Solutions and Innovation

This case has achieved the large-scale application of the "UHD + VR/AR + AI" technology cluster in the cultural, tourism and science popularization fields for the first time, verifying the feasibility of extending virtual audio-visual technology from "film and television production" to "people's livelihood services". It has created a number of iconic application scenarios with industry demonstration significance, achieving a significant transformation from laboratory technology to public-facing experiential products, and providing replicable and promotable experience for the industry to explore "technology-empowered new cultural consumption scenarios".

The case has built China's first 16K UHD LED dome flying theater, adopting the 16K UHD LED dome technology jointly developed by the State Administration of Radio and Television Laboratory, paired with 6-degree-of-freedom motion seats and supported by 8K VR shooting technology, making it China's largest immersive flying experience space.

The themed 8K immersive track-based interactive light-and-shadow spaces such as "Interstellar Crossing" and "Deep Sea Adventure" created by the case effectively integrate the laboratory's mature 8K VR content production solutions, real-time camera tracking technology and panoramic projection system. It can capture the vehicle position in real time, synchronously adjust the 8K projection screen, and realize the precise integration between the car body and the virtual scene.



## Social Effects

In terms of social benefits, it has cumulatively received more than 800,000 visits including participants from the government, industry, academia and research circles, tourists, and teenagers from all over the country for science popularization and research study, providing a practical platform for primary and secondary school science popularization education. It has provided more than 3,000 internship and training opportunities for film and television cultural and creative talents, helping cultivate practical talents in fields such as UHD and VR/AR, and alleviating the industry's talent shortage.

In terms of economic benefits, the total revenue from ticket sales and other sources has reached nearly 20 million yuan, driving the surrounding output value to over 100 million yuan. Through diversified formats such as ticket sales, cultural and creative derivative development, and digital economic services, it has driven the comprehensive cultural and tourism income of Bazhong Enyang, injected new "technology + culture" momentum into local economic development, and supported the implementation of the rural revitalization strategy.

## Expert Comments

Centered on the seamless integration of XDCAM Air and Hive systems, the project develops a end-to-end intelligent production and broadcasting cloud platform, providing an efficient and reliable technical solution for the intelligent upgrading of overseas media.



# Zhejiang, China · Mobile Film–Game Space for Virtual Reality Content



## Project Source

Applicants: Hangzhou 3.5D Space Technology Co., Ltd  
China Animation Comic Game Group Co., Ltd  
Jiaxing Zhongfeng Baibian Space Technology Co., Ltd



## Case Description

As China's first pilot project of virtual reality (VR) mobile theater, the case is implemented with "reusability, usability, and convenience" as its core design principles:

First, through a standardized hardware system and modular content architecture, one set of equipment can support playback across multiple venues, compatible with various types of content and scenarios, effectively improving the reuse efficiency of technological equipment investment. Second, the project space adopts a foldable and expandable structure: when expanded, it forms an 180-square-meter column-free immersive space; when folded, it becomes a standard container size, which can be transported on the road according to standard cargo requirements, significantly enhancing ease of deployment. Finally, except for the unfolding and folding operations, the on-board system and broadcast control system of the project are all integrated into the mobile container, enabling immediate use after expansion. This achieves the convenience of simultaneous on-site playback of multiple contents, the convenience of box office monitoring and profit-sharing settlement for different content owners, and the convenience of supervision departments in supervising the copyright and ideology of playback content.

## Solutions and Innovation

The case effectively solves problems such as the rapid growth of VR content alongside insufficient offline distribution capacity, high risk of fixed stores, limited access to technology and educational resources in underdeveloped areas, and low reuse rate of high-value equipment. On the one hand, the case transforms VR experience from the "fixed store model" to a "dispatchable and replicable public digital cultural carrier", effectively lowering barriers to content distribution and implementation. On the other hand, through standardized space scale, hardware configuration, broadcast control system and content interface, the case realizes unified specifications for VR content across production, deployment, playback and operation, promoting the overall standardization of content production, distribution system and user experience.

This model provides a demonstration path for the VR industry to achieve low-cost expansion and fair access while ensuring experience quality, with significant industry promotion and public value.

## Social Effects

Intelligent Film Symbiosis — AI & XR Film Technology Innovation Conference". It has also been promoted at major international film festivals such as the Beijing International Film Festival, Shanghai International Film Festival, and Shanghai Cooperation Organization (SCO) National Film Festival. Multiple national media outlets including CCTV channels, People's Daily Online, China National Radio News, Xinhua News Agency, and ChinaNews.com have commended and reported on the case's contribution to empowering VR content to proactively reach the people through technology.



In 2026, the project will carry out multi-content cooperation with multiple departments including the Ministry of Culture and Tourism, the Ministry of Foreign Affairs, and the Publicity Department of the Communist Party of China (China Film Administration) and implement pilot projects of the mobile VR screening space across countries and regions along the "Belt and Road". Through practical application in different national and cultural contexts, it will verify the versatility and replicability of the model in infrastructure, content dissemination and operation management, explore a feasible path for the low-cost and high-efficiency global dissemination of immersive digital culture, and provide a demonstrative model for international cultural exchange and digital cultural cooperation. "Chang'an 30,000 Li: Dreaming Back to the Tang Dynasty", created based on the mobile film-game space for VR content, was commended by the Publicity Department of the Communist Party of China (China Film Administration) at the "Boundless Reality &

## Expert Comments

Taking mobile containers as the platform, this project has created a standardized VR screening space. It not only solves the problems of high costs and limited coverage of fixed VR stores but also enables cultural content such as "Chang'an 30,000 Li" to efficiently reach remote areas, realizing the inclusive dissemination of digital cultural resources.



# Sichuan, China · Grand Tourism Show “Panda's Return”



## Project Source

Ya'an Giant Panda 1869 Song and Dance Troupe Co., Ltd.  
Ya'an Science Education Center of Giant Panda National Park



## Case Description

With a total investment of approximately 260 million yuan, covering an area of 57 mu (about 3.8 hectares), a building area of 28,000 square meters, and 1,200 audience seats, this case is located in "Ya'an, the Lung of Tianfu & Hometown of Giant Pandas". It is a core cultural and tourism project for the city of Ya'an to fulfill the mission of building "an important global destination for giant panda cultural tourism". As a benchmark work after the Fourth Plenary Session of the Fifth Ya'an Municipal Party Committee clarified the "One Region Leading" strategy, the project closely focuses on the two major brand images of "1869: Birthplace of the World's Giant Panda Discovery" and "Giant Panda-style Slow Life". Taking the 155-year journey of giant pandas' scientific discovery, ecological protection and cultural dissemination as the main line, it deeply integrates Ya'an's "New Three Elegances" — "Yabao" culture, tea culture and natural ecological resources. Through the large-scale tourism performance, audiences can experience the legendary journey of giant pandas from Ya'an to the world, helping the implementation of the "Cultural Tourism-driven City Development" strategy and the high-quality development of the cultural and tourism industry.

## Solutions and Innovation

Ya'an is the world's first place where giant pandas were scientifically discovered (Dengchigou, Baoxing in 1869) and the first city to release giant pandas into the wild. It boasts the core area of Giant Panda National Park and a unique ecological environment, carrying a complete cultural context of giant pandas from scientific discovery to ecological protection, and possessing a natural foundation for creating an exclusive giant panda-themed IP. Meanwhile, Ya'an is advancing the construction of "an important global destination for giant panda cultural tourism", which requires filling the gap in large-scale characteristic performances and addressing the industrial shortcoming of transforming from a "transit corridor" to a "tourism hub".

This case adopts digital technologies such as holographic projection, 8K giant screens, digital twin, AR interfaces and wirework linkage, and constructs Cenozoic glacial ecological models to realize "time-space folding" non-linear narrative and create a shocking visual effect of "wormhole traversal". Equipped with a 1,500-square-meter immersive light and shadow area, 30 laser projectors, environmental effects (water, electricity, gas, fog, wind), transparent LED screens and naked-eye 4D experience, it breaks the physical boundaries of the stage and enhances the audience's sense of immersion. This changes the limitations of time-space narrative that made it difficult to present million-year spans and fantasy scenes, as well as the lack of immersive viewing experience that weakened audience perception. It facilitates the cross-cultural communication of giant panda culture, enhances the scientificity and appeal of ecological narrative, and transforms cultural symbols into perceivable living experiences.

The Ya'an Science Education Center of Giant Panda National Park established by this case covers chapters such as the scientific discovery of giant pandas, their physical structure and habits, giant panda populations under human intervention, giant pandas on the world stage, and activating global vitality. It aims to arouse people's love for giant pandas and encourage reflection and exploration of the way of harmonious coexistence between humans and nature.



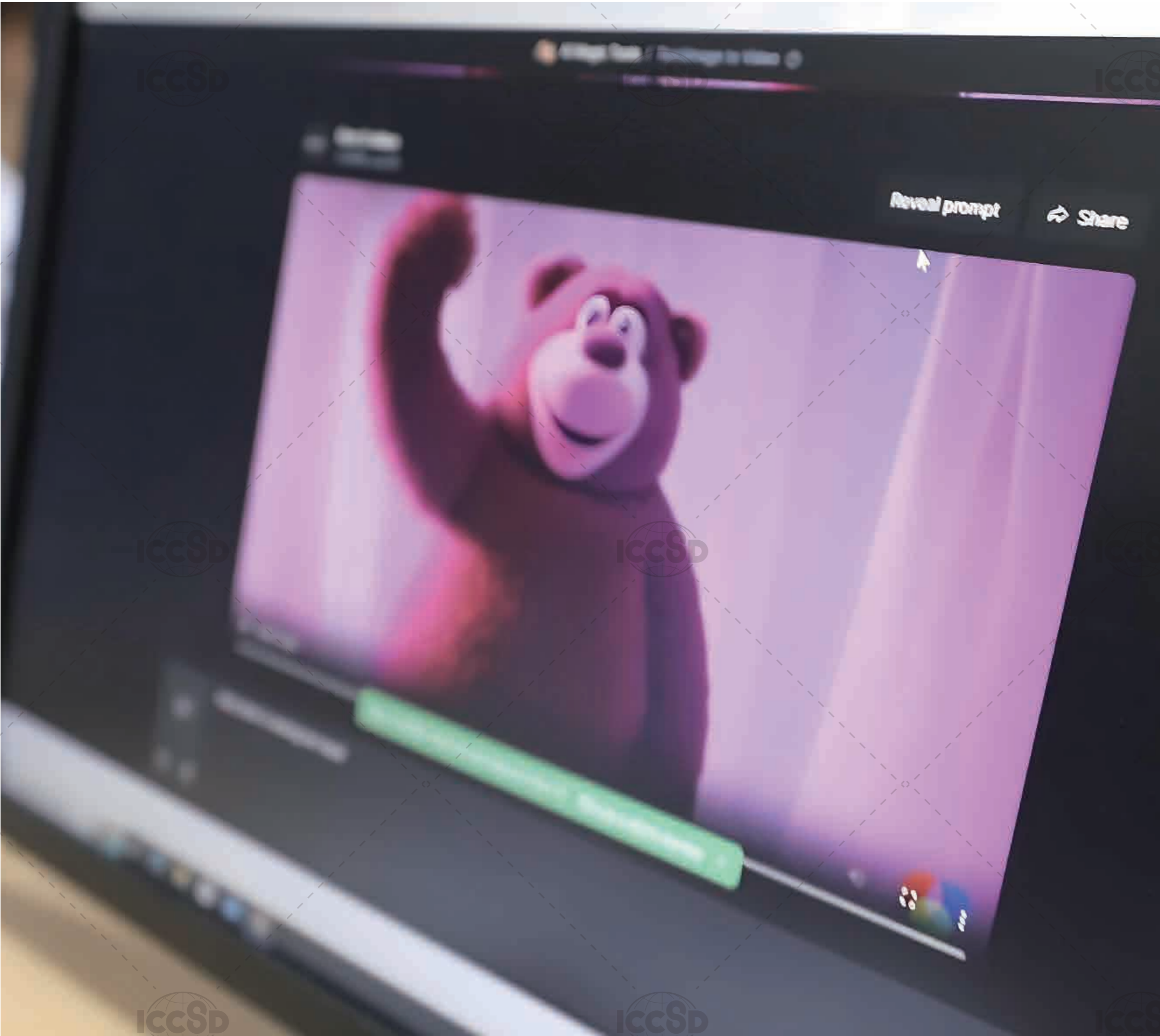
## Social Effects

Within six months of opening, the case has received over 300,000 tourists, and related experience videos have generated over 100 million views on platforms such as Douyin and WeChat Channels. It has been reported by People's Daily in its "Beautiful China" column, CCTV's Focus Interview in its "New Chapter of Cultural Tourism in Ecological Protection" special program and hailed by Chinese National Geography as "a model of interpreting the epic of life through technology".

The case has become an important practice site of the National Ecological Civilization Education Base, hosting inspections from international organizations such as the Secretariat of the Convention on Biological Diversity (CBD) and the World Wide Fund for Nature (WWF). As a Belt and Road natural and cultural exchange project, it vividly tells the story of China's ecological protection to overseas tourists. Its "in-depth ecological IP development model", "technology-empowered natural narrative method" and "community-participated sustainable operation system" have provided a replicable and promotable "Ya'an Solution" for ecological cultural and tourism development in nature reserves at home and abroad, attracting many national-level tourist resorts and national park management authorities to conduct inspections and learn.

## Expert Comments

Based on Ya'an's unique advantage of giant panda culture, this case builds a closed loop of ecological science popularization and cultural experience through digital technology, demonstrating the symbiosis of multiple values including cultural inheritance, ecological protection and economic growth.



# Laos · Vientiane Youth Generative AI Education Workshop × Art Marathon Project



Project Source

Song Ting Studio



## Case Description

Against the backdrop of the rapid development of artificial intelligence (AI), educational resources in developing countries are systematically lacking in the understanding and application of generative AI. There is an urgent need to enhance teenagers' international communication and expression capabilities, technological leadership, and digital production capabilities for local cultural content. Targeting young people in Laos, the "Generative AI Education Workshop x Art Marathon" aims to explore bridging the digital divide through tech for good via AI creation education and practical competitions, foster a new generation of digital art creation, enrich the diversity of global digital cultural expressions, and contribute to the achievement of UN Sustainable Development Goals (SDGs).

The case follows a four-in-one model of "Training + Creation + Competition + Exhibition": First, conduct AI creation training for Laos teenagers, covering modules such as basic understanding of generative AI, AI-assisted picture book and film production, expression skills, and team collaboration. Second, guide participants to create graphic and video works using AI tools, integrating local Laotian cultural elements. Third, organize an "AI Tech Art Marathon" where participants complete, present, and compete their works within a limited time. Finally, promote outstanding works through international platforms such as Laos Youth TV, forming a complete closed loop from capacity building and confidence development to work presentation.

## Solutions and Innovation

The prominent highlight of this case lies in using AI as an "inclusive tool" for cultural creation, exploring an effective path to lower the threshold for teenagers in developing countries to participate in digital cultural production.

The global development of the AI industry has made addressing the international digital divide more urgent. Teenagers in developing countries face two key challenges in digital cultural creation: they are more likely to lack information and awareness of emerging technologies such as AI, and cultural uniqueness is confronted with digital challenges. By introducing basic AI creation training, low-barrier generative AI teaching, and practice-based marathon-style creation mechanisms, the case enables teenagers in developing countries and regions to transition from "knowing nothing about AI" to "confidently using AI for cultural expression" in a short period, achieving simultaneous improvement in practical AI capabilities and cultural confidence. This highly replicable path can contribute to promoting the practice of tech for good among young people in developing countries and narrowing the regional gap in digital capabilities.

## Social Effects

The case truly responds to the "inclusive" value that AI brings to cultural creation. It attracted approximately 50 participants and nearly 200 applicants from various regions of Laos, including some from rural areas of the country.



Through systematic training and practice, the participants mastered the application of generative AI in video, visual art, and narrative creation. They also took the initiative to integrate local culture-related social issues and personal experiences into their works, creating AI short films covering themes such as peace, anti-war, youth ideals, and growth pressures.

The case's achievements include multiple AI video and artworks completed independently or in teams by teenagers, most of whom are female students. These works were displayed through Laos TV and platforms related to the International Children and Artificial Intelligence Film Festival, enhancing the visibility of Laotian youth in the international digital cultural context.

The case verified the practical value of AI technology in youth cultural cultivation, film and television content creation, and cultural diversity communication, providing a replicable practical model for Laos to explore "AI + cultural education" and "AI + youth film and television content creation". It not only bridges the gap in digital creation capabilities in practice but also achieves positive outcomes in gender equality, cultural diversity, and international SDGs, reflecting the practical supporting value of "tech for good" in advancing the UN SDGs. As an exploration of generative AI technology empowering aesthetic education practice, the

## Expert Comments

This case links generative AI education workshops with an art marathon, empowering teenagers to unlock their digital expression capabilities. It provides an interesting and practical international model for the inheritance and innovation of culture as well as the cultivation of teenagers' digital literacy.

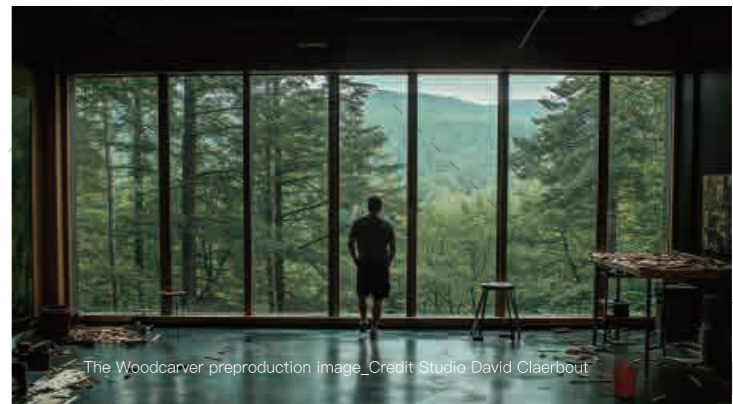


# Europe · "Repairing the Present" Interdisciplinary Artist-in-Residence Program



### Project Source

S+T+ARTS Center



The Woodcarver preproduction image\_Credit Studio David Claerbout

Technology Empowering the  
Development of Cultural Industries

Technology Empowering the  
Protection of Cultural Heritage

Technology Empowering the Inheritance and  
Innovation of Intangible Cultural Heritage



053

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## Case Description

Supported by the European Commission's S+T+ARTS Program, "Repairing the Present" responds to the European Green Deal and the New European Bauhaus Initiative. The case addresses the historical dilemma of the deep division between art and science since the 19th century — scientists have overlooked the subjectivity of their work, while artists have drifted away from the technological frontier. Against the backdrop of the global climate crisis and worsening social inequality, this project aims to rebuild interdisciplinary dialogue between art, science and technology through 21 transnational artists-in-residences, explore innovative paths to address contemporary challenges, and provide cultural momentum for Europe's sustainable development.

The case is designed based on the principle of locality: First, 12 regional S+T+ARTS Centers were established across Europe. Each center set up a "Local Expert Group (LEG)" consisting of 10–15 interdisciplinary experts, which defined regional challenges through Future Thinking Workshops. Second, an open call was launched globally, and 21 resident artists were selected through a three-round review mechanism (internal preliminary review, expert re-review, and final review panel evaluation). Subsequently, a multi-month residency creation period was initiated, divided into four phases: Reflection, Development, Evaluation, and Production. Coordinated by "Innovation Catalysts", artists co-created prototypes with universities, enterprises and governments. Finally, the achievements were displayed to the public through exhibitions (REORLD, REWILD, RETOOL) and the Futures Canvas digital platform, forming a complete "Art-Technology-Public" closed loop.

## Solutions and Innovation

The project's biggest highlight is the construction of the "Local Ecosystem" innovation paradigm, which breaks institutional barriers and embeds artists into a cross-sectoral network composed of universities (such as Johannes Kepler University Linz), enterprises (such as PwC and Witteveen+Bos Engineering Company), governments (such as Berlin Water Utilities) and civil society organizations, enabling the sharing of knowledge, facilities and data.

On the one hand, the case addressed "innovation silos" by establishing daily collaboration channels between artists, scientists and policymakers. On the other hand, it bridged the gap between the public and cutting-edge technology, using the emotional nature of artistic language to translate complex technological issues (such as immunology simulation and blockchain criticism) and realizing scientific democratization through exhibitions and the Futures Canvas platform. Responding to specific urban sustainable development challenges, artists, as "Innovation Catalysts", provided unorthodox perspectives, offering a replicable practical path for global urban renewal.

## Social Effects

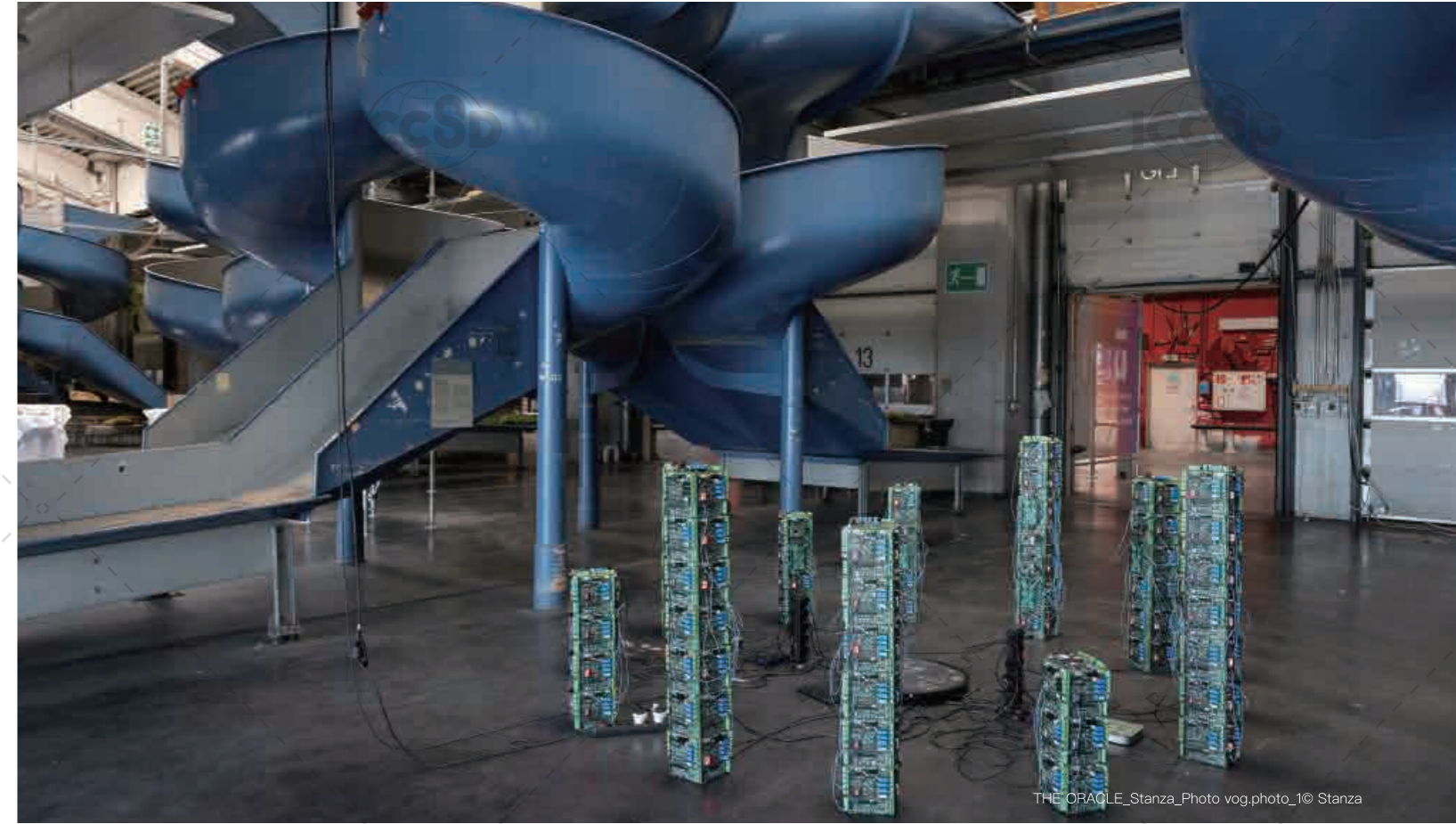
more than 20 workshops and hackathons engaging over 3,600 young people and professionals, and fostering a sustainable innovation culture of "Do-It-Yourself/Do-It-With-Others (DIY/DIWO)".



The Woodcarver preproduction images\_Credit Studio David Claerbout\_2



The Woodcarver production image\_Credit Studio David Claerbout



THE ORACLE\_Stanza\_Photo vog.photo\_1© Stanza



THE ORACLE\_Stanza\_Photo vog.photo © Stanza

The project has established a benchmark paradigm of "Art-Driven Innovation" for Europe and the world, and its model has proven highly replicable: the three-level structure of regional centers, local experts and resident artists can be migrated to any city; the Futures Canvas crowdsourcing tool is open-source and shared, serving as a template for public participation in urban planning; the trilogy exhibition format has demonstrated the value of "Prototype Parks" as new public cultural spaces.

More profoundly, at the policy level, it has verified the effectiveness of the EU's S+T+ARTS strategy, prompting more member states to integrate art into their national innovation systems and providing an empirical basis and methodological toolbox for the formulation of subsequent "Restorative Innovation" policies.

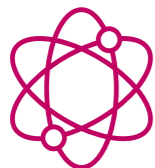
The project has completed 21 high-standard art-tech residency projects covering cutting-edge fields such as biomaterials (e.g., algal bio-batteries), circular economy (e.g., urban waste tracking systems), and smart agriculture (e.g., AI plant interaction devices); successfully held a trilogy of traveling exhibitions, showcasing works such as the Zero-Carbon Vinyl Record by Kat Austen & Fara Peluso and the Water Monitoring Device by Studio Lapatsch|Unger, attracting global audiences; developed the Futures Canvas digital tool, which has collected more than 1,500 public predictions and expectations for future cities; established the S+T+ARTS Academy Network, organizing

## Expert Comments

With "Art-Driven Innovation" as its core, this case responds to practical challenges such as the climate crisis and urban sustainable development through cutting-edge art-tech projects, providing a replicable international paradigm for interdisciplinary collaboration in addressing global issues.



## Technology Empowering the Protection of Cultural Heritage



With the in-depth involvement of digital technologies in the field of cultural heritage protection, brand new possibilities have emerged for the protection and revitalization of irreplaceable resources such as ancient architecture, heritage sites and cultural relics. The application of cutting-edge technologies including 3D modeling, artificial intelligence, augmented reality and blockchain has enabled cultural heritage to evolve from static preservation to dynamic regeneration, from fragmented protection to systematic management, and from local display to global sharing.

12 typical cases in the “Technology Empowering the Protection of Cultural Heritage” track have been selected in this case collection, covering four countries in Asia and Europe—China, Italy, Hungary and Thailand—as well as nine provincial-level administrative regions in China. These cases reveal a clear pattern of technological empowerment through diverse practices: AI-assisted cultural relic restoration, monitoring and early warning, the development of multimodal immersive experience halls, digital archaeological collaboration, and the digital revitalization of historic cities. These practices have not only enhanced the scientific rigour and precision of cultural heritage protection but also expanded the depth and breadth of public participation and cultural communication. The cases vividly illustrate how digital technologies have become the “digital guardians” of cultural heritage, driving the protection of cultural heritage from passive rescue to proactive prevention and from professional practice to public life, and providing replicable and scalable innovative paths for the sustainable inheritance of global cultural heritage.





# Jiangxi, China · Digital Display and Interpretation Project of Jingdezhen's Handicraft Porcelain Industry Relics



## Project Source

Qingyuan Vision (Beijing) Cultural Consulting Co., Ltd  
Jingdezhen World Cultural Heritage Application Leading Group Office  
Jingdezhen Ceramic Culture Tourism Group Co., Ltd



## Case Description

Guided by UNESCO's World Heritage principles and relying on achievements such as heritage application documents, archaeological data, and academic research, this case systematically identifies the key elements of heritage value interpretation and implements it through the path of "research support — content development — technology application — public communication":

**Research Support:** Sort out interpretation content and narrative clues based on research materials such as existing relics, archaeological data, historical documents, and oral traditions.

**Content Development:** Adopt "scene shaping" as the method to organize the four dimensions of characters, places, activities, and artifacts into immersive historical scenes.

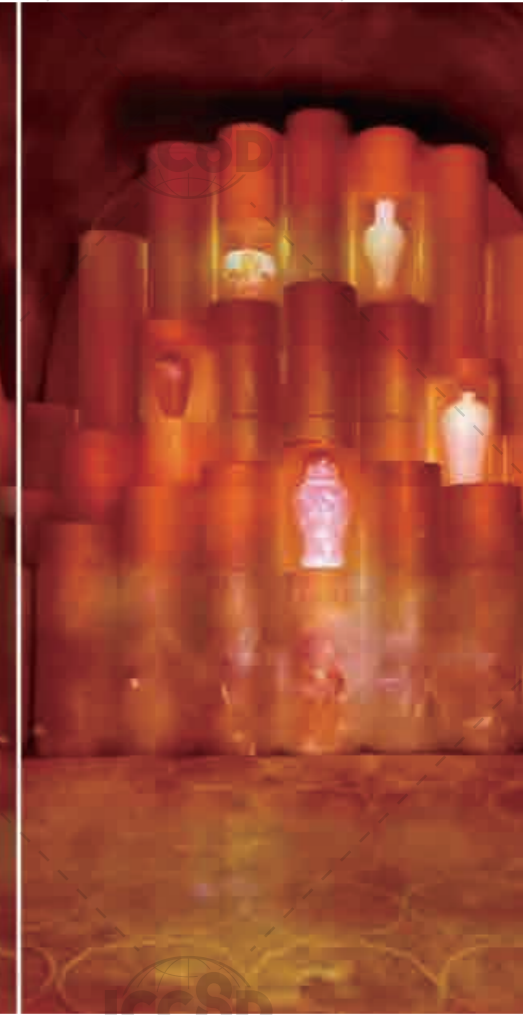
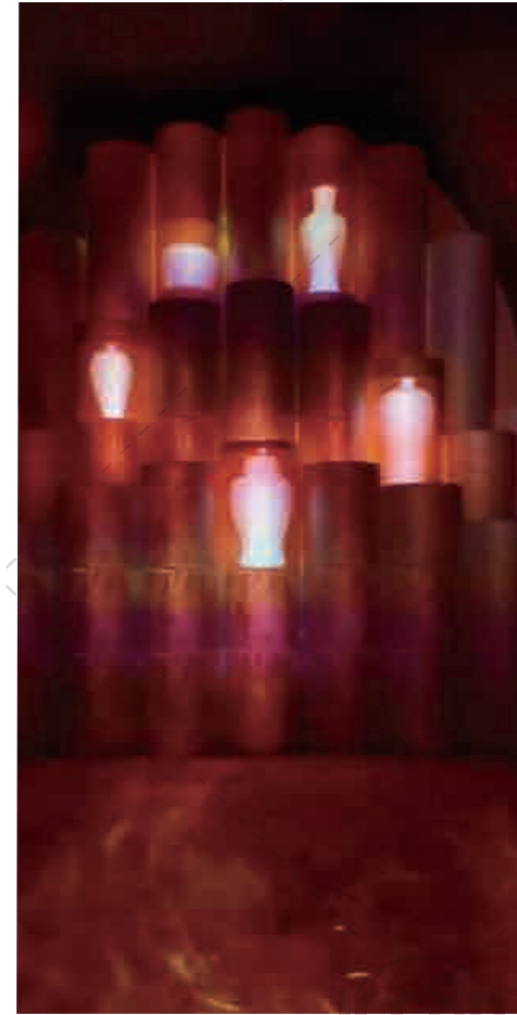
**Technology Application:** Use VR (Virtual Reality) to construct an overall narrative, MR (Mixed Reality) to superimpose information for better on-site understanding, and AR (Augmented Reality) mini program to integrate elements and expand guided tour interaction.

**Public Communication:** Finally, engage both on-site and online audiences through integrated operations and communication to achieve systematic, holistic, and sustainable operation of heritage interpretation.

## Solutions and Innovation

Due to the large temporal and spatial span, scattered elements, and diverse types of Jingdezhen's handicraft porcelain industry relics, their heritage value is difficult for the public to understand intuitively, and traditional exhibition methods cannot support systematic and holistic interpretation needs. This case has comprehensively planned and implemented seven sets of digital display and interpretation projects, forming a digital display and interpretation system consisting of 1 VR (Virtual Reality) project, 5 MR (Mixed Reality) projects, and 1 AR (Augmented Reality) project. Its highlights and main achievements include:

In terms of on-site interpretation, the project adopts Mixed Reality technology to achieve centimeter-level alignment and overlay between digital model scenes and the archaeological sites at the Imperial Kiln Site and Luomaqiao Kiln Site, enabling visitors to intuitively understand remnant features and historical stratification through interactive experiences, and significantly enhancing the interpretability of on-site archaeological relics. Meanwhile, the project has developed a digital interpretation methodology centered on on-site real data-driven presentation. For the kiln immersive projection project, the team collaborated with research institutions to conduct on-site experiments, translating the collected on-site real data and academic research findings into immersive experiences and visualization installations, which has greatly improved the scientificity, authenticity and experiential effect of heritage interpretation.



## Social Effects

This case provides a replicable digital display and interpretation paradigm for cultural heritage sites with large temporal and spatial spans, diverse values, scattered elements, and challenging on-site comprehensibility: taking research as the core to ensure the accuracy of interpretation, using "scenario-based narrative" to enhance public understanding and emotional connection, and achieving multi-level reach through "VR for overall narrative — MR for on-site enhancement — AR for systematic communication", which can be deployed modularly according to the conditions of different heritage sites. This model helps promote the coordinated development of heritage site management, public education, community participation, and integration of culture and tourism, providing promotable practical experience for the activation and utilization, international communication, and sustainable development of cultural heritage.

## Expert Comments

Based on Jingdezhen's porcelain industry heritage and supported by solid academic research, the project provides a replicable solution for the digital transformation of cultural heritage.



# Zhejiang, China · Digital Protection and Dynamic Inheritance of Cultural Heritage in Gaoqian Ancient Village



## Project Source

Research Center for Digital Humanities of Renmin University of China  
 School of Information Resources Management, Renmin University of China  
 Taizhou Municipal Archives Bureau  
 Gaoqian Village, Baita Town, Xianju County, Taizhou City,  
 Zhejiang Province, China



## Case Description

Following the overall implementation idea of Gaoqian culture analysis, digital resource construction and digital product development, this case first conducts systematic fieldwork and documentary research to thoroughly sort out the historical context, family structure and spiritual traditions of Gaoqian Ancient Village, constructing a relatively complete Gaoqian cultural structure system. Centering on folk relics, old documents and oral memories scattered among the people, it extensively carries out digital collection and organization, completes standardized cataloging and storage of multimodal resources, and achieves centralized preservation and structured management of the ancient village's memory resources. On this basis, it builds a systematic framework with a web-based communication platform and a digital resource database as the core, adopting the "front-end platform and back-end database" mode as the overall technical route. Integrating historical and literary research with digital creativity methods, it develops the Gaoqian Ancient Village Digital Memory Website and VAM (Virtual Asset Management) Platform, forming a publicity platform for Gaoqian culture that integrates preservation, display, communication and educational functions.

## Solutions and Innovation

Gaoqian Ancient Village is a national-level historical and cultural village, forming a unique and continuous local cultural tradition over more than a thousand years. However, with population mobility, aging paper documents and damage to traditional buildings, the village's memory is at risk of being lost.

This case systematically empowers the activation of traditional village culture through digital technology, forming an innovative digital memory model integrating integrity, diachronism and intelligence. First, it breaks the digital path of traditional cultural heritage that focuses on single objects or static displays, analyzing and digitizing all elements of Gaoqian Ancient Village's culture, constructing a multimodal integrated "holographic" digital memory system to achieve a holistic presentation of the village's culture. Second, it innovatively introduces the time dimension, integrating over a thousand years of historical evolution, family inheritance and spatial form into a unified digital narrative framework, creating a diachronic digital memory space connecting the past, present and future. Third, it emphasizes dynamic cultural expression, building a perceptible and experiential digital dynamic village by integrating tangible and intangible cultural heritage. Fourth, it introduces AI to empower cultural activation, using generative animation technology to transform static archival materials such as "Ten Major Events of the Wu Family" into aesthetically appealing dynamic narratives, significantly enhancing the communicative impact and emotional resonance of traditional culture. Fifth, through semantic archive organization and multi-dimensional narrative design, it realizes in-depth correlation and sustainable utilization of cultural resources, forming a replicable and promotable paradigm for digital protection and activation of traditional villages.

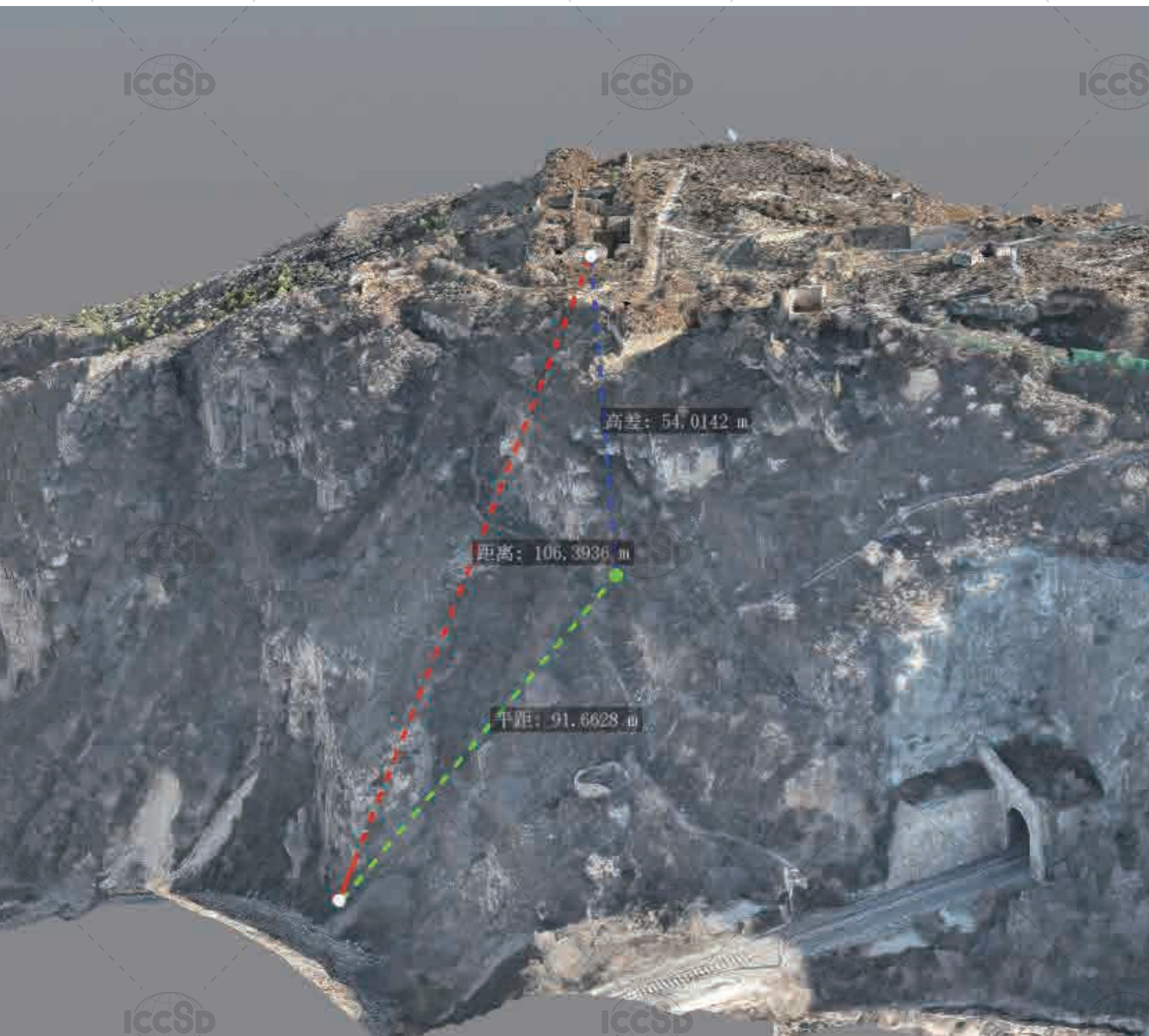


## Social Effects

Taking Gaoqian Ancient Village as a case study, this case pioneered the electronic archiving of ancient villages in Zhejiang, directly promoting the implementation of the provincial "Thousand-Village Archives" construction and facilitating the introduction of relevant laws, which clarify archiving requirements through local legislation. The digital memory model it constructed provides a direct blueprint for the digital projects of five provincial-level historical and cultural villages in Taizhou. It upgrades the communication efficiency of archival culture through book compilation and all-media communication, laying the foundation for the "Archives Speak for Ancient Villages" activity. It not only injects new vitality into the cultural and tourism development of Gaoqian Ancient Village but also mobilizes multiple stakeholders to comprehensively promote the protection and inheritance of rural culture in Taizhou.

## Expert Comments

Based on the historical and humanistic value of traditional villages, the project focuses on digital collection, semantic organization and immersive display. It not only realizes dynamic inheritance but also provides high-quality models for rural cultural tourism and cultural and creative development.

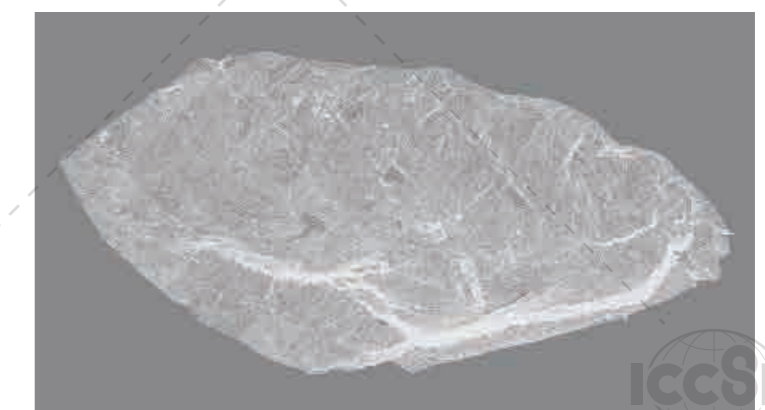


# Inner Mongolia, China · Digital Protection and Utilization of Shierliancheng Ruins in Jungar Banner



## Project Source

Jungar Banner Municipal Party Committee Propaganda Department  
Ordos Yixun Technology Co., Ltd



## Case Description

Located in Shierliancheng Township, Jungar Banner, Inner Mongolia Autonomous Region, the ruins cover an area of approximately 1 million square meters with a total city wall length of 5,579 meters, spanning multiple dynasties including the Han, Sui, Tang, and Ming dynasties. As a practical implementation of the national cultural digitalization strategy, the project is undertaken by Ordos Yixun Technology Co., Ltd. It employs technologies such as high-precision surveying and mapping, laser scanning, UAV oblique photography, and VR to build millimeter-precision digital archives, reconstruct the style of the Sui Dynasty city site, and create an integrated digital platform integrating data management, online display, and immersive experience. By balancing the permanent protection of cultural relics, academic research, and public immersive experience, it empowers the permanent inheritance of cultural heritage and the integrated development of culture and tourism through technology.

## Solutions and Innovation

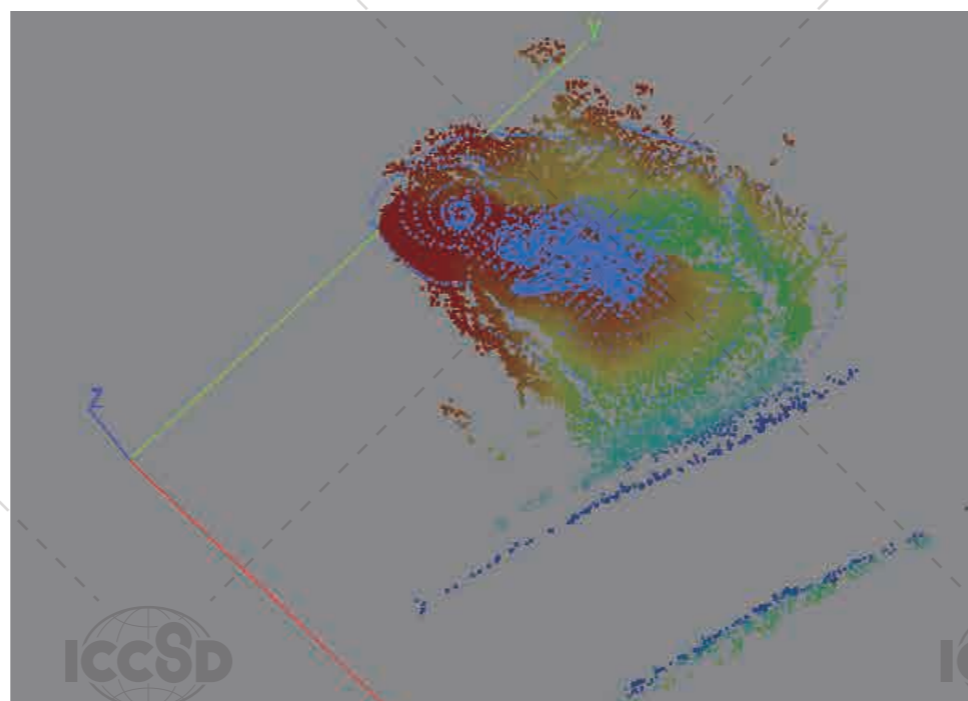
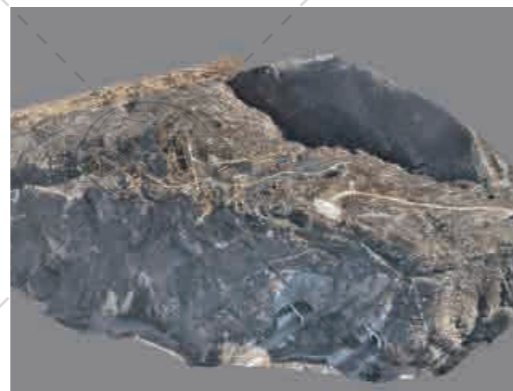
Through digital innovation, this case systematically addresses multiple problems in cultural heritage protection and regional development:

The first problem is that traditional protection methods struggle to balance the long-term preservation of ruins and public experience needs. The project realizes "non-contact" protection of cultural relics through high-precision digital archiving and virtual restoration technologies, while building an interactive digital platform to meet the needs of academic research and public education. The second problem is the low collection efficiency and insufficient precision due to complex terrain and large-scale ruins. The project innovates a "space-air-ground integrated collection system", integrating UAV oblique photography, laser scanning and other technologies to form a full-element collection plan, increasing daily collection efficiency by more than threefold. The third problem is that the interpretation methods of cultural heritage are overly simplistic. Through VR scene reconstruction and digital human guide technology, the project transforms static ruins into dynamic historical scenes, allowing the public to immerse themselves in the thousand-year cultural context of Shierliancheng and addressing the challenge of dynamic dissemination of cultural heritage. The fourth issue is the problems of data silos and long-term operation and maintenance. The project builds an integrated digital platform to achieve the integrated management and hierarchical sharing of multi-source data and establishes a "cloud backup + annual update" mechanism to ensure its sustainable utilization.

## Social Effects

By activating cultural heritage through technology, this case has formed both economic and social demonstration effects.

Economically, relying on innovative experiences such as VR roaming and MR guidance, the project has quickly attracted a large number of tourists, directly driving the upgrading of surrounding consumption formats such as catering, accommodation, and shopping, and activating the regional cultural and tourism industrial chain.



It also creates diverse jobs such as technical operation and operational services to help increase employment and income, providing a replicable income-increasing path for the development of cultural and tourism economy in northern border areas.

Socially, the case has become an industry benchmark for the digital protection of cultural heritage. Its full-process "space-ground-detail" technical plan and "three-state integration" restoration model provide a replicable and promotable model for the digitalization of similar earthen ruins nationwide, attracting many cultural and museum institutions and research teams to conduct inspections and learn. The integrated digital platform constructed by the project transforms professional archaeological data into a vivid historical classroom accessible and interactive to the public. Through online exhibition halls and VR experiences, it greatly expands the coverage and communication efficiency of high-quality historical education, effectively promoting the public interpretation and social sharing of cultural heritage.

## Expert Comments

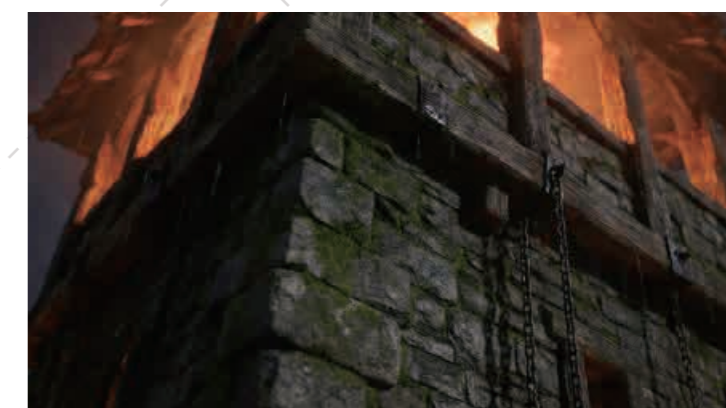
The project empowers cultural heritage protection through technology, promotes the creative transformation of excellent traditional culture through digital collection and restoration, and explores a sustainable path for the utilization of cultural relics in resource-rich cities.

# Italy · Digital Activation Project of the Evolution of the Historical City Walls of Rovigo



## Project Source

Guangzhou Zhuanzhu Architectural Design Consulting Co., Ltd.



### Porta San Giovanni (圣乔治门)

状态: 已拆除 (约1853年)。

曾经的位置: 通往帕多瓦 (Padova) 和北方的主要出口。

#### 描述:

历史上最繁忙的城门之一。在19世纪中叶, 为了改善日益增长的交通状况 (主要是马车和早期的工业运输), 奥地利威灵顿决定将其拆除。它的消失标志着Rovigo从封闭的中世纪堡垒向开放的现代城市转型的开始。

Torre Mozza



## Case Description

As an important cultural relic in Italy, the Rovigo City Walls are the focus of this project. Against the background of digital globalization, the case aims to break the limitations of physical space through VR technology and bridge gaps in historical understanding with immersive narration. Specifically, it includes: constructing high-precision 3D city wall models of different stages from the Middle Ages to the modern era based on historical documents and surveying and mapping data; developing a core interactive system in the Unity engine, including a "dissolution" shader supporting smooth transition, a robust teleportation logic based on state detection, and a video streaming loading technology optimized for the performance of VR mobile devices (Pico 4 Ultra); designing a 3D urban sand table retrieval system and UI information panel, and transforming complex historical data into user-explorable interactive content through the "technology + narration" logic; integrating golden pulse luminous characters and particle-based flicker effects to enhance the artistic appeal of the digital space and strengthen the public's aesthetic engagement.

## Solutions and Innovation

The physical site of the Rovigo City Walls is fragmented, and the superimposed historical layers are difficult to present intuitively. Traditional static exhibition methods cannot effectively restore their evolutionary context over centuries, limiting the in-depth presentation of cultural diversity. To this end, the case has designed a series of innovative solutions:

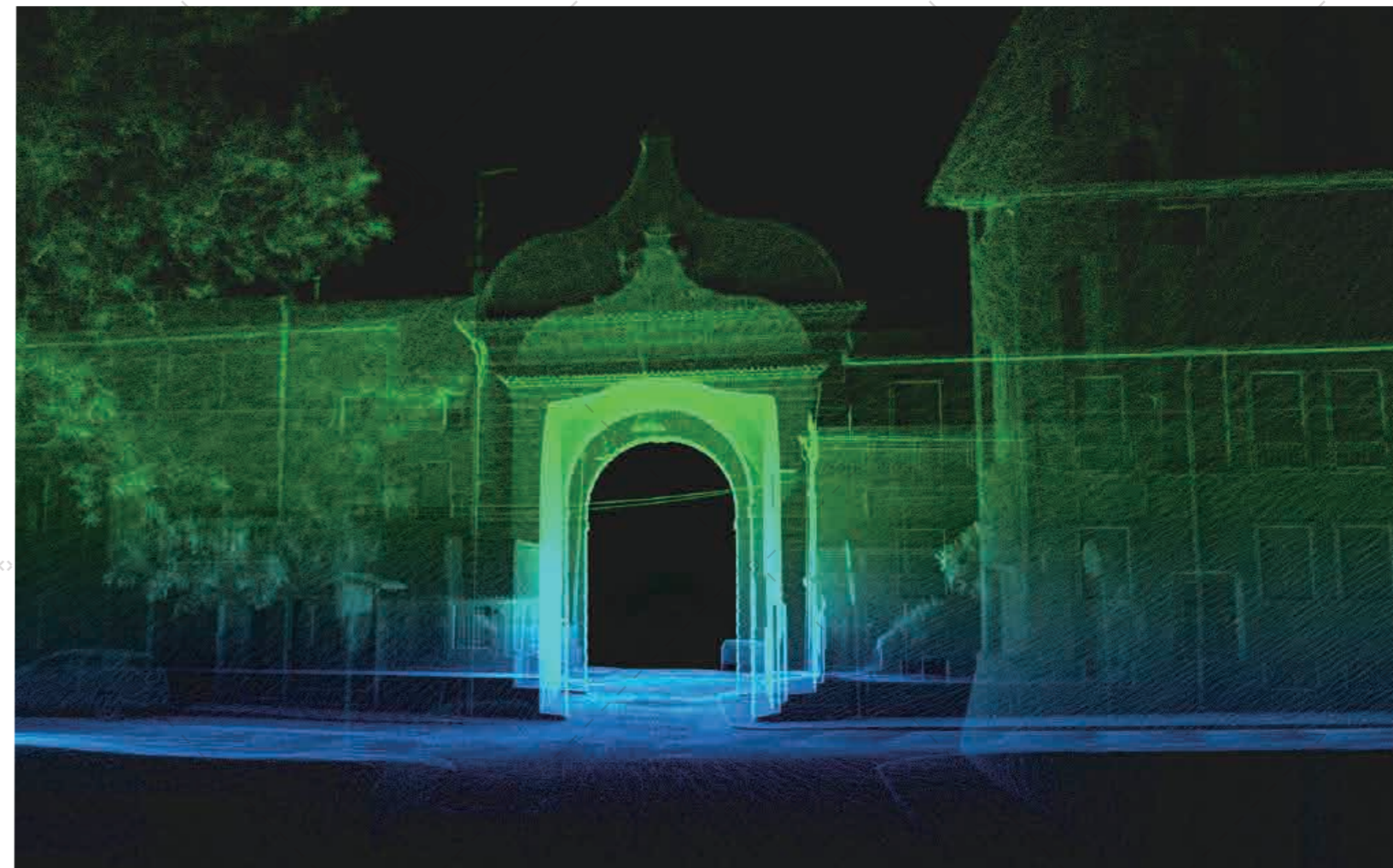
**Technological Innovation:** Develop a "dissolution-based evolution algorithm" to realize seamless cross-century switching of the city walls in the same physical space, providing users with a shocking "time-travel" experience; ensure zero-latency playback of high-bit-rate historical videos through GPU optimization for VR all-in-one machines.

**Interactive Innovation:** Construct a two-level interactive model of "3D sand table - real scene space". Users can not only zoom in and out to control the overall view of the city from a "God's perspective" but also teleport to city wall nodes for fine-grained immersive exploration, solving the common VR interaction problems of unstable teleportation and easy dizziness during viewing.

**Digital Aesthetic Expression:** Draw on excellent digital art cases, develop golden text effects with a sense of breath and outer glow diffusion, transform historical landmarks into cinematic digital landscapes, and greatly improve interaction activity.

## Social Effects

This case shows how to use VR technology to transform "fragmented sites" into "continuous narration", providing a replicable technical paradigm for the protection of fragmented cultural heritage. Its experience in interactive fault-tolerant design, cross-scene state management and digital aesthetic creation can be widely applied to the digital activation of various ancient city walls, historical blocks and other architectural heritage around the world, with strong industry reference value and demonstration and promotion significance.

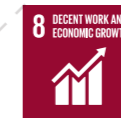


## Expert Comments

Centered on VR technology, the project innovatively develops a two-level interactive model, providing a replicable template integrating technology and aesthetics for the digital activation of fragmented architectural heritage.



# Shanxi, China · Fogong Temple Pagoda (Yingxian Wooden Pagoda) AI + Multimodal Immersive Experience Venue Construction Project



## Project Source

Yingxian Wooden Pagoda Cultural Tourism Development Co., Ltd  
China Unicom (Shanxi) Industrial Internet Co., Ltd  
China United Network Communications Co., Ltd  
Shuozhou Branch, School of Architecture, Tsinghua University



## Case Description

Based on the academic achievements of Study on the Timber Construction of Yingxian Wooden Pagoda by the School of Architecture, Tsinghua University, and the 2024 "Smart Yingxian Wooden Pagoda" plan, this case focuses on the core of "digital protection and immersive activation of the cultural heritage of the Fogong Temple Pagoda (Yingxian Wooden Pagoda)". First, through the space-air-ground integrated system, it integrates equipment such as UAV oblique photography, terrestrial laser scanning, and sensor networks to collect multi-source data with millimeter-level precision and constructs a digital twin and thematic cultural database of the pagoda. Second, relying on the four-layer and two-dimensional technical architecture, it processes data through AI automated modeling, and builds immersive experience systems such as the five-screen CAVE system and naked-eye 3D, as well as an intelligent management system. Finally, it establishes a standardized data governance system to ensure data security and compliance, promote cross-scenario data reuse across protection, experience, and operation, and activate secondary consumption and technology output simultaneously.

## Solutions and Innovation

Building on the academic achievements of Study on the Timber Construction of Yingxian Wooden Pagoda by Liu Chang, Director of the Institute of Architectural History and Heritage Conservation of Tsinghua University School of Architecture, and the accumulation of ancient architecture research, the project empowers the activation of ancient architectural culture with technology.

Technically, combining the school's advantages in wooden mortise and tenon joint research, it conducts millimeter-level digital archiving of the pagoda's "nail-free and rivet-free" construction techniques and Buddha statue carvings through non-contact data collection and AI-assisted modeling, completely preserving the architectural art and Liao-Jin Buddhist cultural genes, and achieving non-invasive protection.

In terms of experience, supported by the school's technical expertise, with the five-screen CAVE system and the film *Destiny of Tower: Beyond a Millennium* as the core, it integrates naked-eye 3D and the "human-Buddha interactive" somatosensory module to reproduce the integration scene of multi-ethnic civilizations, making cultural expressions perceptible and interactive.

In terms of mode, it constructs a closed-loop system of "digital archiving + immersive experience + cultural communication", and the standardized toolchain provides a model for the digitalization of small and medium-sized heritage sites, facilitating the inheritance of diverse cultures.

The case addresses the core pain points including the survival risk of the pagoda due to inclination, the difficulty in accurately preserving the "nail-free and rivet-free" construction techniques and historical context, limited cultural communication caused by weak interactivity of traditional displays, and the lack of digital support for heritage protection, contributing to the protection of the diversity of cultural expressions.



## Social Effects

With the innovative support of this case, the Yingxian Wooden Pagoda scenic area in Shanxi has achieved an annual revenue increase of over 80 million yuan, a 40% increase in combined ticket conversion rate, driven an income increase of more than 20% in surrounding areas, and created more than 100 job opportunities. A millimeter-level digital archive has been built, laying a solid foundation for the permanent inheritance of cultural heritage. It receives over 500 study tour groups annually, overcoming the constraints of time and space to spread the unique culture of the pagoda. Relying on Tsinghua University's technical and academic advantages, it provides a replicable path for the activation and inheritance of cultural heritage and promotes the protection and popularization of the diversity of cultural expressions.

## Expert Comments

Centered on the thousand-year-old ancient architectural heritage of Yingxian Wooden Pagoda, the project constructs a millimeter-precision digital twin through integrated collection and AI modeling technology. It solves the problems of the pagoda's inclined protection and restricted tower-climbing experience, providing a good model for the digital protection of ancient architecture.



# Beijing, China · “Look at The Axis of Heaven and Earth” Digital Cultural Experience Center



## Project Source

Beijing Chongdong Chuangxiang Technology Co., Ltd



### Case Description

Taking the successful inscription of the Beijing Central Axis on the UNESCO World Heritage List as an opportunity, this case deeply integrates cutting-edge technologies such as Unreal Engine 5 (UE5) and spatial computing with the Central Axis IP. It systematically integrates core cultural elements including astronomical observation, ritual order, and agricultural timing, and revitalizes the civilizational genes of the Central Axis “modeling heaven and earth and respecting the center” into a 35-minute VR experience through digital restoration, immersive narration, and public participation. It provides audiences with composite cultural experience portals such as large-space progressive experiences and paragliding experiences. Focusing on recreating the cultural context of the heritage, the case forms a close connection with the Central Axis cultural heritage, building a comprehensive cultural heritage activation system covering historical interpretation, public education, and aesthetic experience, effectively helping the Central Axis transform from a physical cultural heritage into a perceptible, inheritable, and shareable spiritual coordinate of Chinese civilization.

### Solutions and Innovation

This case has mobilized talents from multiple fields, including cultural research, creative planning, conceptual art, 3D modeling, interactive program development, scriptwriting, dubbing and soundtrack, network environment, engineering decoration, and local operations and maintenance. It connects multiple formats such as research, creation, technological R&D, and reception services, conducting systematic exploration and practice in the digital deconstruction and innovative expression of cultural value.

Through the new paradigm of technology-driven cultural tourism—“cloud rendering + edge computing + distributed interaction”—the case has established a cultural digital asset library and a narrative engine intelligent matching system, solving the paradigm shift of cultural heritage communication from one-way output to immersive narration.

In addition to local operation, the case has also realized the lightweight and portability of digital content, expanding to lower-tier markets with a replicable model, and conveying cultural content to more audiences in accessible ways.



### Social Effects

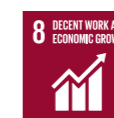
Since its opening in September 2024, this case has served more than 300,000 visitors, with total revenue from VR experience and cultural and creative sales reaching 11 million yuan. During the operation period, the average user stay time has reached 3.2 times that of traditional exhibitions. Since its launch, the case has received in-depth special reports from 18 central and local media outlets including CCTV News, People's Daily, Beijing Daily, Xinhua Daily, and Beijing Radio & Television Station, and has formed a phenomenal communication matrix online and offline. Official platforms such as XinhuaNet and China.org.cn have released more than 200 special contents in total. It has become a 2025 co-creation partner of the "East of the Forbidden City" initiative and a 2024 demonstration case of the new format of immersive sci-fi technology space.

### Expert Comments

The project innovatively constructs a trinity model of "technology + IP + operation", demonstrating the diverse values of digital technology empowering the sustainable development of cultural heritage.

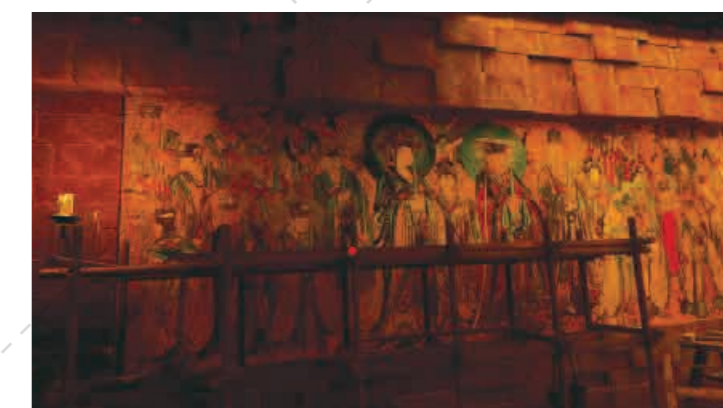


# Ningxia, China · Western Xia Mausoleums AR Intelligent Interactive Guide Project



## Project Source

Ningxia Shengtiancai Digital Technology Co., Ltd  
Ningxia Tourism Information Center  
Beijing University of Posts and Telecommunications



## Case Description

As an important UNESCO World Heritage Site in Ningxia Hui Autonomous Region, the Western Xia Mausoleums contain rich historical information and the value of the integration of diverse civilizations. However, for a long time, limited by the display bottleneck of the site itself being "rich in cultural significance but lacking engaging presentations", it has been difficult for tourists to intuitively perceive its profound cultural connotation. To break through this predicament, Ningxia Sheng Tiancai Digital Technology Co., Ltd., in collaboration with Ningxia Tourism Information Center and Beijing University of Posts and Telecommunications, jointly developed the "Western Xia Mausoleums AR Intelligent Interactive Guide Project". Centered on the in-depth integration of AI and AR technologies, the project is committed to building a perceptible, conversational and interactive intelligent guide system, enhancing the presentation and dissemination of cultural heritage, and promoting the integrated development of culture and technology. Taking the Western Xia Mausoleums as a pilot, the project explores a new path for the digital protection and communication of large-scale earthen site cultural heritage.

## Solutions and Innovation

Following the framework of "technological breakthroughs—system R&D—application demonstration", this case has developed a comprehensive innovative solution. Technically, the case overcomes the application bottleneck of large AI models in the cultural and tourism vertical domain, promoting the leap of large models from "usable" to "user-friendly". At the same time, it enhances AR's ability to understand complex scenarios, achieving a qualitative leap from "seeing clearly" to "understanding thoroughly". At the system level, the project has developed an intelligent assistant-style guidance system for cultural and tourism scenarios, covering multimodal functions such as route planning, personalized recommendations, proactive guidance, intelligent Q&A, scene explanation, and interactive dialogue. It forms a complete technical link of "vertical domain large models—lightweight terminals" and successfully realizes product implementation. At the application level, the project carries out high-standard demonstrations at the Western Xia Mausoleums, forming replicable and promotable technical solutions and business models. The project has also completed data collection and digital storage for 2,000 cultural relics, built a Western Xia cultural and tourism AI large model knowledge base, and produced a number of achievements including papers, reports, standards, and technical application specifications, providing digital and intelligent tool support for Western Xia studies. To address the positioning challenge in weak-texture scenarios, the project adopts dense feature matching technology to improve the accuracy of system pose estimation; to solve the problem of "slow response and rigid tone" in AI Q&A, it introduces Retrieval-Augmented Generation (RAG) and dynamic reasoning scheduling technology, realizing a low-latency and highly smooth anthropomorphic interactive experience, truly achieving the leap from "tool" to "assistant".



## Social Effects

This case has achieved remarkable results in economic benefits, social impact and industrial demonstration. Economically, it is expected to increase the number of visitors to the Western Xia Mausoleums by 30%, directly creating over 10 million yuan in cultural and tourism income, and driving the growth of output value of related industrial chains such as catering, accommodation and transportation in the surrounding areas by more than 30 million yuan, forming a new profit model integrating cultural tourism and technology. Socially, the project enhances the interpretability and interactivity of cultural heritage through technological means, strengthens public cultural identity, and at the same time attracts college students to participate in technical R&D, cultivating a number of interdisciplinary talents in the digital cultural and museum field, and promoting the construction of a local AI talent ecosystem. Industrially, the project provides a replicable digital guide solution for large-scale site cultural heritage in Northwest China and even the whole country, promotes the transformation of the traditional cultural and tourism industry towards intelligence and digitalization, and becomes a benchmark for regional industrial upgrading.

## Expert Comments

Based on Jingdezhen's porcelain industry heritage and supported by solid academic research, the project provides a replicable solution for the digital transformation of cultural heritage.



# Thailand · A Development of Virtual Tour Media for the Promotion and Preservation of Raman Cultural Heritage and Livelihoods in Pathum Thani Province



## Project Source

Mass Communication Technology Faculty, Rajamangala University of Technology Thanyaburi, Thailand  
 Creative media technology Department, Faculty of Mass Communication Technology,



## Case Description

This case showcases an innovative practice integrating creative media technology with cultural heritage protection in Pathum Thani Province, Thailand. The region boasts rich Raman ethnic cultural traditions; however, with accelerating urbanization and the advent of the digital era, the younger generation's sense of identity with local culture has gradually faded, and some traditional crafts such as embroidery and pottery are at risk of being lost. Meanwhile, the number of visitors to important local cultural landmarks such as Wat Bang Luang and Pathum Thani City Historical Center has declined year by year, and the development of cultural tourism has stagnated, affecting the income sources of community residents.

To address this challenge, the Creative Media Technology program at the Faculty of Mass Communication Technology, Rajamangala University of Technology Thanyaburi, launched a virtual tour media development project. Guided by the concept of "service-learning" and integrated with virtual reality course teaching, the project organized students to conduct in-depth fieldwork in the community, collect cultural materials, and document, reproduce, and disseminate Raman cultural heritage through digital technology. The final outcomes include two virtual tour platforms covering Wat Bang Luang and Pathum Thani City Historical Center respectively, open to global users. It aims to stimulate public interest in Raman culture through immersive experiences, thereby driving physical tourism and promoting the sustainable development of local economy and cultural inheritance.

## Solutions and Innovation

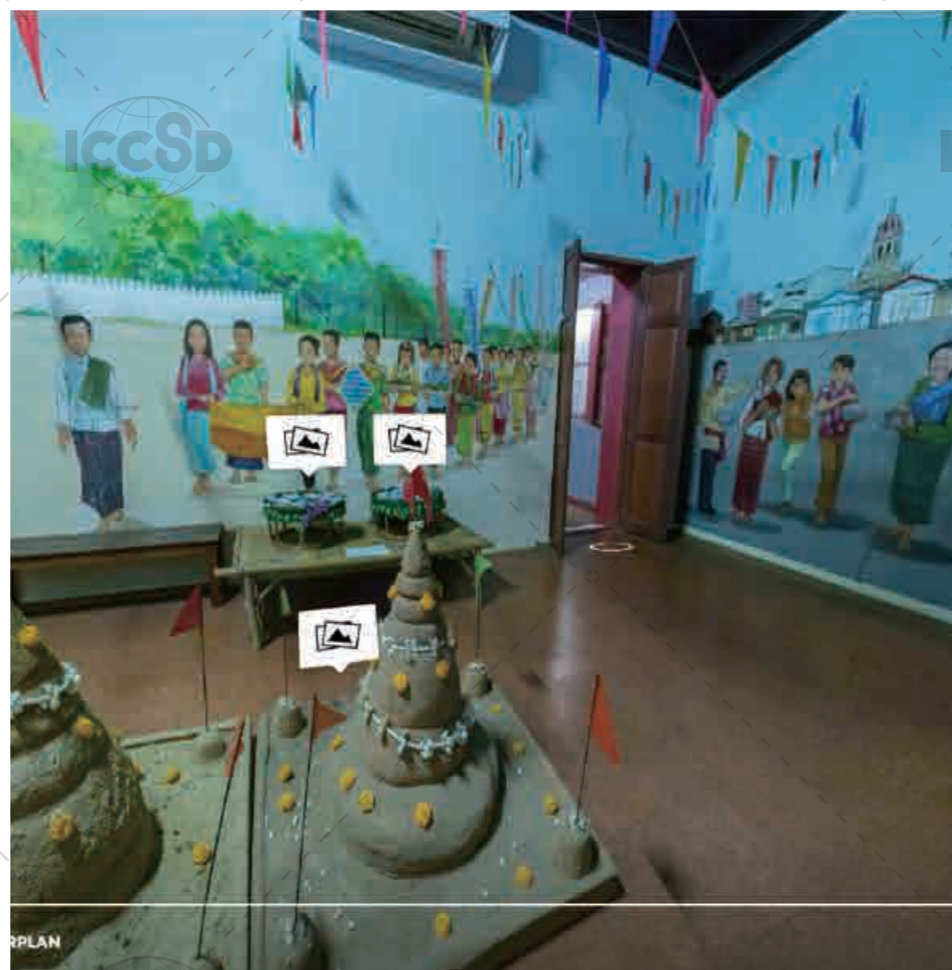
Through a systematic four-phase implementation path, this case has constructed a replicable and sustainable digital protection and communication model for cultural heritage:

**Digital Asset Creation and Content Verification:** Adopting high-resolution 360-degree panoramic photography technology to digitally collect cultural spaces and physical objects. All content was reviewed by community experts and historians to ensure the authenticity and respectfulness of cultural narratives, ultimately achieving a 98% content accuracy rate.

**System Development and Platform Construction:** Using tools such as 3DVista Virtual Tour Pro, students independently developed interactive virtual tour platforms. Users can gain an in-depth understanding of Raman culture by clicking on hotspots, watching videos, and listening to explanations.

**Testing, Evaluation, Release and Promotion:** After the project was completed, user experience surveys and social return on investment (SROI) analysis were conducted to assess its multiple impacts on the community, tourism industry, education, and cultural inheritance. Finally, the platforms were launched and promoted globally, becoming a model for the integration of culture and technology.

The core innovation of this solution lies in the in-depth integration of higher education courses with community services, promoting "intergenerational knowledge transfer", and ensuring the accurate transmission of cultural content in the virtual space through an "authenticity-first" digital path, avoiding cultural "dilution".



## Social Effects

**Promoting Local Economic Development:** The virtual tour platforms have attracted a large number of online visitors, which in turn has encouraged the return of on-site visitors, increased the tourism income of shops and communities around Wat Bang Luang, and fostered positive interaction between digital content and the real economy.

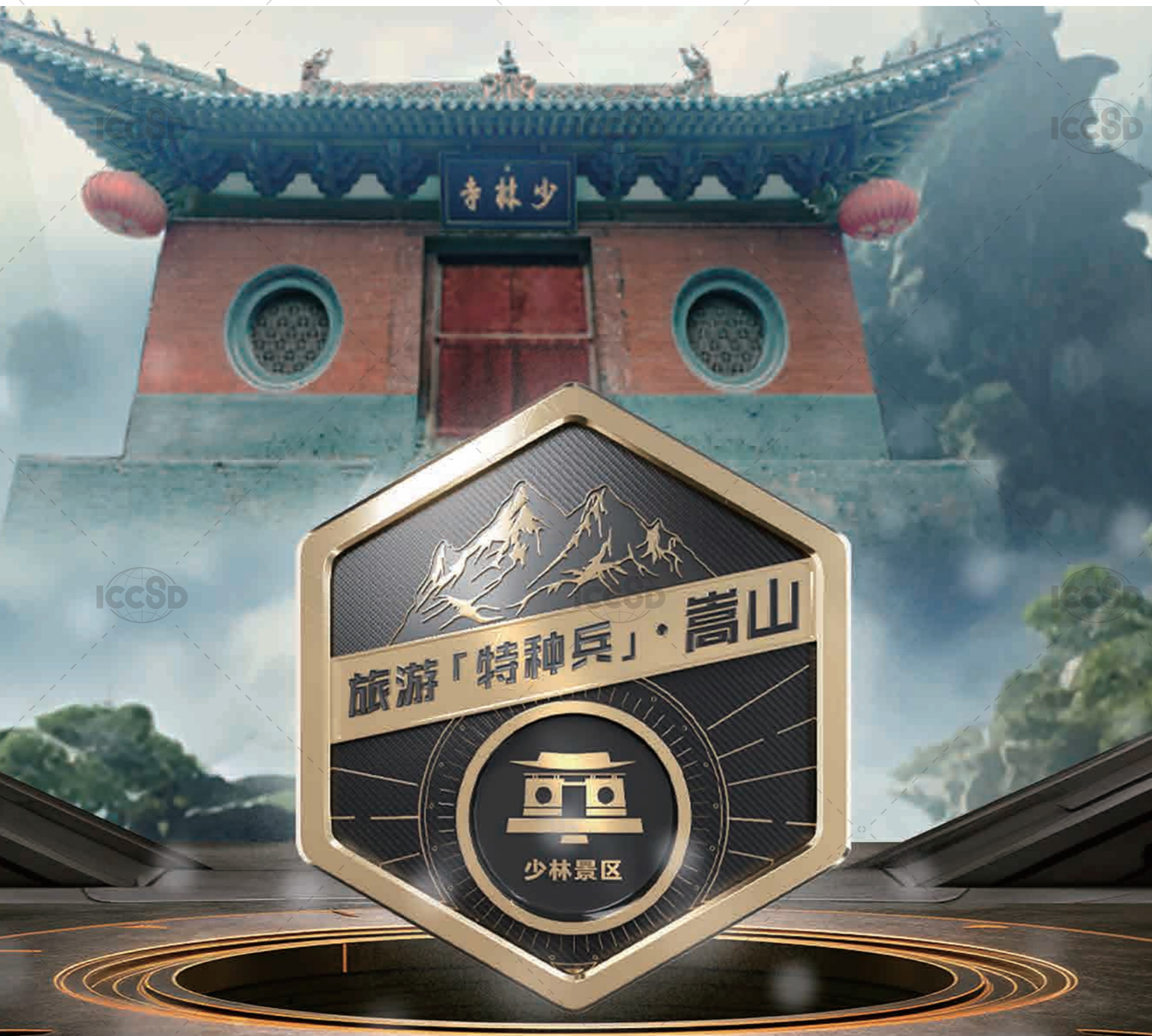
**Empowering Community Artisans and Stimulating Cultural Confidence:** Through the digital recording and display of traditional crafts, the project has helped "endangered arts" such as Raman embroidery and pottery re-enter public view, enhancing the cultural identity and pride of community members.

**Enhancing Tourism Experience and Educational Value:** The virtual tour platforms provide multilingual and self-guided learning functions, allowing users to gain an in-depth understanding of the Raman culture without relying on on-site explanations, significantly improving the cultural and educational value of tourism.

**Promoting "Permanent Digital Preservation" of Cultural Heritage:** The project has transformed vulnerable physical cultural heritage into high-fidelity digital assets, establishing a "living digital archive" and leaving accessible, learnable, and inheritable cultural genes for future generations.

## Expert Comments

Based on Jingdezhen's porcelain industry heritage and supported by solid academic research, the project provides a replicable solution for the digital transformation of cultural heritage.



# Henan, China · Songshan "Special Forces-style Tourism" Badge



## Project Source

EeastenTech Digital Technology Co., Ltd  
Dengfeng Tiandi Zhizhong Cultural Tourism Group Co., Ltd  
Yuanjing Shengsheng (Beijing) Technology Co., Ltd



## Case Description

Launched in June 2023 by EeastenTech (affiliated to Henan Radio and Television), in partnership with Dengfeng Cultural Tourism Group and Alibaba Yuanjing, this case is China's first innovative practice of "digital collectibles + offline cultural tourism rights and interests" (Non-Fungible Rights NFR). Centered on the "Centre of the Heaven and Earth" Songshan Historical Building Complex (a UNESCO World Heritage Site, including Shaolin Temple and Zhongyue Temple), the project adopts an innovative model of "blockchain + NFR (Non-Fungible Rights: digital collection + physical rights and interests)". It designs and issues limited-edition dynamic 3D digital badges for six core scenic spots including the Songshan Shaolin Temple, using blockchain technology to ensure their uniqueness and traceability. The digital badges are deeply bound to offline scenic spot ticket rights—holders can redeem the badge for free admission. Through the linkage of online sales, community operation and offline redemption, it builds a closed-loop experience of "purchase – collection – check-in – sharing".

## Solutions and Innovation

- 1.Pioneering Model:** The first national application of the NFR model in offline cultural tourism entitlements, realizing the integration of virtual digital assets and physical consumption.
- 2.Technological Empowerment:** The first cross-industry application of blockchain technology by domestic radio and television media to empower the transformation of the cultural tourism industry.
- 3.User-Oriented:** Precisely catering to young people's preferences for check-in socializing and collecting, it lowers the entry barrier to cultural tourism consumption with lightweight digital products.

By issuing digital badges with both collection value and practical rights, the case attracts a large number of young users with a low entry price of 39.9 yuan, bringing new passenger flow to scenic spots. It solves key problems such as insufficient appeal of traditional cultural tourism to young groups, single consumption experience, difficulty in attracting tourists in the off-season, and high pressure on the transformation of traditional radio and television revenue models. Leveraging blockchain technology to ensure the authenticity and credibility of entitlements, the project improves transaction security and user experience. By integrating radio and television's IP operation capabilities, technology integration capabilities with cultural tourism physical resources, it has created a new profit model driven by data assets, realizing the unification of social and economic benefits.



## Social Effects

- 1.Economic Benefits:** Upon launch, the badges sparked a surge in sales, with "10,000 units sold in a single day", with a total sales volume of about 75,000 pieces and sales revenue of nearly 3 million yuan, achieving "a low-entry, rapid-return model".
- 2.Social Impact:** The Douyin (TikTok) topic "#Let'sGoSpecialForcesStyleTourism" gained over 3.05 billion views, achieving viral dissemination. Selected into the 2024 Beijing Cultural and Tourism Technological Innovation Application Cases and Solutions, the project attracted attention from the Ministry of Culture and Tourism leaders and follow-up reports by tech media such as 36Kr, achieving cross-circle influence.
- 3.Industrial Exploration:** It has successfully verified the feasibility of the "digital collectibles + cultural tourism entitlements" business model, providing a replicable template for the subsequent "Badge Alliance" plan and the digital upgrading of cultural tourism.

## Expert Comments

Centered on the "Special Forces-style Tourism" digital badge, the case precisely caters to the cultural tourism consumption needs of young groups, providing an innovative model for the digital transformation of cultural tourism and regional cultural tourism linkage.



# Beijing, China · Digital Technology Empowers China–Egypt Joint Archaeology



## Project Source

New Dimension Imagination Digital Technology (Beijing) Co., Ltd.  
Shanghai International Studies University  
Peking University



Technology Empowering the Development of Cultural Industries

Technology Empowering the Protection of Cultural Heritage

Technology Empowering the Inheritance and Innovation of Intangible Cultural Heritage



## Case Description

Implemented against the backdrop of deepening the comprehensive strategic partnership between China and Egypt and jointly building the "Belt and Road", this case originated from the systematic archaeological excavations launched by China and Egypt at the Saqqara Pyramid Complex (the core cemetery of the ancient Egyptian capital Memphis) in 2018. The excavations yielded major discoveries, including a large number of painted anthropomorphic wooden coffins (this discovery was rated as one of the world's top ten archaeological discoveries in 2020). At the complex archaeological site, the case team used high-resolution 3D scanning equipment to scan thousands of wooden coffins and adopted micro-trace enhanced imaging technology to non-invasively record the micro-morphology of the cultural relics' surfaces. The collected data was integrated and processed to establish holographic digital archives for each cultural relic, covering macro morphology, painted textures, and micro traces. Digital models were used to assist in the restoration of physical cultural relics, with plans optimized through virtual rehearsals; ultimately, all data models will be integrated into a globally shared database supporting Chinese, Arabic, and English, open to the academic community.

## Solutions and Innovation

This case pioneered a new model of "cutting-edge technology + archaeological research + international cooperation + public communication", achieving breakthroughs not only in technology but also setting a benchmark in cooperation mechanisms and achievement application. In direct response to the consensus reached by the two heads of state on cultural mutual learning, the project was jointly implemented by the archaeological teams of Shanghai International Studies University, Peking University, and Egypt's Supreme Council of Antiquities, with technical support from New Dimension Imagination Digital Technology Co., Ltd., forming an efficient collaborative mechanism of "academic execution – technical support – official management".

The case implemented a complete digital workflow covering the entire life cycle of cultural relics, integrating technology deeply into the entire process of archaeology and protection. Through high-precision 3D digitalization, the team converted cultural relic information into quantifiable, non-destructive, and comprehensive data. Digital twin models replaced physical objects for repeated observation, measurement, and even "virtual restoration" experiments, achieving "protection first with uninterrupted research". By building a multilingual online shared database, global scholars can access and study the same set of high-fidelity cultural relic data anytime and anywhere, breaking time, space, and national boundaries.



## Social Effects

The case completed the systematic digitalization of cultural relics unearthed at the Saqqara site, forming permanently preservable data assets. In terms of restoration practice, it provided accurate digital references for cultural relic restoration, improving scientific rigor and safety. In academic research, it built the first high-precision digital resource library for this batch of precious wooden coffins, offering new materials for global Egyptology research. In public communication, relevant content was disseminated through Chinese TV variety shows, achieving over 180 million views; additionally, the "Secrets of Saqqara" special exhibition section of Shanghai Museum's exhibition (based on archaeological achievements at Saqqara in Egypt) shared a total of approximately 2.778 million visits with the entire exhibition, setting a world record for the number of visitors to a single paid special exhibition in a museum worldwide.

## Expert Comments

Through digital technology, the project enables non-destructive recording and global sharing of archaeological relics, providing precise support for cultural relic restoration. It possesses both cultural inheritance value and demonstrative significance for international cooperation.



# Hungary · Ethical AI Companions for Cultural Heritage: Pannonhalma – Lake Turkana – Tihany Digital Companion



## Project Source

Hungarian National Commission for UNESCO



## Case Description

Amid the global digital wave, how to make artificial intelligence serve the protection and inheritance of cultural heritage without eroding its humanistic essence has become an important issue of international concern. Launched by the Hungarian National Commission for UNESCO and implemented in cooperation with the UNESCO Youth Forum in Kenya, the “Ethical AI Companions for Cultural Heritage” project emerged against this background. Presented as a side event at the 47th session of the UNESCO World Heritage Committee on July 12, 2025, the case marks the official launch of a transcontinental, cross-cultural, and intergenerational innovative cooperation.

Based on two World Heritage Sites—the Millenary Benedictine Abbey of Pannonhalma in Hungary and Lake Turkana National Parks in Kenya—young students from both regions, under the guidance of teachers and community elders, carried out traditional humanistic activities such as fieldwork, oral history recording, and image collection around their respective cultural environments. The collected materials were then used in a guided AI-supported process in which digital companion tools helped participants reflect on, connect, and express their observations under human supervision. This resulted in digital cultural outputs with local characteristics, grounded in local knowledge and ethical review, and interactively presented through the “Ethical AI Companion”.

Building on this foundation, the same methodology is now being extended through the Tihany Digital Companion in Hungary, as the next place-based implementation of the Ethical AI Companion approach. Developed within the tentative World Heritage property of the Balaton Uplands Cultural Landscape, the Tihany pilot translates the educational and intercultural logic of the original case into a territorial heritage setting, where AI supports visitors’ and communities’ engagement with landscape, water memory, local knowledge, and cultural meaning.

In this sense, the case brings together Pannonhalma, Lake Turkana, and Tihany as one coherent narrative: from youth co-creation and intercultural heritage learning to an ethical digital companion model for place-based interpretation. The Tihany pilot develops this approach through the same methodology in which direct presence, observation, listening, sketching, and dialogue with local knowledge holders precede the introduction of digital and AI-supported tools.

## Solutions and Innovation

The innovation of this case lies in its “humanity-first, technology-later” implementation path. The project team is well aware that the introduction of technology cannot gain long-term trust without educational grounding and community consent. Therefore, all AI applications are positioned as “assistive learning companions” rather than “autonomous decision-making agents”. The AI system plays three key roles in the youth learning process: first, helping students sort out observations, raise questions, and deepen reflections; second, assisting in integrating community-approved stories and images to form clear and structured expressions; third, supporting cross-cultural comparison and dialogue, promoting young people from both regions to find resonance in differences. All AI-generated content must be reviewed and contextualized by teachers and participants to ensure that cultural sensitivity and ethical bottom lines are not breached.

At the technical governance level, the case strictly adheres to the principles established by the UNESCO Recommendation on the Ethics of Artificial Intelligence, emphasizing cultural rights and narrative sovereignty. All data sources are authorized by the community, and the AI system does not have the ability to make independent judgments or generate content, always remaining under human supervision. This “people-oriented, ethics-first” technical path not only effectively avoids the risks of data abuse and cultural misunderstanding but also provides a replicable model for the digital transformation in the field of cultural heritage, from intercultural youth learning to community-based digital companionship in culturally sensitive territorial settings.

In the Tihany Digital Companion, this same logic is applied beyond the classroom and workshop format to the interpretation of a living cultural landscape. Rather than replacing human interpretation, AI functions as a digital companion: supporting reflection, connecting narratives, and reinforcing attentive engagement. In line with the SOPHIA Cradle Cities approach, the Tihany pilot shows how ethical AI can accompany heritage experience in a way that remains culture-led, analogue-first, and grounded in place.



## Social Effects

This case has enhanced the sense of identity and participation of young generations in World Heritage and promoted cross-cultural understanding and intergenerational communication. In Pannonhalma, students re-examined the millennium-old history of the abbey through AI tools and generated digital narratives; in Turkana, young people used the technical platform to tell the ecological wisdom and traditional crafts of local communities. The works of young people from both regions have not only resonated in local communities but also been displayed and affirmed at relevant UNESCO conferences.

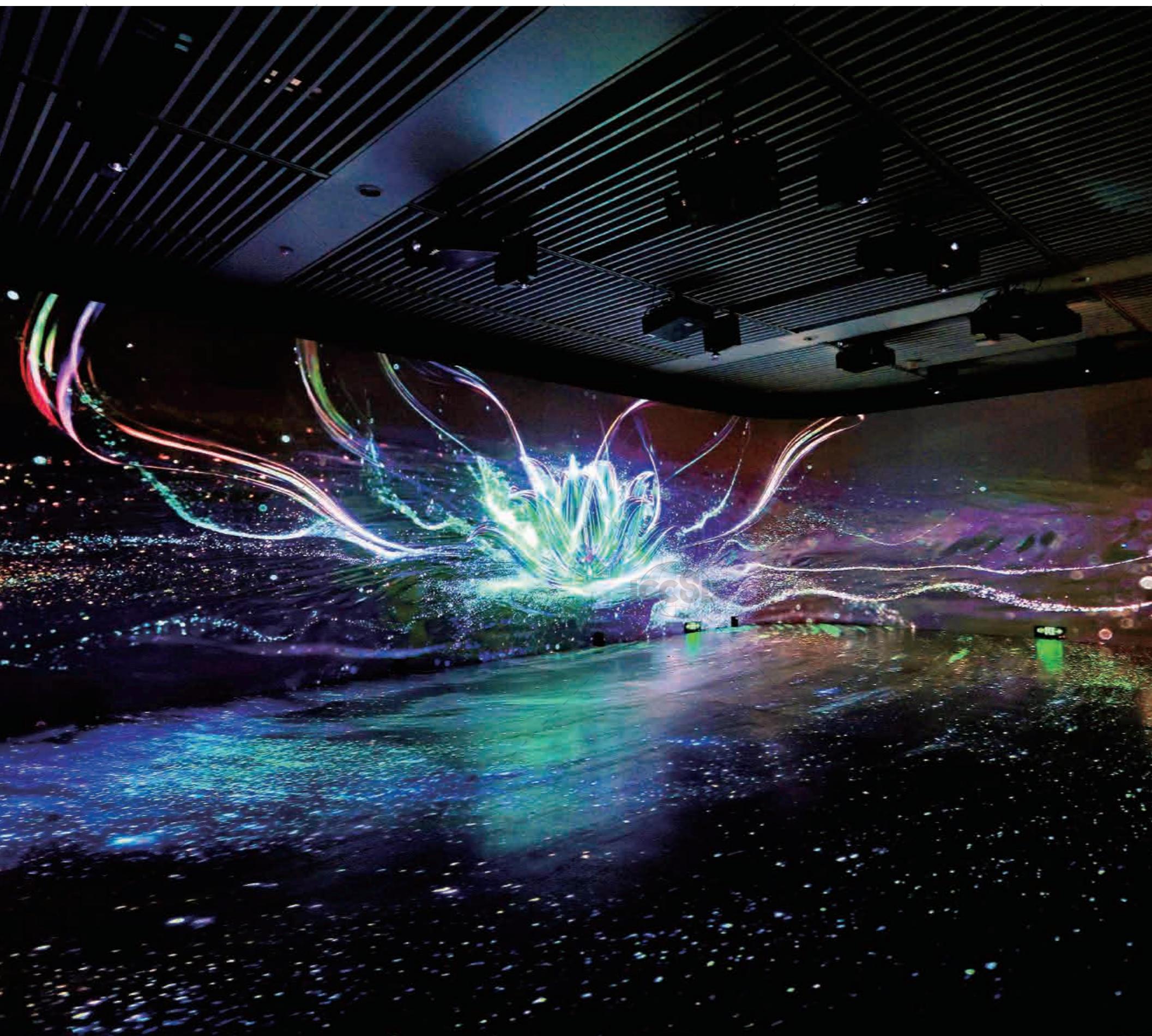
Cooperating with UNESCO’s “World Heritage in Young Hands Program” and UNESCO Associated Schools Project Network (ASPnet), the case promotes the popularization of its methodology and toolkits. The project achievements have been included in the exhibition content of relevant international conferences and are expected to become a reference case for future “AI + Cultural Heritage + Museums” education courses, demonstrating broad social value and development potential.

The Tihany pilot extends these social effects into the fields of territorial interpretation, community participation, and visitor engagement. By applying the same ethical AI principles in a cultural landscape context, it demonstrates how the methodology can move from educational co-creation to a broader public-facing heritage experience without losing its human-centred character.

The case therefore shows demonstrative value on two levels: first, as a transcontinental model of youth-based heritage learning and intercultural dialogue; second, as an emerging framework for ethical digital companionship in heritage sites, museums, and cultural landscapes. This strengthens its relevance as a transferable approach for other heritage and creative-city contexts.

## Expert Comments

Taking ethical AI as the link to connect Pannonhalma, Lake Turkana, and Tihany, the project addresses the problems of unsafe and extractive AI applications in cultural contexts through the model of youth co-creation, community approval, and place-based digital companionship. It provides a trust-enabled international model for the cross-cultural inheritance, interpretation, and sustainable development of living heritage.



# Beijing China · Past to Future: Special Exhibition of Cultural Relics and Hanging Sculpture Art from Xiaoxitian



## Project Source

Guangzhou Fantuo Digital Creative Technology Co., Ltd  
Beijing Wutong Technology Co., Ltd  
National Library of China (National Museum of Classic Books)



## Case Description

Xiaoxitian, formerly known as Qianfo An (Thousand Buddha Nunnery), is located on the top of Fenghuang Mountain west of Xi County, Linfen. Built in the second year of the Chongzhen reign in the Ming Dynasty (1629) by Monk Dongming from Huochang Temple on Wutai Mountain, it holds significant value in architecture, hanging sculpture, color painting, religion, and folk customs, serving as a representative of important cultural heritage in Shanxi Province. Breaking away from the conventional model of digital immersive exhibitions dominated by virtual images, this exhibition deeply integrates digital technology with cultural relic display. Guided by the exhibition logic of "mutual verification of scriptures and images", it takes precious cultural relics such as the Yongle Northern Canon and the hanging sculptures in the Mahavira Hall as the core narrative carriers, and uses digital multimedia content as a means of integration, narration, interpretation, and deduction to highlight the historical and artistic value of the cultural relics themselves, creating a cultural narrative space integrating virtuality and reality.

## Solutions and Innovation

Although Xiaoxitian's hanging sculptures are exquisite, the hall is small and dimly lit. Strong lighting cannot be used inside the hall, and the peak carbon dioxide levels in the air need to be controlled, resulting in a limited number of visitors. Additionally, the exquisite statues are located at considerable height and distance, making it impossible to clearly see the details of the hanging sculptures.

The case team spent more than two months conducting millimeter-precision digital collection of the Mahavira Hall in Xiaoxitian. They used reverse modeling based on 2D video data and AI reconstruction technology to build a hyper-realistic digital model with 10 billion polygons.

Adopting 16K high-definition textures, every detail is clearly visible, perfectly restoring every subtle trace. For colors faded by time, AI algorithms can deduce and restore their original appearance; for blurred patterns, intelligent restoration and enhancement are carried out with reference to contemporary color painting specimens.

The scene in the VR experience area is particularly innovative. When wearing the equipment, visitors can instantly immerse themselves in the virtual Mahavira Hall. They can "ascend" to mid-air to face the Buddha statues quietly among the beams, and even the delicate lines of the Buddha's robes are clearly distinguishable. By reach out a finger to touch, and through gesture recognition, you can "awaken" the sleeping statues, interact with hundreds of interaction points in the scene, and listen to narratives about their origins.



## Social Effects

This case marks the first in-depth activation and application of high-precision digital scanning results of Xiaoxitian's hanging sculptures, fully restoring the grand scene of the hanging sculptures in the Mahavira Hall. It allows visitors to freely explore the entire scene in VR, and clearly perceive the overall layout and detailed beauty of the architecture and statues, transforming the immobile suspended sculpture heritage into digital content that can be deeply experienced and exhibited on tour. This breaks through the difficulties in cultural relic protection and display, setting a reusable benchmark for the digital display of similar ancient architectural painted sculpture heritage.

## Expert Comments

Taking digital technology as an auxiliary tool for cultural interpretation, the project not only realizes an immersive narrative experience integrating virtuality and reality but also provides a reusable technical and exhibition model for the digital display of similar ancient architectural painted sculpture heritage.



Beijing, China ·  
ByteDance Ancient  
Book Protection  
Public Welfare Project



Project Source

Shidian Ancient Books

ByteDance

Center for Digital Humanities, Peking University



## Case Description

Ancient books are vital carriers of Chinese civilization. The protection, activation and utilization of ancient books are of great significance for inheriting fine traditional Chinese culture. Since 2021, ByteDance Public Welfare has focused on the common challenges in China's ancient book restoration sector: shortage of funds and talents, slow progress in ancient book digitalization, and difficulties in activating and disseminating ancient books. Guided by the public welfare vision of "Guarding the cultural context of ancient books to sustain the vitality of Chinese civilization", it leverages the company's strengths in cutting-edge product R&D and design, AI technologies for digital sorting of ancient books, and a diverse content ecosystem to explore new ways of supporting the preservation, activation and inheritance of ancient books.

## Solutions and Innovation

This case provides a set of innovative solutions to the widespread problems in China's ancient book field: insufficient funding and talent, lagging digitalization, and weak public communication of ancient books.

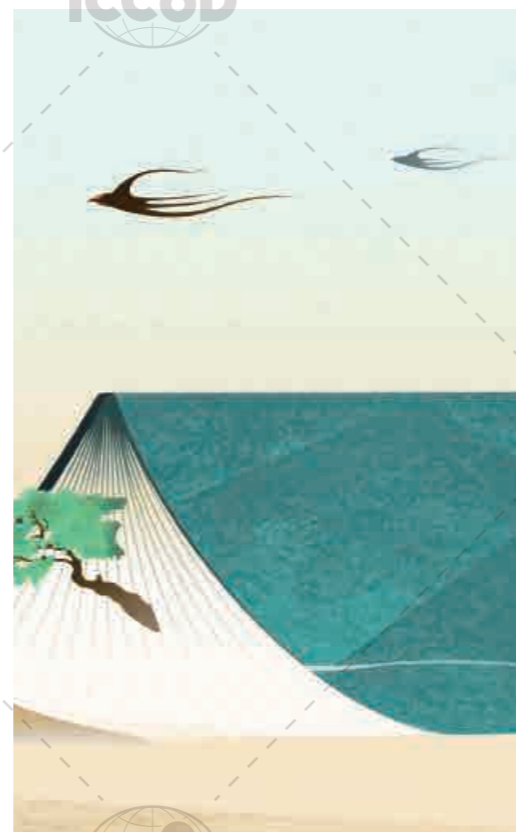
**Ancient Book Protection:** It partnered with the China Foundation for Cultural Heritage Conservation to launch the ByteDance Special Fund for Ancient Book Protection, promoting the integration of traditional restoration techniques with modern technologies through professional institutions, laying a solid foundation for subsequent digitalization.

**Ancient Book Digitalization:** Relying on AI and product R&D advantages, it partnered with Peking University to build a free and open-access platform, Shidian Ancient Books. The platform offers a full set of auxiliary reading functions, including word segmentation retrieval, AI ancient book assistant, image-text comparison, conversion between traditional and simplified Chinese characters, dictionary definitions, classical-modern text comparison, entity encyclopedia and entity relationship graphs. It efficiently converts unstructured ancient book images and texts into searchable, analyzable and understandable structured digital resources and knowledge systems, lowering the threshold for understanding classical Chinese and meeting the urgent demand for accelerating ancient book digitalization.

**Ancient Book Activation:** ByteDance integrated internal resources to promote the popular dissemination and inheritance of ancient books through innovative forms including short-form dramas, essay contests, documentaries and open courses.

## Social Effects

**Protection Outcomes:** The project has funded the restoration of over 180 precious ancient books and trained 107 ancient book restorers. In 2021, ByteDance Public Welfare and the China Foundation for Cultural Heritage Conservation established the first internet-based special fund for ancient book protection, with cumulative investment of tens of millions of yuan. In 2024, it donated an additional 25 million yuan to support Peking University in compiling,



researching and digitalizing the Confucian Canon. Phase two of the project focuses on restoring classics such as the Siku Quanshu (Complete Library in the Four Branches of Literature). Since 2023, it has assisted the Palace Museum in building a technology laboratory for ancient book protection, completed the emergency relocation and protection of Tripitaka engraving blocks, and reprinted and published the five dynasties' Imperially Approved Current Regulations in the Palace collected by the Palace Museum for the first time.

**Digitalization Outcomes:** The "Shidian Ancient Books" platform launched a web beta in 2022 and a mobile app in April 2025, with expanding service scenarios. It has opened over 50,000 ancient book resources, and more than 4,000 external teams have used the platform for research and sorting. The platform serves over 2.4 million users monthly across all channels, with 350,000 daily material searches. The public intelligent sorting program "I Collate Ancient Books with AI - I am a Text Collator" has attracted over 37,000 applicants, including more than 20,000 college students from over 1,450 Chinese universities.

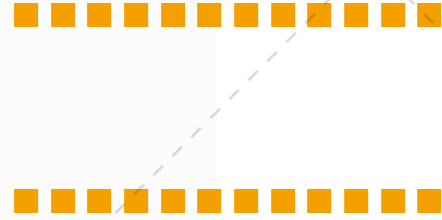
**Activation Outcomes:** Popular content such as the micro-short drama Return to the Yongle Encyclopedia has been launched. More than 147 million people have learned and read ancient books through channels including the Toutiao Ancient Books Channel and the "Shidian Ancient Books" web version. These innovative communication formats have greatly raised the profile and influence of ancient books among young people.

## Expert Comments

Centered on the protection and dynamic activation of ancient books, the project funds restoration through a special fund and builds the "Shidian Ancient Books" platform in partnership with universities, bringing traditional culture to the public with strong communication effects.



## Technology Empowering the Inheritance and Innovation of Intangible Cultural Heritage



Intangible cultural heritage (ICH) carries the living memory of human civilization, and its inheritance and innovation are facing unprecedented opportunities in the digital age. The extensive application of technologies such as artificial intelligence, big data, virtual reality and intelligent interaction has opened up new horizons for the documentation and preservation, skill inheritance, creative transformation and international communication of ICH.

14 typical cases under the track of Technology Empowering the Inheritance and Innovation of Intangible Cultural Heritage have been selected in this call for cases, demonstrating diversified innovative approaches: Large AI models facilitating the protection of trans-boundary languages and dialects, intelligent design systems empowering the innovation of traditional crafts, immersive performing arts and digital human technologies activating the modern expression of ICH, and digital platforms promoting the open sharing of ancient texts and ICH resources. These cases fully embody how digital technologies break the temporal and spatial constraints of ICH inheritance, expanding the traditional model of "oral instruction and hands-on learning" into an innovative ecology of human-machine collaboration and cross-border integration. They drive ICH to evolve from static documentation to living inheritance and from cultural resources to creative capital, providing strong momentum for the sustainable development of intangible cultural heritage in the digital age.



# 侗锦文化数据平台

数据库平台内容展示

纹样库

构型库

灵感库

产品库

色彩库

## 什么是侗锦

侗族自古聚居山区，侗族人在当地的自然条件下形成了“林粮间作”、“稻鱼鸭共生”等生态智慧，也形成了对自然万物的多样崇拜，成为侗族积淀深厚的思想与主题来源。侗锦是民族生活、创造艺术和民族精神的结晶，独特的纹样承载了古代苗族图腾的纹样，将侗族与古代苗族人的血脉上的联系，因循着传统的纹样与纹样关系。



## 精选作品



Weaving with AI  
织颜纺颜

精选作品分区展示 预期产出清晰直观

## 数字交互banner

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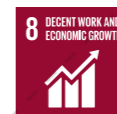
## 亮点功能动态演绎

轻松理解平台  
亮点功能及效果

## 平台功能模块介绍

手工、产品  
数字化全覆盖

# Hunan, China · The Intelligent Design System Project for Intangible Cultural Heritage Dong Brocade



## Project Source

School of Design, Hunan University  
Key Laboratory of Digital Cultural and Creative Intelligent Design  
Technology, Ministry of Culture and Tourism;  
Lushan Laboratory, Yuelushan Center for Industrial Innovation



## Case Description

This case is an intelligent design software developed for the digital expression of ICH Dong Brocade. With core functions including innovative pattern generation, semantic adaptive recommendation, intelligent conversion of craft drawings and multimodal interaction, the software supports three major cultural ecological scenarios: manual production, industrial transformation and digital intelligence.

In different ecological systems, the design logic, core values, user roles and design outputs of the software vary, demonstrating a composite capability to adapt to diverse production models and cultural demands. It provides systematic technical support and development paths for the multi-dimensional development of Dong Brocade.

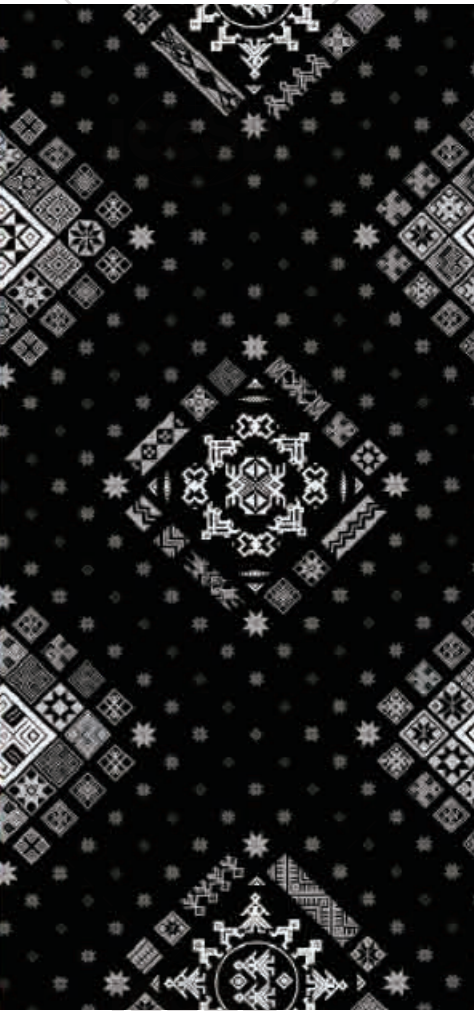
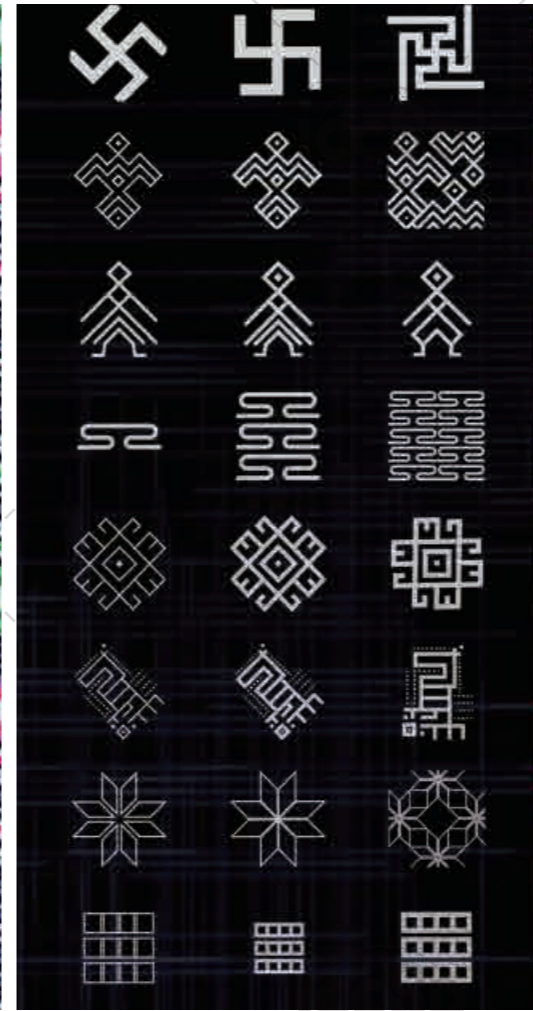
## Solutions and Innovation

With the evolution of social and cultural structures and the rapid development of technology, the inheritance path of Dong Brocade has gradually shifted from traditional self-sufficient manual production based on families and communities to mechanized mass manufacturing and digitally intelligent innovative expression. Against this background, this case provides a digital technical solution to the innovative challenges of Dong Brocade in the digital environment:

**Solving "Difficulty in Implementation":** It addresses the pain points that general AI-generated images cannot be edited, vectorized or directly put into production. Through full-chain digitalization, design drafts are directly applied to both manual and machine weaving, achieving the leap of ICH from "exhibits" to "marketable products".

**Solving "Difficulty in Inheritance":** It creates a weaver-centered collaborative design tool. Through visual intelligent assistance, it targets the pain point of converting design drafts into craft drawings during inheritance, lowers the threshold for skill inheritance, transforms weavers from passive executors to active creators, and realizes the return of cultural subjectivity empowered by technology. It also solves the problem that young inheritors "are willing to weave but reluctant to design", enabling the ancient craftsmanship to achieve living inheritance and innovation through digital technology.

**Solving "Difficulty in Innovation":** AI-generated designs tend to deviate from cultural norms. By embedding parametric design rules and cultural constraints, the platform guides AI to generate creative variations within established paradigms, balances innovation and cultural standardization, and ensures that the output designs conform to cultural authenticity in both form and meaning.



## Social Effects

This case has established a digital transformation paradigm for ICH: "data asset development – tool integration – ecosystem building".

**Technical Transferability:** Its technical architecture of "vertical small data + parametric model" is highly transferable, providing replicable solutions for other traditional handicrafts worldwide facing digital challenges (such as embroidery, printing and dyeing).

**Ecological Inclusiveness:** A universal multi-dimensional empowerment model has been built: activating employment and income growth for local craftsmen at the grassroots level, supporting innovation for designers and artists horizontally, and assisting product upgrading for large enterprises at the upper level.

**Industry Benchmarking:** This full-chain closed loop integrating "community sustainability – design innovation – industrial transformation" provides a replicable and promotable reference for the living inheritance and commercial transformation of ICH globally.

## Expert Comments

The project activates the Dong Brocade ICH ecosystem with a vertical AI model, addresses the challenges in inheritance, innovation and implementation, and provides an efficient and feasible practical model for the digital inheritance and industrial empowerment of traditional handicrafts.



# Guizhou, China · AI Creative Empowerment and Industrial Integration Demonstration Project of Miao Embroidery in Shibing County



## Project Source

Shibing County Wushui Yuntai Tourism Commodity Development Co., Ltd., Guizhou Province



## Case Description

Focusing on the AI empowerment and intelligent manufacturing of the Miao embroidery industry in Guizhou, this case centers on the integrated innovation of "Miao embroidery + AI". Relying on cutting-edge technologies such as big data, artificial intelligence, and image processing, it builds a complete system covering the collection, digital processing, intelligent generation, industrialized production, and multi-scenario application of Miao embroidery patterns. Meanwhile, it establishes a "digital gene library" of Miao embroidery to counter the risk of craftsmanship being lost, establishing a digital protection gene library for Miao embroidery intangible cultural heritage, a multi-modal Miao embroidery vertical large model driven by cultural characteristics, a collaborative platform for intelligent design and production, and an intelligent manufacturing base, as well as the construction of a Miao embroidery intelligent manufacturing base and demonstration of scene application.

The case has connected the industrial chain of "AI Design → Intelligent Production → Global Communication". By systematically collecting, labeling, and analyzing Miao embroidery patterns and stitching techniques, it realizes intelligent generation and customized design of patterns, building a new digital industry ecosystem for Miao embroidery that integrates pattern recognition, design innovation, intelligent manufacturing, and cultural communication. This promotes the transformation of Miao embroidery from traditional handicraft to digital, intelligent, and large-scale production.

## Solutions and Innovation

Through AIGC (Generative Artificial Intelligence) technology, the case achieves functions such as "text-to-image", "image-to-image", and "command-generated patterns", shortening the design cycle of Miao embroidery products from the original one to two weeks to three days, reducing design costs by more than two-thirds, and improving production efficiency by over 80%. From the input of language or image commands to pattern generation, 3D mapping, process optimization, and then to automatic scheduling and intelligent quality inspection, a complete digital production chain has been formed, truly realizing the design vision of "what is desired is obtained instantly".

For the first time, this case applies technologies such as multi-modal large models, fractal geometry, and extension element representation to the cultural analysis and creative generation of Miao embroidery, realizing the intelligent inheritance of intangible cultural heritage craftsmanship. Based on the construction of a big data model application platform, the case uses AI technology to explore the characteristics and creative points of Miao embroidery patterns, and generates design drafts for fashion, clothing accessories, and cultural and creative products with diverse shapes, fabrics, and colors in the cloud, providing a full chain of services from AI design, order generation to finished product production, and enhancing product added value. The platform simultaneously constructs "intangible cultural heritage Miao embroidery + cultural tourism" diverse consumption scenarios, forming a coordinated development ecosystem for cultural inheritance, industrial upgrading, and employment promotion. The whole chain collaborates to connect the entire process of "cultural semantic extraction — AI design generation — intelligent manufacturing — network-based operation", building a closed industrial ecosystem covering design, production, sales, and training.



## Social Effects

Adopting the model of "company + cooperative + farmer", this case enables embroidery women to work at their doorsteps, increase their income, and support rural revitalization. Focusing on training and driving women's employment, it has promoted more than 1,300 rural women to participate in the Miao embroidery industry, enhancing their economic independence.

The case realizes the coordination of economic and social benefits. Relying on the Miao embroidery pattern database and AI large model software to assist in designing Miao embroidery patterns, it cooperates with more than 20 leading enterprises in the clothing and cultural and creative product industries to develop more than 100 derivative products, including clothing, household items, cultural tourism souvenirs, etc., driving the new revenue of related industries to reach 50 million yuan. Meanwhile, it constructs a digital asset library of Miao embroidery patterns, collecting more than 1,000 traditional pattern styles to achieve permanent digital evidence storage; interprets the cultural significance of Miao embroidery through AI technology to form a systematic cultural knowledge map; and establishes digital archives of Miao embroidery cultural inheritors to record traditional craftsmanship techniques and cultural stories.

## Expert Comments

Taking "AI + Miao embroidery" to build a full-chain empowerment system of design, production and sales, this project provides a replicable industrial paradigm for the integrated development of the dynamic inheritance of intangible cultural heritage and rural revitalization.



# Yunnan, China · Digital and Intelligent Empowerment of the Chu Xiong Yi Embroidery Revitalization Project



### Project Source

Chuxiong Prefecture Cultural Development Group Co., Ltd  
Yunnan Weiheng Jiye Technology Co., Ltd  
Yunnan University



## Case Description

Rooted in the original heritage of Yi Embroidery, this case targets pain points such as disrupted inheritance, inefficient industrial development and blocked value release. Taking the opportunity of digital transformation, it builds a digital resource library centered on high-quality datasets, fully integrating multi-dimensional data including Yi Embroidery patterns, craft techniques and market demand. It opens up the entire industrial chain from creative design, standardized production to precise sales via digital technologies, realizing efficient coordination between large-scale mass production and personalized customization, and improving industrial response speed and market competitiveness.

The case innovatively creates a diversified integration model of "Yi Embroidery +", actively promoting the in-depth integration of Yi Embroidery with modern clothing, home decoration, cultural and tourism products and other fields. It brings Yi Embroidery, an intangible cultural heritage, to the international stage through channels such as international fashion weeks and cultural exchange exhibitions, enabling traditional craftsmanship to generate new cultural value and commercial vitality from a global perspective.

## Solutions and Innovation

The case accurately addresses three core problems: first, disrupted inheritance, as traditional craftsmanship passed down orally is hard to sustain and young practitioners are scarce; second, fragmented and disorganized industry, with long design cycles, inconsistent quality standards and limited sales channels for embroidery products; third, limited transformation of cultural value, as traditional patterns are disconnected from modern aesthetics and copyright protection is lacking.

The solution focuses on full-chain digital enablement. It has built China's first Yi Embroidery digital cultural industrial park and constructed the "Three Databases and Three Platforms" system, completing the registration of over 50,000 embroidery artisans and copyright registration of more than 1,700 patterns. The AI pattern generation system shortens the design cycle from 15 days to 3 days, and blockchain technology realizes copyright verification and transactions. Sales channels are expanded via the "Yi Embroidery Cloud" e-commerce platform and livestreaming marketing.

Meanwhile, digital training improves practitioners' skills and promotes the innovative transformation of traditional patterns, forming a closed loop of "policy guidance — digital drive — industrial upgrading — cultural inheritance". This preserves the authenticity of intangible cultural heritage while increasing income for 60,000 embroidery artisans.



## Social Effects

**Explosive growth of industrial scale:** The output value reached 1.13 billion yuan in 2024; the number of business entities increased from 538 to 2,233, with 13 enterprises above designated size, forming a large-scale industrial pattern.

**Remarkable livelihood benefits:** It has created jobs for 60,000 embroidery artisans, raising their per capita annual income from 20,000 yuan to 40,000 yuan; more than 2,000 disabled embroidery artisans have achieved stable income growth, supporting rural revitalization.

**Breakthrough in global branding:** It has appeared at five major international fashion weeks with media exposure exceeding 3.4 billion views, launched co-branding with international brands, and become a global demonstration case of UNESCO.

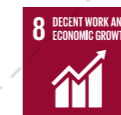
**Win-win inheritance and innovation:** A four-level inheritor system has been established; practitioners are empowered by digital training, and traditional craftsmanship is deeply integrated with modern aesthetics to realize living inheritance.

## Expert Comments

Centered on the protection and dynamic activation of ancient books, the project funds restoration through a special fund and builds the "Shidian Ancient Books" platform in partnership with universities, bringing traditional culture to the public with strong communication effects.



# Fujian, China · Innovative Practice of Revitalizing Huian Women's Costumes Based on Fashion Narrative and Digital Interaction



## Project Source

People's Government of Huian County



## Case Description

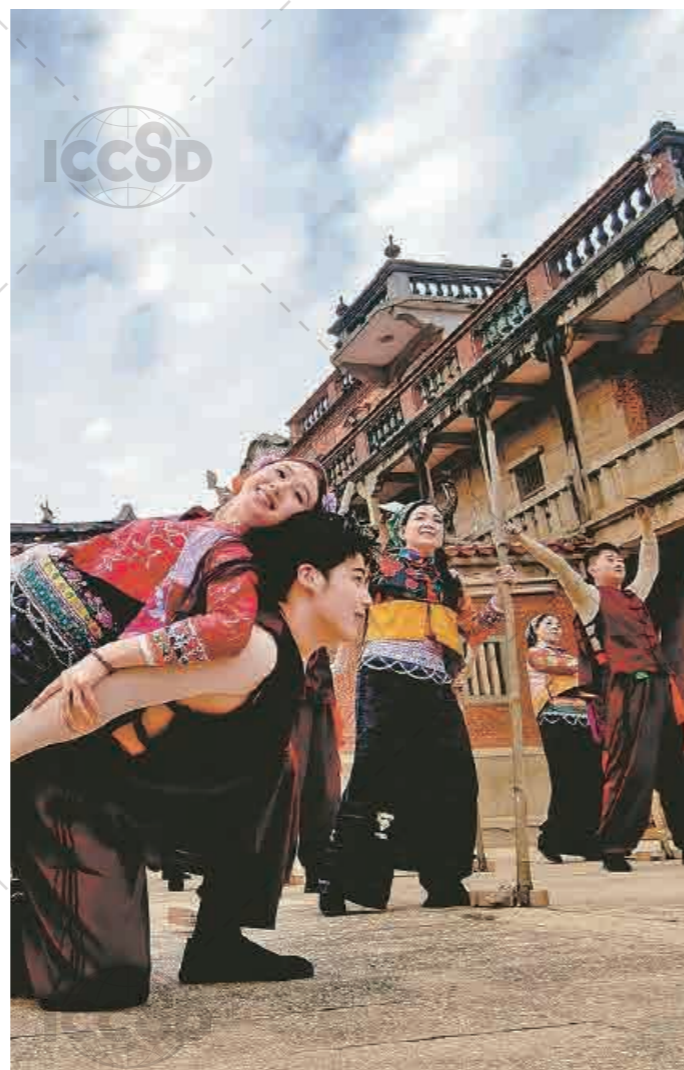
Huian Women's Costumes are a national-level intangible cultural heritage (ICH). Their unique visual features and the hardworking "Huian Women's Spirit" constitute a highly recognizable cultural gene. Taking the "Huian Women's Customs Promotion Year" as an opportunity and the planning of the Huian Women: Blossoms in Splendor series of fashion events as the primary platform, Huian County promotes the upgrading of Huian women's culture from a visual spectacle to an understandable, experiential and participatory spiritual symbol of the times. This is achieved through the reconstruction of fashion narratives and deepening of digital interaction, supported by a series of measures including empowerment by renowned designers, digital transformation of offline spaces, development of cloud-based study courses, digital cultural and creative products and immersive experiences.

## Solutions and Innovation

The innovative practice of Huian Women's Costumes targets two core problems in ICH inheritance: "difficult cultural interpretation" and "difficult long-term development" and provides a systematic solution. It uses the fashion aesthetics of the Huian Women: Blossoms in Splendor series as a medium of translation to convert traditional symbols into international fashion language, realizing a profound leap from visual spectacle to spiritual resonance.

Meanwhile, it builds a tripartite collaborative ecosystem of "policy – market – society": special policies guide and leverage creative resources; market mechanisms transform cultural narratives into products and experiences; social forces (inheritors, designers, the public) extensively participate in content co-creation and communication. This forms a sustainable closed loop from value decoding to industrial innovation, establishing a long-term support mechanism for the living inheritance and contemporary development of ICH.

Its core lies in the successful paradigm shift from "marketing drainage" to "in-depth value narrative". By building the sustainable cultural translation system of Huian Women: Blossoms in Splendor, it interprets local ICH with an international fashion language system, deepens interactive experiences with technological means such as AR, virtual study tours and digital cultural and creative products, and effectively integrates inheritors, designers and commercial platforms supported by special policy funding. It builds an organic ecosystem of collaborative innovation and accurately solves the deep-seated dilemma that cultural heritage is "incomprehensible".



## Social Effects

Cultural influence has achieved breakthrough upgrading. Huian Women's Costumes have risen from a regional folk symbol to a fashion IP featured at international fashion weeks in Paris, Milan and Beijing.

In-depth communication has achieved remarkable results. The total online exposure of the series of content exceeds 500 million views, and in-depth interpretation content has attracted a large number of young designers and scholars to take the initiative to participate, realizing the intergenerational renewal of the inheritor group.

Industrial driving benefits are outstanding. The "Huian Marine Charm" Block has become a phenomenal cultural tourism destination. During the May Day holiday in 2025, it drove a year-on-year increase of 989.5% in tourist volume in the Chongwu Ancient City area, and the income of surrounding businesses increased exponentially. A replicable and standardized empowerment model for ICH modernization has been formed, featuring "core fashion narrative leadership + digital interaction to deepen experience + policy ecosystem collaborative support".

The innovative practice of Huian Women's Costumes provides the "Huian Solution" for the modern transformation of ICH worldwide. It reconstructs cultural narratives with international fashion language, turning regional heritage into a contemporary cultural brand with international communication capacity; it deepens cultural experience and education with digital technology, realizing in-depth empowerment of connotation by technology; with precise policy design, the local government effectively coordinates resources from all parties and builds a sustainable innovation ecosystem with multi-stakeholder collaboration. This proves that the key to ICH "going viral" is to "strike a chord" through systematic value reconstruction, providing practical Chinese local experience for cultural inheritance in the digital era.

## Expert Comments

Centered on the ICH Huian Women's Costumes, the project uses fashion-based narrative translation and digital interaction empowerment, and links international fashion weeks, enabling ICH to break through regional and intergenerational barriers and demonstrating the innovative value of cultural inheritance.



Beijing, China ·  
Alibaba Cloud Design  
Center × Beijing  
Institute of Fashion  
Technology  
"Comprehensive  
Fashion Design"  
Innovation Project



Project Source

Alibaba Cloud Design Center, School of Fashion Accessory  
Beijing Institute of Fashion Technology



### Case Description

As a key project of the D20 Global Design Institutes Deans' Summit, this case is an industry–university–research collaborative education initiative launched by Alibaba Cloud Design. It aims to support design students in conducting research and practice using AI tools and facilitate the transformation and promotion of their creative outputs. Centered on traditional Chinese costume culture, the project guides students to conduct systematic research on costume colors, patterns, crafts and materials, and practice with AIGC design tools. The curriculum covers LoRA–based model segmentation, training and optimization, ComfyUI workflow construction on Alibaba Cloud PAI–ArtLab platform, and instruction in and application of voice–based AIGC tools. Supported by the computing power of Alibaba Cloud's "Yungong Kaiwu" University Support Program, students explore the potential of AI–generated costume design and finalize virtual fashion design schemes rooted in traditional costume culture.

This course not only helps students understand and apply AI tools for creative practice but also provides practical pathways and resource repositories for the digital innovation of traditional costume culture.

### Solutions and Innovation

AIGC technology is profoundly reshaping the design industry, and AI has been fully integrated into university courses. From theoretical instruction to practical training, understanding of AI and support from AI tools have become essential for design education. AI + Education has become a core demand for the development of contemporary design and art education.

This project links university curricula with real industry demands. Relying on the PAI–ArtLab one–stop AIGC design platform, it helps students grasp and apply AI tools for creative practice and promotes industry–education integration under the new paradigm of AIGC design.

PAI–ArtLab is a customized one–stop AIGC platform for art and design universities, providing a cloud–deployed and cloud–stored working environment, abundant AIGC tools, and standardized teaching management to meet the diverse needs of future design education. Supported by PAI–ArtLab, the project builds a standardized and replicable professional course workflow for AI–integrated design curricula, facilitating the implementation of AIGC courses in universities.



### Social Effects

Backed by the PAI–ArtLab AIGC platform and computing power from Alibaba Cloud's "Yungong Kaiwu" University Support Program, PAI–ArtLab has been adopted by more than 50 universities nationwide, including Zhejiang University, Chongqing University, Southern University of Science and Technology, Beijing Institute of Fashion Technology, China Academy of Art and Jiangnan University. It has enabled the exploration and practice of AIGC x design disciplines in multiple fields, such as industrial design, fashion design, art and archaeology, and traditional craft design.

AIGC technology is deeply integrating with various industries through comprehensive adoption in university design education. The 2025 Alibaba Cloud x University Industry–University–Research Collaborative Education Project connects academic curricula with real industry needs. Based on the PAI–ArtLab one–stop AIGC design platform, it has launched 10 high–quality industry applications and workflows, advancing industry–education integration under the new paradigm of AIGC design.

### Expert Comments

As a benchmark for industry–university–research collaborative education, the project promotes the inclusive adoption of AIGC design education and injects sustainable momentum into the revitalization of intangible cultural heritage and the upgrading of the design industry.





Beijing, China ·  
2025 Beijing  
International  
Intangible Cultural  
Heritage Week “ICH  
Digital Human”  
Application



Project Source

Volcengine



## Case Description

During the 2025 Beijing International Intangible Cultural Heritage Week, to further expand the influence of the event and deepen interactive communication with young groups, the Beijing Municipal Bureau of Culture and Tourism fully leveraged ByteDance's communication reach and technological advantages to jointly launch the "ICH Digital Human" project. Using virtual images as the primary medium, the project seamlessly integrates a variety of intangible cultural heritage (ICH) elements, creating an innovative path for the digital dissemination and application of ICH.

Based on the Doubao Large Model and Coze Platform, the case designed and launched ICH Digital Humans with multimodal interaction capabilities, deployed intelligent agents across both the Doubao App and Douyin Platform, and set up check-in installations at the event site, forming an integrated online-offline communication system.

## Solutions and Innovation

The case innovatively introduced interactive digital humans into large-scale cultural event scenarios, effectively improving the online visibility of ICH content and its appeal to young people, and helping to address problems such as the disconnect between ICH dissemination and young groups and insufficient interactivity. In practice, through AI digital humans, multimodal interaction and platform linkage, the project enabled vivid and personalized communication of ICH content, enhanced user participation and experience, and promoted the inheritance and innovation of ICH in the digital era.

The case provides comprehensive SDK and API solutions, configures dialogue modes and builds an ICH knowledge base to support the upload and learning of multi-format corpora. Through the Coze Platform, it integrates the capabilities of the Doubao general model, including but not limited to the Doubao Language Model, Doubao Speech Model (Mandarin, English), Doubao Vector Knowledge Base, and Doubao Internet Plug-in.

On this basis, the case completed the development of the application and launched it as an intelligent agent on the Doubao App and completed the association of the AI avatar with the official Douyin account @Douyin Intangible Cultural Heritage Program leveraging ByteDance's product system.



## Social Effects

The case has formed a collaborative model of "large-scale events + digital technology + ICH IP". Specifically, relying on international ICH events, it uses digital humans, AI and other technological means to improve experience and efficiency, and with the platform's rich ICH content reserves, builds a complete chain from content communication, interactive participation to IP development, providing referable digital creativity and application strategies for similar cultural activities.

The case has integrated usage and display channels across multiple ByteDance products. For example, users can access the intelligent agent by searching for "ICH Digital Human Feifei" on the Doubao App and interact with the AI avatar of the official Douyin account @Douyin Intangible Cultural Heritage Program. At the offline event site, the "ICH Digital Humans" became popular check-in installations among teenagers, enhancing the engagement between ICH and young groups.

## Expert Comments

Using Chinese-style digital humans as the primary medium, the project integrates the ICH knowledge base and intelligent interaction capabilities, demonstrating the practical value of technology empowering cultural inheritance.





# Yunnan, China · Lancang-Mekong Countries Cross-Border Language AI Large Model



## Project Source

Yunnan Endangered Language and Culture Communication Co., Ltd  
Zhiyi  
Shanghai Biren Technology Co., Ltd



## Case Description

The construction starts with the building of a high-quality corpus. The basic process of corpus construction includes: first, collecting high-quality audio corpora in a recording studio, followed by annotation and proofreading. Based on the vocabulary, grammar and pronunciation characteristics of the collected languages, basic AI large models such as an AI-based text translation and generation system, a speech synthesis system and a speech recognition system are further built. Relying on these basic systems, applications for multiple fields are developed, including government governance, language resource protection, intangible cultural heritage inheritance, cultural and tourism promotion, education improvement and e-commerce.

## Solutions and Innovation

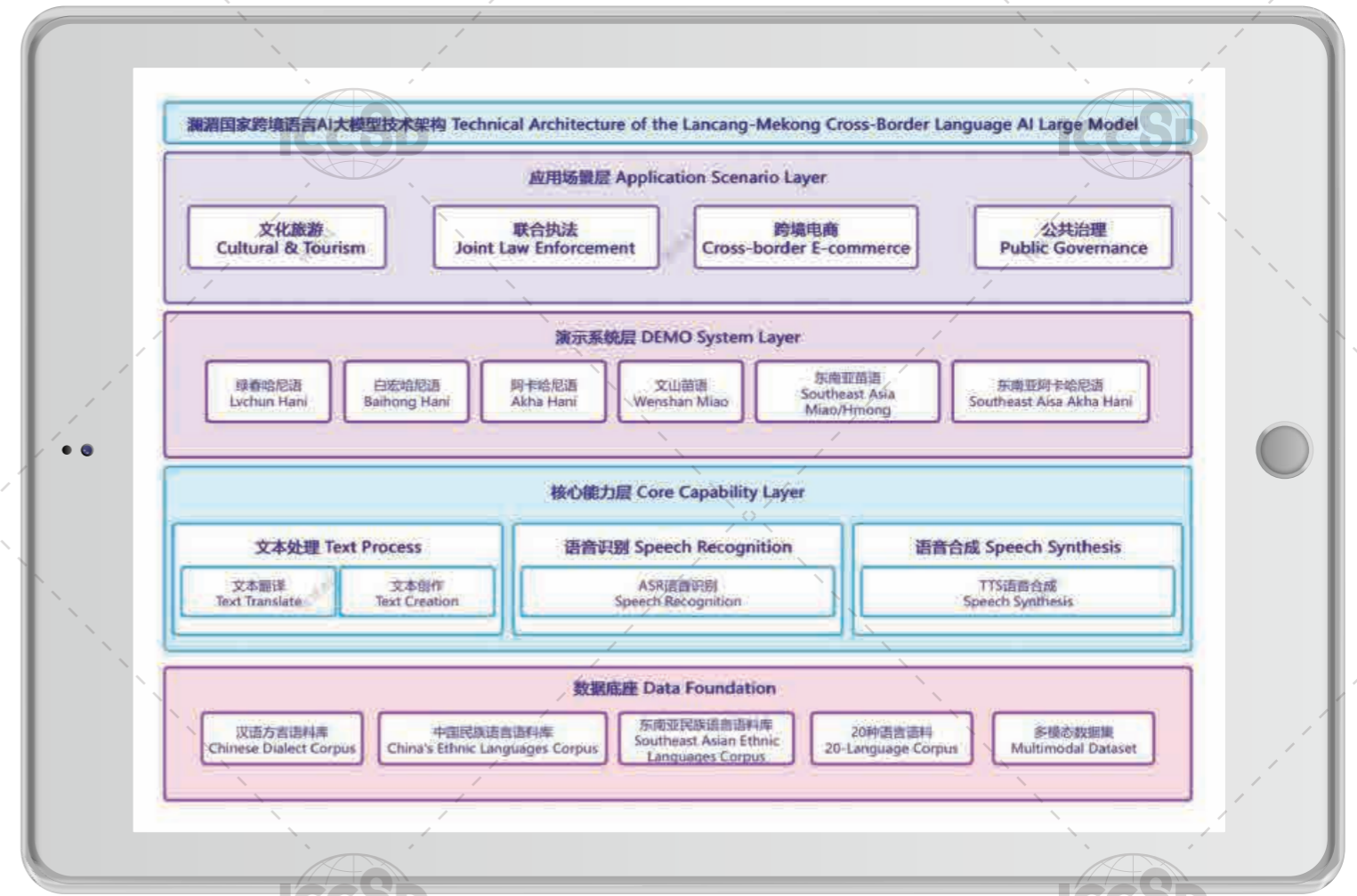
The Lancang-Mekong River Basin runs through six countries, where dozens of cross-border ethnic groups live. Most of them use their own native languages different from official languages, and language differences create significant barriers to folk and cultural communication. Since most of these languages lack written records and digital corpora, traditional translation methods can hardly systematically solve the problem of language interoperability. Therefore, promoting the construction of the Lancang-Mekong Countries Cross-Border Language AI Large Model is of great significance for protecting linguistic and cultural resources, promoting regional peace and stability, and achieving digital equity.

This case directly addresses the three core pain points in the Lancang-Mekong region caused by language barriers: governance difficulties, cultural loss and unbalanced development. By building a cross-border language AI large model, it provides digital basic tools for solving deep-seated social problems in the region such as long-standing armed conflicts, drug crimes and economic backwardness.

Firstly, the cross-border language AI large model provides a technical foundation for cross-language information translation and communication, empowering information interoperability scenarios such as government affairs, online content review and security early warning. It helps break information barriers, improve the efficiency of regional collaborative governance and judicial cooperation, and provides technical support for combating cross-border crimes and promoting peaceful dialogue.

Secondly, it rescues and protects endangered language resources in a digital way, enabling them to be recorded, learned and used, providing an innovative carrier for the inheritance of intangible cultural heritage and cultural and tourism promotion, and mitigating cultural loss caused by language gaps.

Finally, it reduces the digital divide, enabling ethnic minority groups to access digital education, e-commerce and cultural and tourism services in their native languages, obtain development opportunities and information, promote the inclusive growth of the regional digital economy, and fundamentally weaken the breeding ground of unstable factors such as poverty.



## Social Effects

There are about 7,000 languages in the world, and more than 6,500 of them are low-resource languages. The "Lancang-Mekong Model" of this case provides a transferable solution for many regions around the world facing similar dilemmas. Through the path of "corpus co-development - foundational model - scenario-based application", this model can quickly adapt to local languages, providing a ready-to-use technical toolbox for promoting cross-regional governance cooperation, digitally preserving endangered cultures and reducing the digital divide, so as to solve governance fragmentation, cultural inheritance crises and uneven economic development exacerbated by language barriers.

This case plans to invest 10 million yuan from 2026 to 2028 to cooperate with Peking University to build a Low-Resource Language AI Large Model Technology Research Center, a corpus and an AI computing power center. In the future, it will build a World Language Center, with the ultimate goal of developing a world language AI large model named "Tower of Babel". This model will continuously document the process of human civilization and strive to build a global and inclusive knowledge base.

## Expert Comments

The project builds a "digital gene bank" for ethnic minority languages with AI technology. Through multimodal corpus collection, intelligent translation and cultural image translation, it provides a technology-empowered practical paradigm for strengthening the sense of community for the Chinese nation and inheriting the pluralistic integration of Chinese culture.



# Jiangsu, China · Suzhou iFlytek AI + Dialect Protection Plan



## Project Source

iFlytek (Suzhou) Technology Co., Ltd  
 Suzhou Intangible Cultural Heritage Protection and Management Office  
 Suzhou Museum



## Case Description

With the rising national popularity of Mandarin and rapid urbanization, dialects are losing the speakers and cultural environments they need to survive. Many people have forgotten their native accents, and countless distinctive dialects are gradually fading away. As a vital carrier of China's multi-ethnic and multi-regional culture, the inheritance and development of dialects embody national cultural confidence and diversity.

In response to the national call for cultural confidence, Suzhou iFlytek has carried out systematic digital protection and innovative practices for dialects leveraging artificial intelligence technologies since 2018, exploring feasible paths to safeguard linguistic and cultural diversity in the digital age. The soft, mellifluous Wu dialect, exemplified by the Suzhou vernacular, is the cultural voice of the millennia-old city of Gusu, yet it faces the risk of dilution and oblivion. Exploring an innovative AI-powered protection path for the Suzhou dialect provides a replicable model for national cultural and linguistic heritage conservation.

## Solutions and Innovation

This case addresses the core dilemmas of dialect inheritance — difficult recording, weak communication, and shallow experience — by building a full-chain innovative solution of technology — art — communication — cultural and creative products.

Following the path of AI technology + cultural content + diverse scenarios, it has established a technical foundation with dialect recognition and speech synthesis systems. Integrating intangible cultural heritage (ICH) and folk custom displays, it has created four public welfare short films dubbed with AI Suzhou dialect in the Gusu Lock Notes series: Golden Thread Robe, Lazy Eyebrow Pencil, Fairy of the Sky, and Hua Ning Rui Ai (Flowers Condense Auspicious Mist).

It has partnered with Suzhou Museum to launch the interactive Echoes · AI Dialect Art Exhibition, integrating technology into public art and cultural tourism guidance. It has collaborated with Chongqing Museum to present "Hear and See: Multi-dimensional Chinese Character Culture" exhibition, blending technology with public art to vividly showcase Chinese character and dialect culture.

Leveraging automatic dialect synthesis technology, Suzhou iFlytek has pioneered ICH digital innovation projects with the Suzhou Bureau of Culture, Radio, Television and Tourism. It has implemented the Digitalization of 100 Intangible Cultural Heritage Works and the research program Digitalization of Wu Culture, supported by 3D information scanning, 3D modeling, and Suzhou dialect speech synthesis. Empowered by technology, the charm of Suzhou's ICH is revitalized with both sound and form.



## Social Effects

Supported by this project, the dialect recognition rate reaches 84%, and the MOS (Mean Opinion Score) of synthetic speech hits 4.0. Four dialect-themed short films have been released, accumulating over 200 million online views. The Echoes · AI Dialect Art Exhibition co-hosted with Suzhou Museum received nearly 400,000 visitors in 45 days. Interactive exhibits such as Hua Shan Shui and Learn Wu Dialect with Wen Zhengming have been developed, realizing visualized and interactive communication of dialects. The AIGC Cultural and Creative Laboratory has been launched to promote integrated innovation of dialect + technology + cultural and creative products.

The project has formed a replicable model of government support + enterprise R&D + cultural and museum institutions + public participation. It boosted cross-regional dialect protection cooperation (e.g., co-building an AIGC laboratory with Chongqing Three Gorges Museum). It provides a trinity practical model of technology + content + scenarios for the digital inheritance and innovation of linguistic intangible cultural heritage worldwide.

## Expert Comments

Centered on the Suzhou dialect, the project builds a digital protection foundation using AI speech recognition and synthesis technologies. It not only solves the inheritance dilemmas of "difficult recording and weak communication" for dialects but also integrates dialects into modern life and achieves dynamic inheritance through diverse forms such as public welfare short films and art exhibitions.



# Beijing, China · Digital Protection and Dissemination Project for Intangible Cultural Heritage Vocal Mimicry



## Project Source

Beijing Yunzhiyin Culture Communication Co., Ltd  
Beijing Tianqiao Hehngong Investment Co., Ltd



## Case Description

This case aims to build a digital protection system using cutting-edge technologies, explore the activation path of ICH in the modern context, promote the transformation of ICH from "static preservation" to "dynamic inheritance", and realize the in-depth integration of technology and culture:

Adopting high-fidelity recording and other technologies, the case systematically records and classifies various sounds imitated by vocal mimicry artists, establishing a digital sound archive database. It especially conducts emergency digital preservation for those imitated objects at risk of disappearance due to environmental changes, ensuring the complete preservation and inheritance of this sound-centered ICH art.

The case records professional vocal mimicry tutorials, providing functions such as decomposed teaching and real-time feedback. Through audible, visible and interactive modern teaching scenarios, it popularizes the teaching and communication of ICH vocal mimicry art, expanding the reach of inheritance.

## Solutions and Innovation

**In-depth Innovation in Technology Integration:** For the first time, integrate panoramic sound technology with vocal mimicry performances to create an immersive sound theater. Through technological means in the performance area, the directionality and spatial perception of natural sounds are brought to the performance site, enabling the audience to have an immersive experience and breaking the traditional boundary of ICH performances.

**Systematic Digital Inheritance:** Build a complete digital chain from archive preservation to interactive teaching, realizing the traceability, recoverability and accessibility of ICH resources.

**Potential Expansion through Cross-border Applications:** Explore the application of vocal mimicry in digital film and television, games, music and other fields, injecting modern vitality into ICH.

**Deepened Integration of Humanistic and Natural Education:** As a cultural carrier recording the harmonious coexistence of humans and nature, vocal mimicry art specially designs a series of "natural soundscape observation" courses in the digital teaching system. It guides students to observe, imitate and understand natural sounds, cultivates their ecological awareness, and realizes the innovative integration of ICH art and natural education.

**New Inheritance Path for Special Groups:** Based on the auditory sensitivity advantage of visually impaired children, develop China's first "non-visual vocal mimicry teaching system". By designing special sound recognition training modules and tactile auxiliary feedback devices, it helps visually impaired children master this unique artistic expression through sound imitation and creation. This practice opens up a new way for special groups to participate in ICH inheritance, reflects the humanistic care and social value of ICH protection, and forms an innovative model of "ICH + Special Education".



## Social Effects

This case provides a replicable paradigm for empowering ICH protection and innovation with technology. Its "collection – activation – application" model proves that technology can not only solve the preservation problems of ICH but also develop its contemporary value and market space through creative transformation, injecting new momentum into the sustainable development of ICH. The project reaches a diverse, large and wide range of people. Meanwhile, it promotes in-depth collaboration between cultural institutions, technology enterprises and inheritors, providing practical reference for exploring the integration of traditional culture and digital economy, and having industry-leading and promotional value.

## Expert Comments

Centered on the protection and dynamic activation of ancient books, the project funds restoration through a special fund and builds the "Shidian Ancient Books" platform in partnership with universities, bringing traditional culture to the public with strong communication effects.



# Beijing, China · ByteDance Ancient Book Protection Public Welfare Project



## Project Source

Shanghai Fengyuzhu Culture Technology Co., Ltd  
Shouxian Shouzhou Cultural Tourism Development Co., Ltd



## Case Description

Rooted in the profound historical and cultural heritage of Shouxian County and drawing on Huainanzi as its intellectual foundation, this case builds a public cultural experience space for the Twenty-Four Solar Terms through digital and immersive exhibition methods, integrating the traditional Chinese view of time and nature into contemporary cultural and tourism consumption scenarios.

Adopting the overall narrative structure of Observing Time to Know Order — Farming According to Time — Acting in Accordance with Time — Coexisting with Time, the case is developed across four themed exhibition halls:

1. Systematically present the formation and scientific basis of the Twenty-Four Solar Terms system through document sorting, multimedia films and interactive devices.
2. Create immersive farming and life experiences by integrating agricultural production, solar-term folk customs, dietary practices and other content.
3. Take the cycle of four seasons as the clue, combine local cultural scenes with digital interactive games to enhance sense of participation.
4. Elevate the theme to the modern value of harmonious coexistence between humans and nature, supported by secondary consumption projects such as flying theaters, cultural and creative products, and local specialty tofu-based milk tea, forming a complete implementation path of cultural display + interactive experience + consumption transformation.

## Solutions and Innovation

This case targets the problems of fragmented communication, static display and low public participation in traditional solar-term culture, highlighting three core strengths: systematic expression, immersive experience and everyday-life-oriented translation.

1. With Huainanzi as the core academic support, it systematically sorts out the origin, evolution and global influence of the Twenty-Four Solar Terms, building a complete and clear knowledge system.
2. It extensively applies immersive digital spaces, interactive devices, multimedia interpretation and scene restoration, turning abstract time and rhythms into perceptible and participatory experiences, including the Vientiane Triple Mirror, Flower & Letter Space and restored farming scenes.
3. It integrates solar-term culture with diet, medicine, folk customs and local specialties to strengthen practical relevance and consumer engagement.

Since completion, the project has become a comprehensive cultural experience venue integrating cultural communication, science education, parent-child study tours and cultural tourism consumption, significantly raising public awareness and engagement with the Twenty-Four Solar Terms.



## Social Effects

From its opening on January 16, 2025, to December 31, 2025, the pavilion received more than 200,000 visitors in total, including over 14,000 in a single week during the May Day holiday, with annual verified revenue exceeding 5.5 million yuan, achieving growth in both visitor volume and income and becoming a core cultural tourism attraction in the region.

In 2025, the Twenty-Four Solar Terms Pavilion won multiple national and provincial honors. It has established strategic cooperation with the Anhui Meteorological Bureau and Shouchun Middle School of Anhui Province, serving as the Anhui Provincial Meteorological Science Education Base and the Off-Campus Science Education Base of Shouchun Middle School.

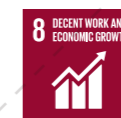
As of December 2025, 9 solar-term themed events and 12 cooperative special events were held. The pavilion received 360 group visits (including official receptions) and 61 study tour sessions with over 9,000 participants.

## Expert Comments

Centered on the protection and dynamic activation of ancient books, the project funds restoration through a special fund and builds the "Shidian Ancient Books" platform in partnership with universities, bringing traditional culture to the public with strong communication effects.



# Xinjiang, China · Rendezvous with Kashi” Large-Scale Immersive Performance



## Project Source

Beijing Yujian Culture & Technology Co., Ltd.



## Case Description

"Rendezvous with Kashi" Large-Scale Immersive Performance is an immersive show crafted with the compilation, inheritance and protection of the Uyghur on Ikki Muqam, a UNESCO Intangible Cultural Heritage of Humanity, as its central theme. The case fully employs cutting-edge technological means including digital lighting, surround sound, holographic projection, high-altitude wirework and stage mechanics, breathing life into Kashi Ancient City—listed on the UNESCO World Heritage Tentative List—through a blend of virtual and physical forms to revive its thousand-year-old charm. More than 20 intangible cultural heritage (ICH) items, such as the Uyghur on Ikki Muqam, naan-making craft, clay pottery craftsmanship and Atlas silk weaving, are presented in a dynamic, living format and integrated into the immersive drama experience.

Spanning over 8,000 square meters, the venue is divided into four thematic spaces: The prologue Gate of Time and Space use an installation art light show to showcase the cultural diversity of Kashi Ancient City as a historical crossroads where Eastern and Western cultures converge. A "gate formation", symbolizing thousands of households, shifts with musical light changes to open a magical portal through time.

The square space Shule Ancient City features a deeply immersive ICH-themed show, with 20 exquisitely designed ICH bazaars recreating the historical prosperity of multi-ethnic and multi-cultural integration. Audiences become part of the drama, singing and dancing alongside performers to break down the "fourth wall" of theater.

The transition hall Pearl of the Silk Road hosts a full-space multimedia digital show, with stunning 360-degree projections depicting iconic Silk Road landscapes including the Taklamakan Desert and Muztagh Ata Glacier, offering an artistic interpretation of Kashi Prefecture's tourism resources.

The circular space Soul of Music Theater is a 1,500-seat multi-dimensional time-space Muqam epic theater. It leverages a wealth of cutting-edge digital technologies to fully demonstrate the unique charm of ICH culture and realizes a three-layer narrative never before seen in cultural tourism performances, leaving audiences with unforgettable and touching memories.

## Solutions and Innovation

The project completed the entire chain of work—from creativity, design and implementation to rehearsal and operation—in just nine months, and this scientifically efficient workflow set an industry record. In terms of design, unlike traditional one-way viewing performances, the project incorporates a full-sensory design engaging audiences through sight, sound, taste, smell, touch and interactive participation. It adopts a "batch-flow hybrid" operation model, where audiences in different batches enter various performance spaces along a timeline; this significantly increases the peak instantaneous capacity of the theater and effectively improves its operational efficiency.

The case has created excellent social conditions for the intergenerational inheritance of intangible cultural heritage in Kashi Prefecture. Through the "training + stage practice" model, the project cultivates young ICH practitioners. Leveraging its far-reaching influence, the project also creates opportunities for these young practitioners to perform in the show, engage in community outreach and carry out cultural communication activities on campus, truly fulfilling the goal of "one employment, one inheritance line".



## Social Effects

In its first year of operation, the performance has attracted over 200,000 audience members to the theater, with more than 10,000 UGC posts created on major social media platforms. It has been covered by central media outlets including CCTV News, Xinhua News Agency, Economic Daily and People's Network in over 100 reports, with a total view count exceeding 10 million, exerting a significant radiating effect on promoting local culture and driving cultural tourism traffic. The project has directly created over 200 jobs covering performance, technical and service roles, with ethnic minority employees accounting for 82%. Consumer spending by theatergoers—including dining, accommodation and shopping in surrounding areas—has brought positive industrial interaction for tourism businesses in Kashi Ancient City and Jiulong Street, stimulating the improvement and upgrading of tourism element allocation in these areas.

As a representative project for the protection and inheritance of multi-ethnic cultural integration in Xinjiang Uyghur Autonomous Region, the Rendezvous with Kashi International Performing Arts Center has been designated as a key venue for foreign affairs reception and cultural exchange by the International Department of the Central Committee of the Communist Party of China (CPC) and the autonomous regional government. Since its premiere, the center has received dozens of visits by foreign dignitaries and international enterprises, making the project an important platform for the mutual appreciation of world civilizations. Leading cultural tourism institutions have also come to observe and learn from its full-process consulting model, innovative application of art and technology, and batch-flow hybrid operation system, providing a successful experience paradigm for the development of new forms of digital cultural tourism.

## Expert Comments

This project skillfully leverages digital holographic technologies and other advanced techniques to deeply integrate the Uyghur on Ikki Muqam and more than 20 other intangible cultural heritage (ICH) items into immersive live performances. Its "batch and flow hybrid" operation model has greatly improved the operational efficiency of the theater. The case has effectively boosted local employment and the intergenerational inheritance of ICH among young people, set a new benchmark for the integration of culture and tourism, and ultimately achieved a win-win result for cultural protection and economic growth.



# Beijing, China · “Ancient Capital Panorama”: A Digital Immersive Experience Based on Printmaking Literature



## Project Source

Capital Library of China,  
CNPIEC UNTRO Technology Beijing Co., Ltd.



## Case Description

Taking rare printmaking literature and historical books as the core research objects, this case is based on authoritative collections and academic achievements, following the implementation path of "document sorting—academic research—digital translation—immersive presentation—public communication": First, conduct literature sorting, image research and content structuring around 198 Chinese and Western prints (such as Hongxue Yinyuan Tu Ji (Illustrated Record of Hongxue Encounters), Wuyingdian Juzhenban Chengshi (Procedures of Movable-Type Printing at the Wuying Palace), Tangtu Mingsheng Tuhui (Illustrated Gazetteer of Famous Sites in Tang Dynasty)) and 25 types of rare ancient books, building a foundation of printmaking literature resources that can be digitally translated; second, take printmaking image language as the visual parent, integrate the characteristics of traditional crafts such as woodblock printing, copperplate printing and lithography, and complete cross-media image creation using digital technologies such as panoramic video and naked-eye 3D; third, realize multi-scenario display and public experience in public cultural spaces and exhibition platforms through forms such as naked-eye 3D and immersive spaces, form a sustainable communication mechanism, and expand the global expression path of ancient capital culture.

## Solutions and Innovation

In the process of activating and utilizing traditional ancient book resources and mass communication, there are common problems such as high professional thresholds, insufficient participation, and limited communication scope, making it difficult for the public to fully understand their cultural connotation and value. To address these issues, the case converts complex historical information into intuitive and perceptible cultural experiences, breaking language, spatial and cognitive barriers, lowering the threshold for public participation and expanding the communication boundary.

Centered on the digital translation and immersive presentation of printmaking literature, the case innovatively builds a new cultural communication model of "taking printmaking as the medium, space as the carrier, and experience as the core".

Based on systematically sorted historical documents and relevant research results, the case conducts 3D modeling and digital animation re-creation of urban spatial structure, important architectural forms and urban life scenes, combined with rare ancient books. In terms of visual language, it absorbs the aesthetic characteristics of traditional Chinese painting and printmaking, forming an image style with "ancient capital charm". Relying on the multi-angle linked presentation of the five-screen CAVE immersive space, it significantly enhances the spatial depth and immersive effect of the picture, creating a continuous and immersive viewing experience for the audience.

With the symbolic image of "Beijing Swift" as the narrative thread, the film connects the evolution process of the ancient capital's space and social life in different historical periods, systematically presenting multiple cultural connotations such as urban planning concepts, ritual order and folk life. It moves beyond the traditional expression method of literature display dominated by images and texts, allowing the audience to intuitively perceive the historical context in the immersive experience.



## Social Effects

The case has explored and formed a set of digital translation and immersive communication paths for printmaking and ancient book literature, providing a replicable and promotable practical paradigm for the activation and utilization of traditional classical literature resources in the digital environment. Relevant experience has positive demonstration significance for public cultural institutions to carry out digital display of ancient book literature, and enhance the diversity of cultural expressions and international communication capabilities.

The case has been exhibited at platforms such as the 2025 Beijing Culture Forum and the 21<sup>st</sup> China (Shenzhen) International Cultural Industries Fair, gaining wide attention, and becoming a typical achievement of public cultural institutions using digital technologies to activate collected resources and promote the creative transformation and innovative development of Chinese culture.

## Expert Comments

Based on printmaking literature as its cultural foundation, the project realizes the innovative activation of traditional resources through digital technology, builds a new path for the protection and communication of cultural heritage, and demonstrates the academic value and practical significance of cultural diversity inheritance in the digital era.



# Beijing, China · Taichi Cube Digital Cultural Space



## Project Source

Taiji Cube (Beijing) Technology Co., Ltd  
Tencent Tanyuan Initiative,  
Tai Chi Committee of the China Intangible Cultural Heritage  
Safeguarding Association



### Case Description

With the mission of “Digital Revitalization of Intangible Cultural Heritage and Intelligent Driven Health”, the “Taichi Cube Digital Cultural Space” builds a digital platform integrating cultural inheritance, health management and industrial application through artificial intelligence, multimodal perception, blockchain and other technologies, promoting the transformation of Tai Chi into modern health services and digital experiences.

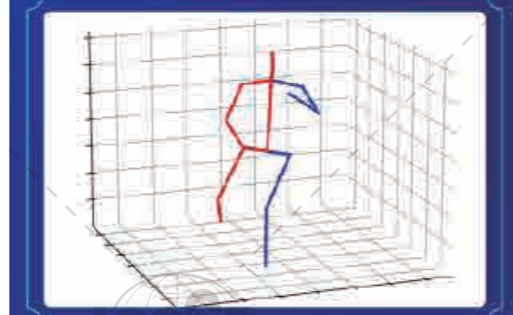
Its core businesses and implementations include: creating the “Tai Chi Digital Cultural Experience Space (Taichi Cube)” that provides an integrated scenario of “entertainment, perception, detection, practice and therapy”; relying on self-developed AI posture assessment and movement analysis systems, achieving key progress in the digital inheritance of Tai Chi and landing in major institutions; realizing the revitalization of intangible cultural heritage and innovation of health services through technology integration; cooperating with research institutions to conduct interdisciplinary research on multi-omics, AI and blockchain, and building a standardized database and trusted sharing platform for Tai Chi intervention in chronic diseases.

### Solutions and Innovation

As a UNESCO Intangible Cultural Heritage of Humanity, Tai Chi faces challenges such as an aging inheritance group and traditional communication methods. To attract young people and promote the modern inheritance of ICH, this project builds the “Taichi Cube” cultural space via digital technologies, realizing the in-depth integration of ICH and technology.

Based on AI, multimodal perception, 3D posture reconstruction and other technologies, the case breaks spatial and temporal constraints through AI posture recognition, immersive interaction and digital follow-up practice systems, providing quantifiable, feedback-based and personalized learning and health management solutions, and creating an integrated digital experience system of “entertainment, perception, detection, practice and therapy”.

The project team cooperates with ICH institutions, universities and research institutes, and with the support of the “Tanyuan Scheme”, has carried out scenario-based implementation and exhibitions in Zhengzhou, Chengdu, Beijing and other locations, promoting the standardization and scenario-based digital inheritance of Tai Chi.



### Social Effects

This case has built China's first “Tai Chi Digital Cultural Experience Space”, realizing real-time AI movement evaluation and personalized training report generation. The project team has cooperated with Tencent and the three major telecom operators to promote the innovation of digital culture and cultural tourism services.

It provides a replicable and promotable “technology + culture + health” integration paradigm for the digital inheritance of sports-related intangible cultural heritage, supporting the application of ICH in campuses, communities, cultural tourism, medical care and other scenarios, and enhancing the public's, especially young people's, recognition and participation in traditional culture.

The case has been featured on important platforms such as the 9th Chengdu International Intangible Cultural Heritage Festival, Tencent Tanyuan Innovation Conference and Peking University Tai Chi Culture Festival, gaining extensive social attention and media coverage.

### Expert Comments

The project integrates multiple resources including Tencent and universities, deploys scenario-based applications across multiple locations, and appears on important platforms such as the International Intangible Cultural Heritage Festival. It realizes the cross-border integration of intangible cultural heritage and smart health services and promotes the modern inheritance of sports-related intangible cultural heritage.

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International Centre for Creativity  
and Sustainable Development  
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联合国教科文组织  
国际创意与可持续发展中心

## Special Acknowledgments (in no particular order)

Beijing Science and Technology Innovation Promotion Center  
Zhongguancun Zhongheng Culture and Technology Innovation Service Alliance  
International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO  
International Training Centre for Intangible Cultural Heritage in the Asia-Pacific Region under the auspices of UNESCO  
The Professional Committee of Cultural Creativity of Tsinghua Alumni Association  
Institute of Creative Industry Technology at Renmin University of China  
Faculty of Creative Tourism and Intelligent Technologies, Macao University of Tourism  
Research Institute of China Digital Culture Group Co., Ltd.  
Ars Electronica Linz GmbH, Austria  
Hungarian National Commission for UNESCO  
World Trade Point Federation  
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