



## Session

# Digital Context: Unlocking the Value and Commercial Ecosystems of Heritage Digital Assets

### **Chairpersons:**

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### **Description and Motivation:**

This session investigates the role of digital technologies in transforming the preservation, interpretation, and commercialization of cultural heritage. Structured around three pillars — technological innovation, economic viability, and sustainable frameworks — the discussion will analyze how digitization reshapes cultural stewardship while generating novel economic opportunities (business innovation).

Technological innovation should include advancements in cutting-edge technologies, such as high-fidelity 3D modeling, extended reality (XR) for immersive storytelling, and AI-driven systems/applications for predictive conservation, such as AI algorithms diagnosing material degradation in artifacts, automating metadata management for large-scale heritage databases, and designing adaptive interactive experiences for diverse audiences.

Alongside collaborative frameworks for shared digital repositories, and blockchain-based intellectual property management, analyze the crucial role in integrating cultural heritage resources, facilitating cross - institutional cooperation and data sharing, and the challenges and corresponding countermeasures.

Economic viability will be explored through case studies of emerging commercialization models. Examples includes NFT-based virtual collections,

metaverse-enabled heritage experiences, and VR/AR-integrated tourism model, and so on. These cases will illustrate how digitization generates revenue while expanding public engagement.

Sustainable governance will address operational and ethical complexities, including balancing open-access principles, with revenue generation, and as well as designing equitable revenue-reinvestment mechanisms/models.

Challenges such as biased algorithmic interpretations of marginalized histories and the risks of over-commercialization will also be scrutinized.

This session seeks to align cultural stewardship with market-driven innovation, ensuring digitization serves as both a conservation tool and a catalyst for inclusive economic growth. The session welcomes lectures from diverse stakeholders, including:

- Leading institutions (e.g., museums, UNESCO, national archives, universities) presenting case studies on digitization frameworks;
- Technology pioneers (CTOs, blockchain architects, AI developers) demonstrating tools such as AI-driven artifact restoration or decentralized IP systems;
- Commercial innovators (startup founders, IP strategists, cultural economists) sharing scalable business models like NFT-based collections or metaverse heritage experiences;
- Ethics and governance experts (policy advisors, NGO leaders, community representatives) addressing equitable access, algorithmic bias, and revenue reinvestment mechanisms.

### **Target Audience:**

1. Heritage professionals (academia researchers, museum curators, archivists, UNESCO representatives);
2. Digital technology experts (XR/AI/blockchain developers, technical artist);
3. Commercial stakeholders (cultural investors, commercial arts entities, IP strategists, tourism developers, game industry practitioners);
4. Policymakers and researchers in cultural economics and digital humanities;

### **Keywords:**

Heritage Digital asset commercialization, Metaverse integration, AI-driven conservation, Blockchain-based IP governance, Cross-sector collaboration

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