

Preserving Heritage: A Key to Understanding our Identity and Generating Economic Benefits



Our heritage is an essential part of our lives, providing a link to our past and a deeper understanding of our ancestors' way of life and culture. It helps us preserve our traditions, customs, and cultural practices while also contributing to our sense of identity. The study and preservation of heritage also hold economic benefits, such as increasing tourism and generating revenue for local communities.

What is Digital Heritage?

Innovative digital tools can be used to preserve and promote historic assets for future generations. By harnessing the power of AI, advanced sensors, and mixed reality for example, we can create sustainable ecosystems that drive resilience and recovery from the challenges posed by COVID-19. Furthermore, these technologies can help establish a more inclusive and innovative heritage ecosystem and economy.

In turn, heritage companies can leverage digital technologies to enhance their operations and reach a wider audience through digitising archives and collections of artefacts, preserving items and making these more accessible now and in the future.

Virtual tours can help to promote heritage sites whilst supporting education and awareness within classrooms and beyond, enabling greater access to sites from across the world and linking these to additional learning resources for improved storytelling.

The Virtual Engineering Centres, Head of Industrial Digitalisation Dr Konstantin Vikhorev explores the true potential of digital for heritage:

The continued digitisation of our world is also affecting our cultural heritage. Digital heritage encompasses the preservation of cultural artefacts, such as literature, art, music, and historical documents, in digital form. While this presents new opportunities, it also comes with its own set of challenges.

The advantages of digitising our cultural heritage include greater accessibility and preservation. Digital archives allow people worldwide to access artefacts that may have been out of reach otherwise. Additionally, digital archives can help preserve artefacts at risk of deterioration or destruction.

However, digital heritage also faces significant challenges. Digital preservation is a key challenge as digital archives are vulnerable to technological obsolescence. Maintaining and updating digital archives is crucial to ensure long-term preservation and improved record keeping.

Ownership and copyright issues are other significant challenges with digital heritage. Determining who owns the rights to digitised cultural artefacts can lead to legal disputes and debates about access.

To address these challenges, the VEC's digital transformation team will create a digital heritage ecosystem to make the UK a world leader. The team will develop a Digital Heritage Strategy for the Liverpool City Region, focusing on heritage preservation, promoting its value, and lessons to new generations. The project will also create opportunities for museums, heritage organisations, and universities in the Northwest to advance their research programmes in digital and cultural heritage.

The proposed UK Digital Heritage Centre in the Northwest will serve as a hub for research streams, including heritage digital twins, virtual historical characters, reality capture, and collaborative heritage asset reviews. This infrastructure will enrich the understanding of data for key stakeholders, educators, and the public.

The UK Digital Heritage Centre plans to use state-of-the-art hardware and software technologies, including airborne and ground-based scanners deployed by the VEC team. The use of drones and robotics with scanners in heritage work provides several advantages over traditional methods. These scanners can capture highly detailed and accurate 3D images of historical sites and structures, including areas that are difficult or impossible for humans to access, reducing risks and costs while improving the accuracy and efficiency of data collection.

The Centre will also leverage blockchain technology to create a tamper-proof record of historical data, increasing transparency and accountability in heritage management. Blockchain technologies will enable easy collaboration and sharing of information between different heritage organisations and institutions, incentivising individuals to contribute to heritage preservation efforts, and provide a clear and auditable trail of ownership and custody for artefacts and cultural heritage sites.

Moreover, the VEC will employ 15 years of expertise in advanced visualisation and VR to offer visitors a realistic and immersive experience. The use of advanced visualisation techniques in digital heritage can improve the visitor experience,

To find out how the VEC can support your business in learning more about Digital Heritage and other emerging technology, get in touch with our friendly team today:

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facilitate research and analysis efforts, enable customised tours and experiences, improve access to cultural heritage, and aid in the preservation of historical sites and structures.

The project will provide significant intellectual capital and skills to research staff and visiting users. Learning from the research will also be leveraged for the training and development of undergraduate and postgraduate students and researchers across the University of Liverpool through its proposed Immersive Education Institute.

Digital Heritage has the potential to play a significant role in preserving our cultural heritage for future generations. However, addressing the challenges that come hand-in-hand, requires ongoing maintenance and investment in efforts to address the issues surrounding ownership and copyright.

Ultimately, digital heritage has the potential to be a powerful tool in preserving our cultural heritage and ensuring that it is accessible to all.

In April 2022 the VEC joined St George's Hall in hosting the UK's first digital heritage symposium. For more information you can find our Digital Heritage brochure [here](#).

