

Heritage in the Digital Age

Navigating Emerging Technologies for Small and Medium Museums

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THE DIGITAL SPECTRUM



THE CHALLENGE

Small and medium museums (SMMs) face increasing pressure to modernise and remain relevant, but emerging technology adoption is often shaped by large-museum contexts [1].

However, many SMMs face significant constraints relating to [2]:

- Funding
- Staffing
- Technical expertise
- Physical space

Within these constraints, identifying appropriate emerging technologies becomes critical. Adopting technology simply because it is new or popular can create systems that are difficult to maintain and poorly aligned with organisational needs [3,4].

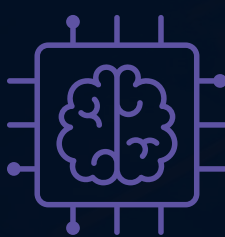
How can SMMs determine which technologies are right for them and develop sustainable digital infrastructure?

EMERGING TECHNOLOGIES

Evaluating technical capabilities against the realities of SMM constraints.



XR



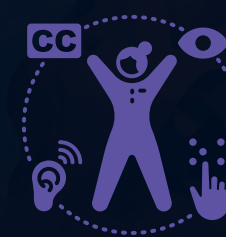
AI



Digital Twins



Mobile Apps



Accessibility Technologies



Digital Storytelling

Research highlights how emerging technologies can support visitor engagement, education, and accessibility within heritage contexts [5,6].

For SMMs, however, adoption must be considered alongside available expertise, infrastructure, sustainability, environmental impact, and long-term maintenance needs [3,7].

RESEARCH VISION

1

Literature Review

Mapping digital transformation and emerging technologies in heritage.



2

Sector Survey

Identifying SMM challenges, priorities, and adoption barriers.



3

Museum Case Study

Designing and evaluating a digital experience in practice.



4

Framework Design

Creating an open-source framework for sustainable adoption.



5

Framework Evaluation

Refining the framework through stakeholder feedback.

Goal: An open-source framework that enables small and medium museums to assess, adopt, create, and sustain appropriate emerging technologies without requiring extensive technical expertise or resources.

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