

CANVAS OF TOMORROW

EXPLORING MUSEUMS IN A NEW LIGHT



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"A museum is a place that tells the story of who we are, where we've been, and where we're going."
_Gail Dexter Lord-

UNIVERSITY TECHNOLOGY MARA (UITM)

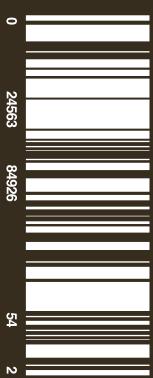


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FROM THE EDITOR



An editor's letter is a message written for a variety of purposes, from friendly to formal. They can help the reader understand the content and creative direction of a certain issue, they can give the reader and idea of what they can find in the magazine, or they can explain the issue's theme and how it can resonate with them.

Aiman Mokhtar

**MUHAMMAD AIMAN BIN MOKHTAR
2024542727**



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Akif Aiman

**MUHAMMAD AKIF AIMAN BIN MOHD RIDZUAN
2024947513**

AI is transforming museums, offering personalized, immersive ways to explore art, history, and culture. In this issue, we celebrate how technology bridges the past and future, redefining how we experience humanity's heritage.

Dalila Humairah

**NUR DALILA HUMAIRAH BINTI NORIZAN
2024542575**



CORRESPONDENCE



REVIEWER

Letters from readers show how much they feel a connection with your publication. Whether they're glowing reviews, helpful feedback, or simple shoutouts, these readers taking the time to write shows how much they care. Show your appreciation by featuring their letters in your next issue. They're sure to feel valued once they read it.

AIMAN MUIZZ BIN ZUPAIDI

2024927451



REVIEWER

AHMAD SYAKIRIN BIN SANI

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"The rise of digital museums marks a new trend in cultural preservation and accessibility. E-museum services leverage technology to offer virtual tours, interactive exhibits, and global access to collections, breaking geographical barriers and enhancing user engagement. This innovative approach redefines traditional museum experiences, catering to a tech-savvy generation while ensuring art and history are preserved in the digital era."



GRAPHICS DESIGN

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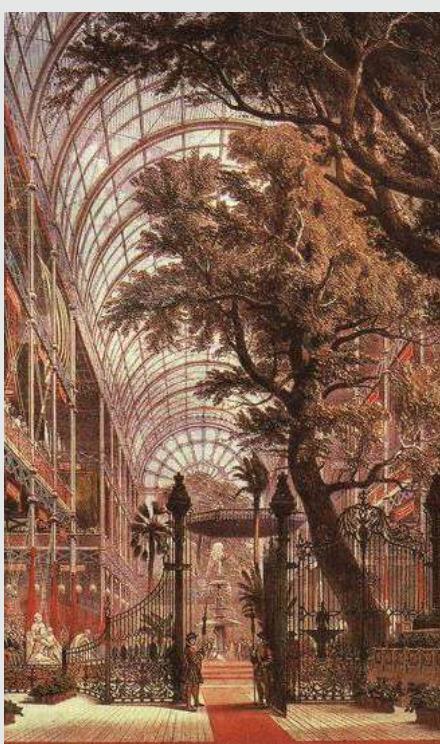
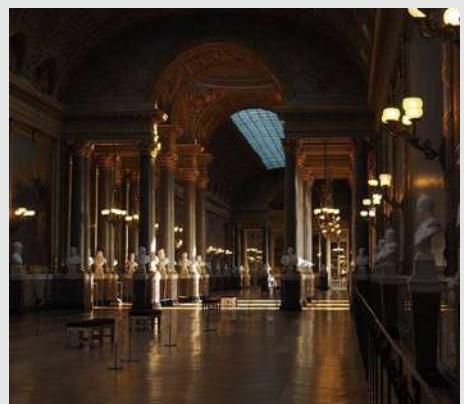
"A universal museum is more than a collection of artifacts; it's a journey across time and cultures, a mirror reflecting the shared heritage of humanity. My experience exploring its halls taught me that every object has a story, and together, they tell the story of us all."

Canvas of Tomorrow: Exploring Museums in a New Light

INTRODUCTION

We as students working on this task like a team of professionals who perform certain work to achieve a complete and high-quality work. Muhammad Aiman Bin Mokhtar, Muhammad Akif Aiman Bin Mohd Ridzuan, and Nur Dalila Humairah Binti Norizan serve as the editors of the article that is crafted, coherent, accurate, and interesting. Their responsibilities include refining ideas and perspectives on difficulties, advantages, and artificial intelligence in museums.

Aiman Muizz Bin Zupaidi and Ahmad Syakirin Bin Sani serve as reviewers, providing critical comments and assuring the clarity, consistency, and relevance of conversations about services and the notion of an e-museum. They enhance the narratives and contribute to the achievement of the purpose of the project Nurfatiha Adini Binti Mohd Khairi, the project manager, tackles the amenities and comes up with interesting and professional and graphical interfaces to make the audience understand and appreciate the presentations.



This project explores a variety of interconnected subjects, such as problems, benefits, services, e-museums, artificial intelligence in museums, and facilities. The team's collaborative efforts enable a full investigation of these themes, providing significant insights into the changing landscape of museum technology and its larger consequences.

The field of material at the museum regards “Facilities and Services in Museum”, which call for enhancing the tourist experience through design facilities and high service quality. This is an important area since elements such as interactional displays, accessibility, and user-friendly services contribute to the experience needed by diverse consumers. Besides, high quality services that include guided tours, digital service and customer service ensure that the visitor is fully engaged throughout his or her time inside the museum and leaves with better appreciation for the items inside the museum..

The choice of museums as key institutions results from their historical relevance as the spaces where the past, the present, as well as the future, is represented. Educationally, museums serve as custodians of history, art and science and play an important social function. The work carried out deals with facilities and services with the aim of showing how museums can stay fresh in a more advanced society while making sure they are preserving the past.



BLUEPRINT TO BRILLIANCE : A FACILITY CHALLENGE



TRANSFORMATION MUSEUM CHALLENGE

With ever increasing technological innovation and changing culture, now, more than ever, museums must challenge the traditional museum paradigms that have the museum acting as a static institution, simply housing artefacts. The process of change is not limited to digital transition; it merges into a radical reconsideration of museums as organisations, communication tools and learning environments. "Blueprints to Brilliance: A Facility Challenge" elaborate on the biophysical challenges that museums encounter on this journey, such as funding, new audiences, and technology. As funders become more demanding, and audiences' expectations and expectations Rabkin 2007 increase, conservative halls clash with bold new models and have no other tactics but to adopt contemporary values that focus on openness, accessibility, durability, and connection to society.

Transformations of museums are required by such factors as innovations in technology, shifts in the expectations of the audience, and shifts in practices taking place in the museum. Cultural and old generation museums for instance heavily used display and informed communication techniques. In particular, current tourists, at least the European ones, do not quest for sanitised framed experiences. The concept of change in a museum facility can be viewed as a change in use or experience encompassing relationships with collection, space and time.



The construction of a brand new facility means that additional opportunities are presented to install the latest in technologies that add to a different environment include augmented reality (AR), virtual reality (VR), as well as touchable people and objects, which make visitors invited to the exhibits to have unique experiences and even interact with them on a one on one basis.



Blueprints to Brilliance: A Facility Challenge



TRANSFORMATION MUSEUM CHALLENGES

MUSEUMS NEED TO QUESTION ESTABLISHED IDEAS AND RECONSIDER THEIR ROLES AS INSTITUTIONS, CHANNELS OF INFORMATION, AND EDUCATIONAL SETTINGS. INNOVATION IN TECHNOLOGY, AUDIENCE EXPECTATIONS, AND BEHAVIOURS ARE THE MAIN DRIVERS OF THIS SHIFT. MUSEUMS MUST EMBRACE MODERN IDEALS EMPHASISING TRANSPARENCY, ACCESSIBILITY, LONGEVITY, AND SOCIAL CONNECTEDNESS AS DONORS GROW MORE PICKY. A CHANGE IN MUSEUM INFRASTRUCTURE ENTAILS A SHIFT IN HOW PEOPLE UTILISE OR PERCEIVE THE SPACE, TIME, AND COLLECTION. IF MUSEUMS WANT TO BE IMPORTANT, THEY MUST KEEP UP WITH SOCIETY'S INTEGRATION OF MODERN TECHNOLOGIES. TOUCHABLE PEOPLE AND OBJECTS, VIRTUAL REALITY, AND AUGMENTED REALITY CAN BE INSTALLED IN NEW FACILITIES TO PROVIDE VISITORS WITH NOVEL EXPERIENCES AND OPPORTUNITIES FOR INTERACTION..



The Need for Transformation

TRADITIONALLY, MUSEUMS HAVE BEEN ORGANISATIONS DEDICATED TO GATHERING, STORING, CONSERVING, AND SHOWCASING CULTURAL ARTEFACTS WITH THE GOAL OF ENTERTAINING AND EDUCATING THE PUBLIC. HOWEVER, THE AUDIENCE'S ATTITUDE TOWARDS CULTURAL INSTITUTIONS HAS SHIFTED AS A RESULT OF THE QUICK ADOPTION OF DIGITAL TECHNOLOGY. NOWADAYS, VISITORS EXPECT PERSONALISED, INTERESTING MATERIAL AND AN EXPERIENCE THAT HELPS THEM UNDERSTAND ARTEFACTS AND TOPICS BETTER. TO STAY COMPETITIVE IN THE INCREASINGLY CROWDED CULTURAL INDUSTRY, MUSEUMS MUST COMPLETELY REALIGN THEIR PRACTICES AND STRATEGIES IN RESPONSE TO THIS TRANSITION. DIGITAL TECHNOLOGIES IN MUSEUMS REDEFINE MUSEUMS IN SOCIETY BY RADICALLY ALTERING EPISTEMOLOGICAL ASSUMPTIONS. NEWER METHODS INCLUDE INCORPORATING VR, AR, AI, AND OTHER METHODS TO ENGAGE AUDIENCES BEYOND TRADITIONAL METHODS. VR ALLOWS VISITORS TO STUDY HISTORICAL EVENTS OR CIVILIZATIONS IN A WAY THEY WOULDN'T IN REAL LIFE OR IN A TYPICAL MUSEUM SETTING. THIS APPROACH CREATES AN ENGAGING ENVIRONMENT FOR VISITORS TO APPRECIATE AND UNDERSTAND THEIR IDENTITY, COMPARED TO PASSIVE VIEWING AND RECEIVING OF MESSAGES.





The NEED FOR TRANSFORMATION

"TRANSFORMATION SEEKS FROM ONE SINGLE STEP TO EVOLUTION"



Traditionally, museums are open to the understanding that they are institutions responsible for collection, housing, preservation, and display of cultural property to educate the public with an entertainment angle. Consequently, these institutions have been organized within a paradigm that assumes physical artifacts, fixed exhibits and timed visits. Nevertheless it is important to emphasise that by the massive use of digital technology, the positioning of the audience towards the cultural institutions has changed essentially. As technology advances faster to meet today's standard, visitors not only demand engaging and personalized content but also demand an experience which will enable them to gain better insight of the artifacts/contents. This shift therefore calls for a complete reorientation in the practices and strategies instituted in museums in order to remain competitive in the ever more congested cultural sector.



The effects of digital technologies in museums are not simply operational, but they involve a radical change of epistemological paradigms by which museums redefine themselves in society. Some of these newer methods include incorporating VR, AR practically within the museum, elucidating means through which museums can engage audiences other than the traditional methods, means such as AI among others. For example, through VR guests can see how certain historical events occurred or study a particular civilization as they wouldn't be able to in real life or in a typical museum setting. Furthermore, this approach creates an engaging environment for visitors to appreciate and understand the identity they are exposed to, compared to passive viewing and receiving of messages.



Furthermore, the current global COVID-19 pandemic crisis has been a conduit for propelling the digital transformation of all museums globally. As physical areas were limited, most organizations relied on web technologies in order to continue engaging their audiences. Various types of virtual exhibitions, online Museum programs, and even "live" and engaging educational presentations evolved into a critical means through which museums attempted to reach out to the audience even in a limited way. This rapid change emphasized the roles of being online and changed the role of visitors and their expectations based on the pandemic. Thus, the implementation and incorporation of a digital experience now poses a question to the museum's long-term planning, as other museums had previously done.

CHALLENGES ENCOUNTERED BY MUSEUMS

THE PROCESS OF MODERNIZING THEIR FACILITIES

Visitor Engagement

There is reason to believe that active visitor participation is crucial for museums that want to bring their facilities up to date. However, most museums found themselves challenged with regards to competing for the attention of the public with other activities. Here the question is in the design of the narrative experiences appropriately that are relevant to the target audiences. It is necessary for existing institutions to create new forms of programming that both inform and entertain too reaching a wider audience. This includes involving the younger generation in their cultural expectations and preferences with aspects to interactivity and personalization meant in this case.

Technological Integration

The use and incorporation of new technologies become another problem that museums come across. As useful as computers are for creating guessing games and providing additional information, they can involve a great deal of work for the museum. There are other challenges that museums need to confront as they require staff training, ways to collect data, and the use of information technology in a way that will not detract from the non-profit educational goals. Further, there are cultural issues to do with data privacy and representation also come to play, something that can be a challenge due to the upsurge in use of digital engagement strategies by the institutions. The fast changing nature of technology indicates that museums need to keep updating meanings and implementing new technologies to meet the audience's needs.

Financial Constraints

This is easily one of the most serious issues that museums face when engaged in the process of modernization or during the purchase of large-scale exhibits. There are a number of institutions in the value chain that suffer with systematic financial deficit and are unable to commit substantial funds for upgrading and carrying out necessary maintenance. Most funders like flashy projects, or great-looking ones like putting up new exhibit areas or new facades rather than, for instance, upgrading an old heating and ventilation system or putting up new storage facilities. This leads to a cycle by which important conservation measures are missed and conditions continue worsening for the structures and items in the museums.

"IF NOT NOW,
THEN WHEN?"

Sustainability Practices

With increasing concerns for safeguarding the environment, matters of sustainability are being encouraged in the management of museum organizations. Modernisation entails not only aesthetic improvements but also incorporating green systems that make less use of energy and resources respectively. The content of this subject involves appreciating cultural and historical assets through general and individual encounters, evaluation of these museum's potential in prioritizing sustainability with design and provision of adequate visitor experiences to support their need. This also means that sustainable development: entails long-term perspectives and investments in structures that meet the ecological and historical objectives.

Community Engagement

Engaging with locals in their ongoing endeavours and becoming a part of the community is crucial for museums which want to modernize. Through coding of activities and organizations by the members of the community you get better results as they organize an event in accordance to what they need. In this respect, museums should consider every stakeholder's voice and incorporate it into their planning processes



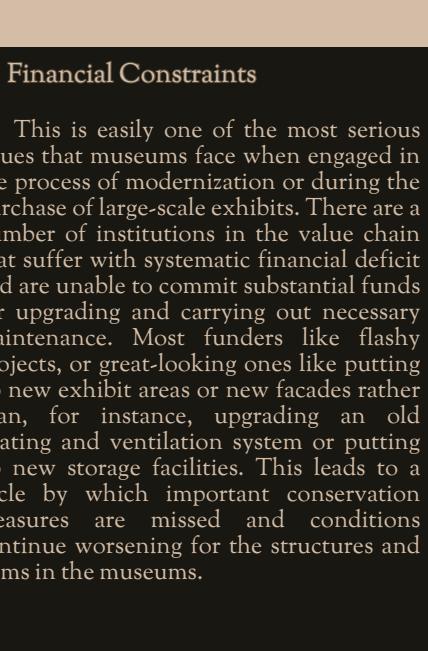
Challenges encountered by museums

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THEN VS NOW

02. HISTORICAL CONTEXT

In the past, museums were mainly used for mainly storage and display of objects. They were used as storehouses for art and antiques where products were arranged as they also preserved and promoted the arts and history of their residents and visitors. The public would move through spaces that had glass cabinets or pictures on the wall and the only form of engagement was observing.

03. Technological Integration

With advanced technology, the enjoyment of the museum has undergone a huge transformation. Earlier books provided information through posters or hand-linked descriptive books. Unlike the conventional technique of presenting artifacts, new museums incorporate advanced technologies such as augmented reality and virtual reality. For instance, AR Tour at the Detroit Institute of Arts where visitors engage in Lumin to have additional information viewing using handheld devices to overlay information.

01. Accessibility and Inclusivity

What visitors will find perhaps being one of the most defining features of a modern museum is the fact that such institutions are very much accessible. For years, physical barriers eliminated museums from the opportunities of engaging with specific groups because of structure, location, or price. Currently, the idea of making an institution friendly to everyone has become more important to many offices. Some of the effects include that almost all museums today can provide virtual tours and online access to collections, meaning, people who physically cannot get to museums can have a look at the exhibits from anywhere.

04. Public Interactivity and Interaction

Today's museums are all about the visitor experience which is facilitated by products that one can touch or manipulate. The contemporary facilities can hardly be compared to the older models where people were merely spectators; whereas, many centers often involve live demonstrations, as well as team work. For example, ArtLens Interactive Studio in the Cleveland Museum of Art is equipped with several touch screen activities most of which involve body motion and touch from the visitors. Such initiatives are capable of creating a feel of culture and togetherness among visitors thus enhancing the experience of users of the museum.



Top 5 Most Notable Changes in Museum Facilities



01. SHENZHEN, SCIENCE AND TECHNOLOGY MUSEUM OF CHINA

This year Shenzhen will inaugurate a new Science and Technology Museum by Zaha Hadid Architects. This complex is planned to accommodate 125,000 sqm and is intended to act as an educational campus for schools and innovation centers. Effectiveness: One has a U shaped design, it flexibility of space for different galleries which in turn improves on the visitors' experience. Sustainability is an element; energy efficient systems help to decrease energy intake.



Sustainability is a key focus of the museum's design. Detailed computer modeling and wind tunnel testing have been conducted to analyze thermal performance, natural lighting, wind levels, and air quality. These analyses aim to maximize the building envelope's effectiveness in reducing energy consumption while ensuring visitor comfort and preserving the collection. The design optimizes energy conservation during Shenzhen's hot, humid summers through high thermal insulation, high-efficiency glazing, HVAC systems, lighting, and smart building management systems. The museum aims to achieve the highest Three-Star rating of China's Green Building Evaluation Standard.

02. Richard Gilder Center for Science, Education, and Innovation – America

The Richard Gilder Center for Science, Education, and Innovation is a significant addition to New York City's American Museum of Natural History (AMNH). Designed by Studio Gang and opened in May 2023, the 230,000-square-foot center enhances the museum's mission to inspire discovery and education. The Gilder Center features a striking design inspired by natural processes like wind and water erosion, resulting in a central five-story atrium with flowing, cave-like forms. The façade, clad in Milford Pink granite, complements the museum's historic architecture while presenting a contemporary aesthetic.



New York's American Museum of Natural History is preparing to inaugurate the Richard Gilder Center by Studio Gang. This centre will upgrade the museum experience with science education enriched with architectural design. The project is quite interactive and what is more, it tries to capture people's attentiveness for the contemporary problems that science can solve

03. Bob Dylan Center, USA

The Bob Dylan Center has been designed and built in Tulsa, Oklahoma by Olson Kundig. This place transforms a historic century paper mill into an experiential storytelling gallery, and its subject is the life and art of Bob Dylan. The design brings the culture to the project overall while offering a contemporary space in which Dylan can showcase other artistic talents.



Immersive Film Experience: An innovative presentation that introduces visitors to Dylan's artistic evolution through a dynamic blend of archival music and film.

Studio Recreation: A meticulously recreated studio environment where visitors can experience what it was like to be present at one of Dylan's historic recording sessions.

The Columbia Records Gallery: An in-depth look at the creation, performance, and production of timeless Dylan songs such as "Like a Rolling Stone," "Tangled Up in Blue," and "Chimes of Freedom."

Multimedia Timeline: A comprehensive timeline of Dylan's life from his early years in Minnesota through the present day, written by award-winning historian Sean Wilentz.

04. Bundanon Art Museum located in New South Wales, Australia

The Bundanon Art Museum is a renowned cultural and environmental hub located in New South Wales, Australia. It is part of the Bundanon Trust, an arts organization founded by Australian artist Arthur Boyd and his wife, Yvonne Boyd. They donated their property to the Australian people in 1993 to foster creativity and education.

The museum is nestled in the Shoalhaven region on the South Coast of NSW, amidst breathtaking natural landscapes that include bushland, rivers, and escarpments. The museum offers a unique combination of art, architecture, and nature. It showcases contemporary and historical Australian art, including works from Boyd's extensive collection and other significant pieces from Australian artists.

A notable feature of Bundanon is the Bridge for Creative Learning, a striking architectural addition that blends seamlessly with its environment. Designed by Kerstin Thompson Architects, the building is elevated to adapt to the flood-prone area and includes exhibition spaces, artist studios, a café, and spaces for education and public engagement.



CONCLUSION

The Museum Facility Challenge demonstrated the potential for transforming museum spaces into more dynamic, accessible, and engaging environments. By integrating modern design, technology, and user-centered experiences, the challenge highlighted the importance of innovation in enhancing visitor interaction, education, and the overall cultural experience within museum settings.

5. Museum of Tolerance Social Lab, USA



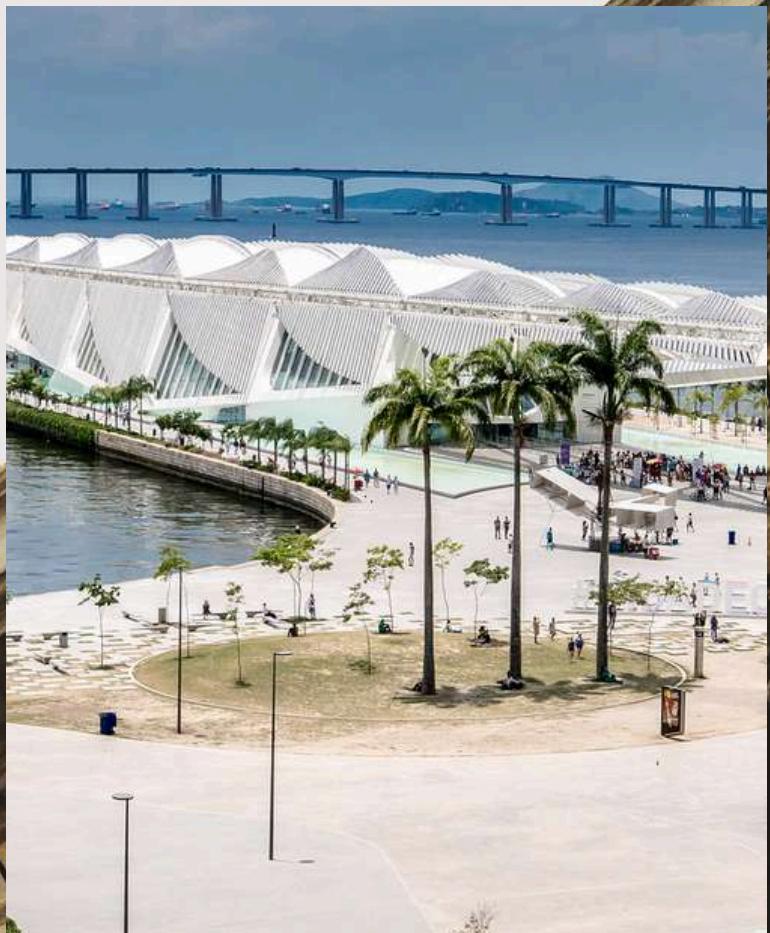
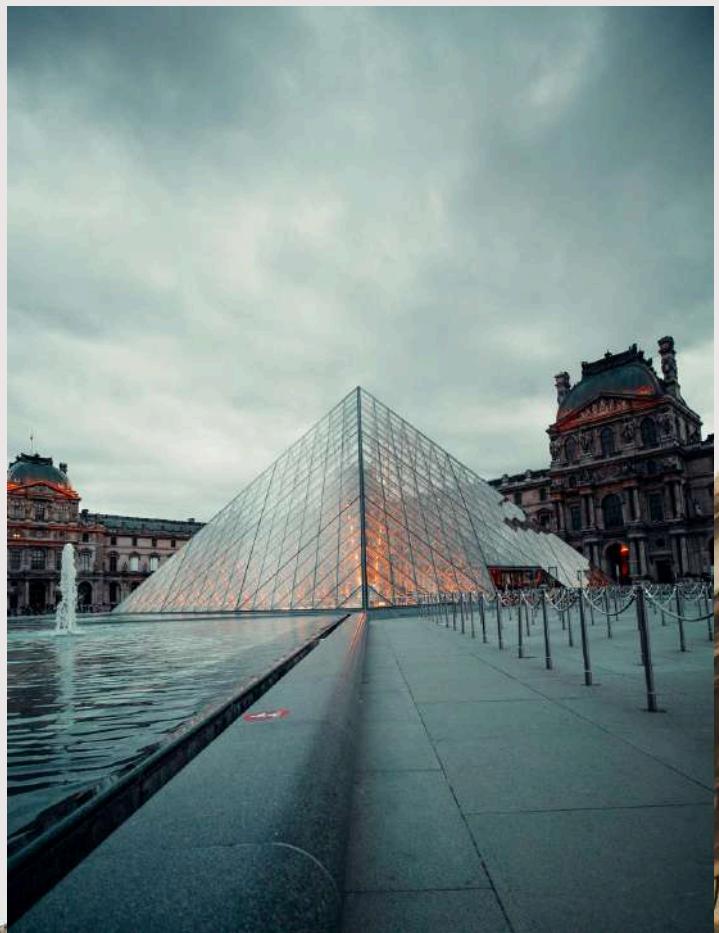
The Museum of Tolerance (MOT) is located in Los Angeles, California, USA. It is dedicated to promoting understanding and respect among people of different cultures and backgrounds, with a focus on combating intolerance, discrimination, and prejudice. One of the unique features of the Museum of Tolerance is its Social Lab, a space designed to engage visitors in interactive experiences that help them understand the impact of discrimination and social injustices.

The Museum of Tolerance in Los Angeles incorporates cutting-edge technology and immersive experiences to engage visitors in meaningful conversations about tolerance, diversity, and human rights. Its Social Lab is a futuristic facility designed to foster critical thinking and dialogue through interactive, multimedia-driven exhibits. This space blends art, technology, and education, offering visitors the chance to explore contemporary social issues in innovative ways. Visitors can use augmented reality (AR) or virtual reality (VR) technologies to experience the challenges faced by marginalized groups or to simulate different perspectives on global issues.

The facility also integrates digital platforms to enhance the learning experience, allowing visitors to contribute their thoughts, interact with dynamic exhibits, and even access resources on social change initiatives. The futuristic access in the Social Lab includes interactive screens, AI-driven discussions, and digital simulations, providing an accessible and engaging environment for learning about diversity, inclusion, and human rights. This forward-thinking approach ensures the museum remains a cutting-edge space for education and empowerment.

"The integration of technology in museums is no longer optional; it is the bridge between tradition and a digital future."





REFERENCE

Anderson, G. (2012). Reconceptualizing the museum: From modernism to postmodernism. *Museum International*, 64(1), 19-32. <https://doi.org/10.1111/j.1468-0033.2012.01717>.

Sandell, R. (2007). Museums, prejudice and the diversity of audiences. In L. Silverman (Ed.), *The social work of museums* (pp. 101-113). Routledge.

Finkelstein, D. (2001). The museum and the digital age. *Museum Management and Curatorship*, 19(3), 319-332. <https://doi.org/10.1080/09647770100699134>

Prown, J. D. (1994). Art as evidence: The importance of artifacts. *The American Historical Review*, 99(5), 1472-1481. <https://doi.org/10.2307/2166671>

Weil, S. (2000). A museum in the 21st century: A vision for the future. *Museum Management and Curatorship*, 18(3), 233-245. <https://doi.org/10.1080/0964777000058539>

EXPLORING THE IMPACT OF AI IN MUSEUM

OPPURTUNITIES AND CHALLENGES

"Introduction to the Role of Artificial Intelligence in Museum"

Artificial intelligence (AI) integration in museums is transforming behind-the-scenes operations as well as visitor experiences, therefore changing the way cultural legacy institutions interact with the public. AI-driven technologies offers hitherto unheard-of possibilities as well as problems that need cautious control.

Artificial intelligence has significantly improved the visitor experience through a variety of innovative applications. The Louvre's virtual advisors, who are controlled by AI and provide guided tours and real-time data, provide educational value to museum visits. The British Museum's augmented reality (AR) software allows visitors to view historical artefacts in their original surroundings via phones or AR glasses. This demonstrates how artificial intelligence (AI) and augmented reality (AR) may work together to create more engaging experiences. The British Museum's AR software, for example, allows visitors to view historical items in their original surroundings using their phones or AR glasses. Accessibility is another area where AI has grown. Chatbots like IRIS+ at the Museum of Tomorrow translate between languages and provide personalised voice explanations, which encourages everyone to participate (MuseumNext, n.d.). Technologies powered by AI that integrate contemporary news with digital art may enable visitors to engage in more tailored experiences. This helps one to see collections from fresh angles. Using predictive analytics, such as those provided by Google Gemini, may help museums in several areas including optimizing exhibit layout, controlling visitor flow, and estimating maintenance needs.



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Major obstacles, nevertheless, are stopping museums from adopting artificial intelligence immediately. Using artificial intelligence calls for various significant ethical considerations including privacy, discrimination, and moral obligation. The digital gap is the unequal difference between some institutions lacking access to modern technologies while others possess. This justifies the application of artificial intelligence. Thanks to growing awareness of artificial intelligence, workers and tourists might not need to interact as much as first thought. Given that artificial intelligence systems must safely review enormous amounts of visitor data, data management is a big issue. The authentic human experience fundamental to museum visits may be compromised by excessive dependence on artificial intelligence (MuseumNext, n.d.). As artificial intelligence advances, museums must judiciously navigate these benefits and challenges. Institutions may fulfil their objective of conserving and disseminating cultural heritage while enhancing visitor engagement, optimizing operations, and maintaining relevance in the digital era through the ethical use of AI.

References

- MuseumNext. (n.d.). Artificial intelligence and the future of museums. Retrieved from <https://www.museumnext.com/article/artificial-intelligence-and-the-future-of-museums/>

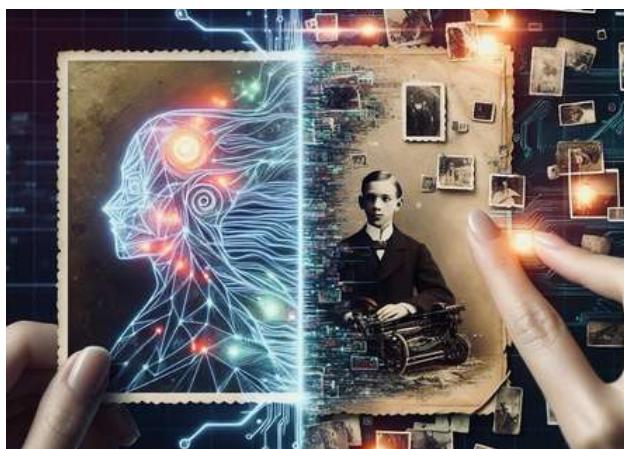


Fun Fact: The Louvre in Paris is the world's most visited museum, attracting over 7 million people annually—and its star attraction, the Mona Lisa, is so popular it has its own security and climate-controlled enclosure!

Artificial intelligence (AI) in museums is transforming visitor experiences and optimising operations while providing museums with new methods to engage audiences and improve their exhibits. This new technology has a lot of potential for improving efficiency both behind the scenes and in front of visitors.

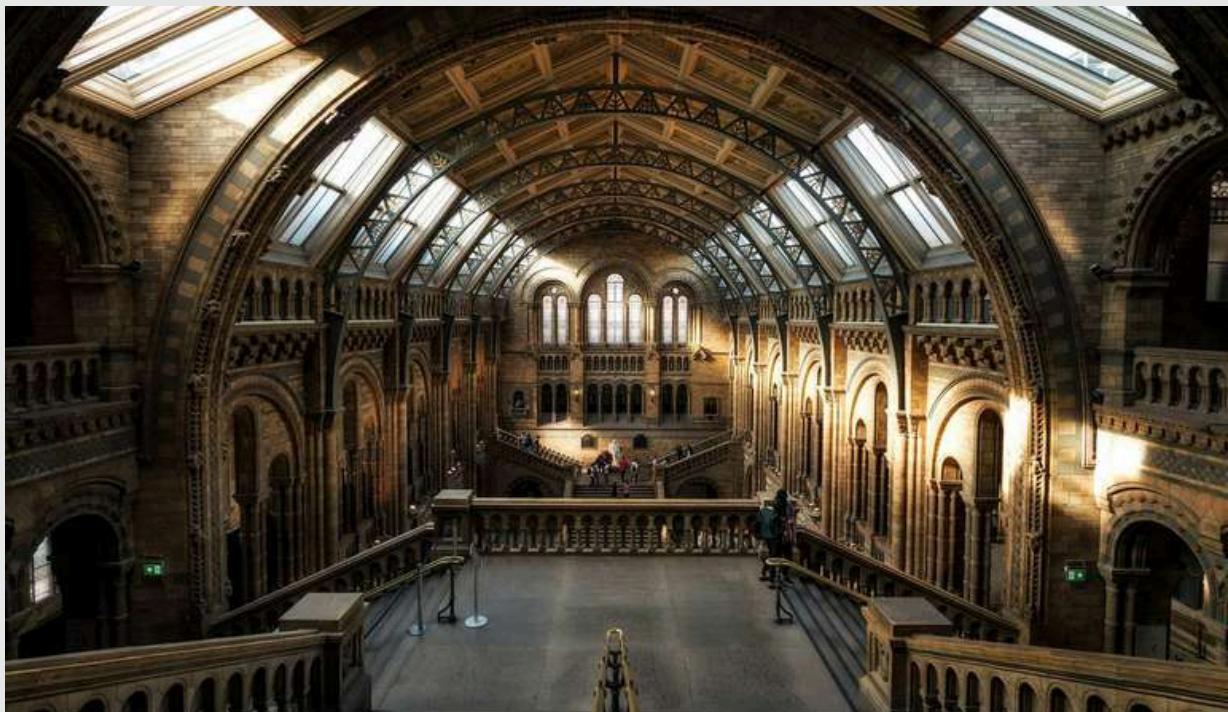
OPPORTUNITIES OF ARTIFICIAL INTELLIGENCE IN MUSEUMS

The creation of AI-powered virtual guides is among the most intriguing uses of AI in museums. For example, "Leonardo" at the Louvre offers real-time information and personalised tours, allowing for customised experiences for huge groups of visitors and minimising the need for human guides (MuseumNext, n.d.). AI-enhanced augmented reality (AR) is another advancement. By presenting historical artefacts in their original settings, the British Museum's augmented reality app leverages AI to bridge the gap between digital material and physical exhibitions (MuseumNext, n.d.). AI has also enhanced museum accessibility features. To make museums more accessible and welcome, the Museum of Tomorrow in Rio de Janeiro, for instance, employs its AI-driven IRIS+ chatbot to provide personalised audio explanations and real-time sign language translation (MuseumNext, n.d.). AI is revolutionising museum operations beyond devices that interact with visitors. To reduce downtime and enhance collection preservation, predictive maintenance systems, such as those employed by the Smithsonian, utilise sensors and machine learning algorithms to foresee equipment failures and schedule timely repairs (American Alliance of Museums, 2024).



OPPORTUNITIES OF ARTIFICIAL INTELLIGENCE IN MUSEUMS

MUSEUM



DIGITAL MUSEUM

AI

AI-driven sentiment analysis is providing valuable insights on visitor feedback. Museums can assess visitor happiness and swiftly discover areas for improvement by examining remarks and feelings. Institutions may modify their services to satisfy visitor expectations thanks to this data-driven strategy (MuseumNext, n.d.). Additionally, AI makes it easier to participate in new ways. For example, Google's Art Selfie function creates shareable content that expands the museum experience beyond its physical location by matching visitors' selfies with portraits in museum collections (MuseumNext, n.d.). With the ongoing development of AI, museums have the chance to ethically utilise new technologies. The potential advantages of integrating AI are numerous, notwithstanding the need to address ethical issues like prejudice and data protection. AI has the potential to revolutionize cultural heritage engagement through creative visitor experiences, more efficient operations, and more relevance in a digital age (ResearchGate, n.d.).

American Alliance of Museums. (2024). Transforming museum workflows with artificial intelligence (AI). Retrieved from <https://www.aam-us.org/2024/12/16/transforming-museum-workflows-with-artificial-intelligence-ai/>

MuseumNext. (n.d.). Artificial intelligence and the future of museums. Retrieved from <https://www.museumnext.com/article/artificial-intelligence-and-the-future-of-museums/>

ResearchGate. (n.d.). Opportunities and challenges of artificial intelligence enabling museum building. Retrieved from https://www.researchgate.net/publication/382508532_Opportunities_and_Challenges_of_Artificial_Intelligence_Enabling_Museum_Building

Challenges of Artificial Intelligence in Museums

The application of artificial intelligence (AI) in museums presents both exciting new opportunities and significant challenges. Museums need to handle the ethical concerns brought up by AI technologies with caution, despite the fact that these technologies promise to enhance visitor experiences and operational efficiency.

Museums face the formidable challenge of preventing the epochal decline of human knowledge and interaction brought about by artificial intelligence. AI can't match some of the things that humans can do, like helping museum guests, as Kaleh (n.d.) says. points out. The fundamental importance of museums is their capacity to utilise human curators and guides to foster intimate relationships with art, artefacts, and history. This basic benefit could be lost if collections are just digitised or AI is used instead of people working there.

An additional critical responsibility is to rectify issues pertaining to privacy and data security. Museums maintain extensive confidential information on sponsors, objects, and visitors. The National Endowment for the Arts, 2024 Concerns about the management, storage, and security of data pertaining to AI systems are prevalent. When AI systems show bias, it raises ethical questions. Artificial intelligence (AI) driven systems that evaluate datasets or provide personalised recommendations raise concerns about the unintentional spread of biased or false information. Museums should make sure AI systems are fair in their development and training and accessible to all people, says the American Alliance of Museums (2024).



CHALLANGES OF AI MUSEUM

The rapid speed at which technology is emerging makes it difficult for museums to remain current with developments and provide visitors stability and continuity. According to Kaleh (n.d.), museums have historically been sluggish to embrace modern technologies like social networking and audio tours, which at first caused conflict before improving the experience for visitors. If institutions don't adjust to AI technology fast enough, a similar situation can occur. Major issues also are authenticity and the uncertainty of the lines separating human-created art from AI-generated content. As museums acquire AI-generated works in an era when machines can make sophisticated works of art, they have to establish precise criteria for what constitutes "authentic" creative inspiration (Kaleh, n.d.). Not least of all, including artificial intelligence technologies calls for significant training and infrastructure costs. Smaller or less financed museums may find it challenging to adopt and implement artificial intelligence technologies as effectively as larger institutions (DataMart, n.d.). In essence, even if artificial intelligence presents museums with significant opportunity to enhance visitor experiences and speed operations, these benefits must be carefully weighed against problems with prejudice, privacy, authenticity, and resource inequity. Museums have to ethically and morally control its integration to ensure that artificial intelligence technologies improve rather than undermine their objectives.



American Alliance of Museums. (2024). Transforming museum workflows with artificial intelligence (AI). Retrieved from <https://www.aam-us.org/2024/12/16/transforming-museum-workflows-with-artificial-intelligence-ai/>

DataArt. (n.d.). Museums eye a rash of new opportunities with AI technology. Retrieved from <https://www.dataart.com/blog/museums-eye-a-rash-of-new-opportunities-with-ai-technology-by-doron-fagelson>

Kaleh, S. (n.d.). AI and the future of museum work. Retrieved from <https://curious-optimist.medium.com/ai-and-the-future-of-museum-work-fdab16f28a65>



CONCLUSION

Reflecting on the Impact of Artificial Intelligence in Museums



In conclusion, adding artificial intelligence (AI) to museums brings up a number of important issues that need to be addressed so that AI can be used in a way that is both effective and moral. Finding the right balance between AI and human skills is one of the hardest things to do. Curators, tour guides, and teachers help make culture stories and personal links, which is very important to the success of museums. AI should strengthen the link that makes museums useful as places where people can connect with art and history in a meaningful way, not replace it.

Furthermore, crucial are ethical concerns, particularly with regard to data security, privacy, and probable AI system bias. Museums collect vast amounts of visitor information, so maintaining public confidence depends on safeguarding of this data. Moreover, prejudices in artificial intelligence systems can compromise inclusivity by ignoring underprivileged points of view or supporting stereotypes. If museums want to make the visits of their visitors better, they need to make sure that the growth and use of artificial intelligence is fair and open to everyone. There is a lot of content made by AI that isn't always real or relevant to culture. Museums seek to exhibit human ingenuity; nonetheless, it is crucial for them to formulate explicit criteria for incorporating AI-generated art alongside instructive material. Establishing clear procedures is essential to fostering genuine interactions and building meaningful relationships with novel communication techniques.

Museums need to respond quickly to the rapid changes in technology. Smaller museums usually find it challenging to compete with larger organisations that can afford to invest in current artificial intelligence technology and better staff training. This could result in a growing gap between organisations with sufficient resources and those without. Investments in infrastructure, training, and continuous assessment are required for AI integration. There are strict ethical guidelines that museums must follow when implementing AI. By putting an emphasis on equity, diversity, and openness, museums can incorporate AI with their objectives while upholding their values. Museums may enhance operations and visitor engagement while maintaining their unique human-centered identity by carefully integrating AI.



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BEYOND BORDERS

Universal Museum as Portals to the Worlds

INTRODUCTION: CONCEPT OF UNIVERSAL MUSEUM



"ART MUST BE AN INTEGRAL PART OF THE STRUGGLE. IT CAN'T SIMPLY MIRROR WHAT IS IT MUST REFLECT WHAT CAN BE." - AI WEIWEI

The idea of a universal museum is based on establishing a welcoming and accessible environment where **people of all abilities** can participate equally in experiencing art, history, and culture. It aims to create a museum setting that addresses the requirements of all visitors, ensuring that both those with disabilities and those without have an equally enriching experience. Ensuring that all areas of the museum are reachable through **step-free pathways, ramps, elevators, and accessible restrooms** is fundamental to this approach. These features are crafted with intention, serving as essential components of the museum's architecture and harmonising effortlessly with its overall design.

A comprehensive museum also recognises the significance of engaging multiple senses, providing experiences that extend beyond just visual interaction. For example, hands-on displays enable guests to feel and investigate replicas of sculptures or artefacts, offering a valuable experience for individuals with visual impairments while also improving the overall visit for everyone else. In a similar vein, audio guides and descriptive narratives serve individuals who are blind or have low vision, while also providing an engaging option for all guests. Integrating sensory components such as soundscapes, scents, and interactive displays guarantees that the museum caters to a diverse range of preferences and abilities.

The way information is presented in a universal museum is an important factor to consider. To promote accessibility, displays feature **Braille labels, tactile maps, and large-font signage** for those with visual impairments. Video guides featuring sign language interpretation provide accessibility for visitors **who are deaf or hard of hearing**. Additionally, the use of straightforward text and clear symbols supports individuals with cognitive disabilities or language barriers in comprehending the content effectively. Furthermore, advancements in technology like mobile applications, virtual reality, and online resources facilitate tailored interactions, allowing users to engage with content in manners that align with their individual needs and preferences.

Inclusivity goes further than just providing physical and sensory accommodations; it also involves the mindset and training of the museum's personnel. A comprehensive institution focuses on recruiting and developing staff who possess both expertise and compassion, ensuring they are prepared to support visitors with diverse requirements. By creating an inviting and encouraging environment, the museum guarantees that each visitor feels appreciated and honoured.

The effectiveness of a universal museum's design and operation greatly relies on the experiences and insights of the community it aims to serve. Including individuals with disabilities in the planning process guarantees that their needs are genuinely considered. Ultimately, a comprehensive institution aims to reflect the ideals of inclusive design, establishing an environment where adjustments are so effortlessly woven in that they serve all individuals, irrespective of their capabilities. This dedication to inclusivity turns the museum into a significant representation of fairness, creativity, and collective human bonds.

ACCESSIBILITY FEATURES IN MUSEUM



Universal museums aim to create an inclusive atmosphere by incorporating various accessibility features that address the different needs of their visitors. A key part of this is **physical accessibility**, which involves things like ramps, lifts, and wide pathways to help wheelchair users and people with mobility challenges. Having accessible restrooms, seating areas, and mobility aids like wheelchairs or scooters available on-site really makes it easier to get around. Museums make sure that their physical spaces are easy to access, so everyone can move around and enjoy the exhibits without any problems.



Clear signage with straightforward directions and symbols helps minimise confusion, while calm areas provide a spot for visitors to unwind and refresh. Museums usually have interactive and multisensory exhibits that involve different senses, which makes learning more engaging and easier to access. Museums use clear and simple language to make sure visitors aren't confused by complicated terms. Improvements in digital and technological accessibility have made inclusivity even better. Museum websites and mobile apps are created to follow global accessibility standards, like the WCAG (Web Content Accessibility Guidelines). Virtual tours allow people who can't visit in person to explore the museum from afar. Adaptive interfaces on touchscreens help make sure that assistive technologies, such as screen readers, work well, which makes digital content easier for everyone to access.



For visitors who have **visual impairments**, ensuring that things are easy to see and understand is important. Museums usually have braille and large-print materials available for exhibit descriptions, maps, and signage. Tactile exhibits give visually impaired visitors the chance to feel objects, creating a sensory link to the artefacts. Also, audio descriptions give verbal explanations of exhibits, which you can access using headphones or mobile apps. Museums focus on having good lighting to help visitors with low vision, making sure that exhibits are bright and easy to see. To help people with **hearing impairments**, there are measures like sign language interpretation for tours, events, and lectures, along with captioned videos and presentations. Lots of museums provide theatres and guided tours with assistive listening devices, like loop systems, to make the sound louder. Emergency systems are designed to be inclusive, incorporating visual alarms such as flashing lights alongside auditory warnings. It's important to think about **cognitive and sensory accessibility** for visitors who have **autism**, **sensory sensitivities**, or **intellectual disabilities**.

Inclusive **staff training** is an important part of making things accessible. Museum staff receive training to help them understand and support visitors with disabilities, making sure they can communicate effectively. Multilingual and multi-sensory guides provide an extra level of inclusivity, addressing various cultural and sensory requirements. Additionally, museums work together with organisations focused on disabilities and actively look for feedback from the community to find areas that need improvement. Feedback mechanisms allow visitors to share their experiences and recommend improvements, promoting a culture of ongoing development. When universal museums include these features, they do more than just follow the law; they create places where everyone can connect with art, history, and culture. These measures enhance the experience for visitors with disabilities and help create a more inclusive environment for everyone.

INNOVATIVE EXHIBITION DESIGN

"Design is not just what it looks like and feels like. Design is how it works."

- Steve Jobs



Exhibition design in universal museums aims to create spaces that are inclusive, engaging, and accessible for a variety of audiences. A key method is **using multisensory exhibits that combine sound, touch, visuals, and even smell** to create a more engaging experience for everyone, including those with sensory impairments. Interactive technologies, like **augmented reality (AR), virtual reality (VR), and touchscreens**, make learning more engaging by letting visitors dive into artifacts or historical events in immersive ways. Models and replicas of artifacts allow for hands-on experience, making exhibits easier to access for visitors who are visually impaired.

Having clear and easy-to-follow navigation is super important. Good signage, utilizing universal symbols, digital guides, and colour-coded paths, facilitates easy navigation around the area. Exhibit layouts that are flexible are made to fit wheelchairs and strollers, all while looking good. Museums also use dynamic lighting and soundscapes to create engaging and atmospheric environments, making sure they are comfortable for visitors who have sensory sensitivities.

The chart that we can see here is based on figure 1, and it shows the top ten nations that practically everyone visits. Each museum has its own unique specialisation, which is what causes people from other countries to desire to visit it. However, Malaysia is not included on the list, and if we are able to establish a museum that provides a specific audience, it will be able to capture the interest of people from all over the globe. It is because of this that we have the opportunity to make an effort to establish a universal library in Malaysia that is centred on the culture of Malaysia. This would be a curious project since there are not many universal museums in the world that are accessible to persons with disabilities and acceptable for regular people.

Using universal design principles makes sure that exhibits are accessible from the start, so there's no need to make changes. For instance, **using large-print labels, high-contrast graphics, and height-adjustable displays** can accommodate a wide variety of visitors without targeting any group. Exhibits usually **use storytelling methods**, like personal stories, interactive timelines, or multimedia displays, to build emotional connections and make the content more relatable.

Lastly, museums use sustainable and adaptive materials in their design, showing environmental responsibility and making it possible for future changes. Exhibition designs change and improve thanks to input and participation from the community, ensuring they stay inclusive, innovative, and relevant. Universal museums change the usual visitor experience by mixing technology, accessibility, and creativity, making it more engaging, educational, and inclusive for everyone.



HIGHLIGHT INCLUSIVE MUSEUM WORLDWIDE



Highly dedicated to accessibility, the Museum of Modern Art (MoMA) in New York makes sure that visitors with impairments may interact completely with its events and collections. Wheelchair access to the museum's facilities including accessible bathrooms and elevators is provided throughout for people with hearing problems, assistive listening devices, audio guides, and transcripts are supplied; for those with vision problems, verbal explanations and tactile sensations are offered.

MoMA also offers specialised seminars and tours catered to those with cognitive or developmental disability. Service animals are also welcome, and the staff is trained to meet a range of requirements, therefore fostering inclusive surroundings for every guest. MoMA offers inclusive events for guests with dementia and their families, sign-language translated gallery presentations, and touch, listen and discuss tours for those who are blind or partly sighted. Additionally available online at MoMA are a downloadable sensory map highlighting parts of the museum most likely to be calmer and less busy, spaces with sitting, and naturally occurring lighting.



The Frye Art Museum in Seattle, Washington, focuses on making sure that all visitors, including those with disabilities, can have an inclusive and accessible experience. The museum has everything set up for wheelchair access, including ramps, elevators, and restrooms that are easy to use. There are assistive listening devices for public programs for visitors who have hearing impairments, and a lot of exhibits come with written materials to go along with the visual displays. The Frye offers tactile opportunities and verbal description tours for visitors with visual impairments, making sure everyone has a rich and engaging experience. Service animals are allowed, and the staff is prepared to assist guests with different needs, creating a friendly atmosphere for all.

The Smithsonian Institution in Washington, D.C., is one of the top museums for universal accessibility, welcoming both able-bodied and impaired tourists. Its museums, including the National Museum of American History and the National Air and Space Museum, provide handicapped ramps, elevators, accessible bathrooms, and free wheelchair loans. To engage visually impaired visitors, the Smithsonian offers audio explanations, large-print guides, and tactile displays. Hearing-impaired people benefit from assistive listening equipment, sign language interpretation, and multimedia subtitles. Additionally, sensory-friendly programs and services serve autism and other developmental impairments. The Smithsonian leads in accessibility and diversity by offering free entry to most of its museums.

The Smithsonian Institution stands out as the best universal museum in the world because it is dedicated to inclusivity, accessibility, and education for everyone. The place has amazing exhibits and really focuses on making sure everyone can enjoy them. They have wheelchair access, assistive technologies, tactile experiences, and sensory-friendly programs, so all visitors can fully participate, no matter their abilities. The free admission to most museums helps eliminate financial barriers, allowing everyone to access its rich cultural and historical treasures, which really strengthens its position as a global leader in universal museum design.

CHALLENGES TO BUILD UNIVERSAL MUSEUM



Creating a universal museum involves a lot of challenges that need careful planning and teamwork. A big challenge is finding a way to include **accessibility features** while keeping the look and historical value of the space intact. For example, incorporating ramps or tactile displays can change how exhibits look and feel.



Moreover, the **expensive** nature of implementation, which covers assistive technologies, structural changes, and staff training, can put a lot of pressure on museum budgets, particularly for those that depend on limited funding.

Another significant challenge is **balancing the preservation** of artifacts with interactive features; tactile exhibits or hands-on activities, which are important for accessibility, can jeopardize delicate artifacts. Additionally, addressing the various needs of visitors, such as those with mobility, sensory, and cognitive disabilities, usually involves a variety of tailored solutions, which makes design and operation more complex. **Staff training and awareness** create additional challenges, as employees need to be prepared to engage respectfully and offer effective support to all visitors. Using and keeping up with advanced technologies such as augmented reality (AR), virtual reality (VR), and mobile apps makes things more challenging since they need regular updates and compatibility checks.



Also, **space limitations**, especially in older or historically important buildings, can really restrict the possibility of adding features like wider pathways or quiet rooms.

Additionally, the legal and cultural factors differ from one region to another, which means that universal museums need to adjust their designs to comply with local regulations and societal norms. The resistance to change in traditional institutions, along with the difficulty of developing sustainable and eco-friendly solutions, makes things even more complicated.

Finally, **making sure that the community is involved and figuring out** how well the accessibility features are working is something we need to keep doing. Museums should really get different groups involved in their planning and be open to feedback to make changes as needed. To tackle these challenges, we need to find a successful mix of creativity, funding, and teamwork to make sure that universal museums are genuinely inclusive and accessible for everyone.

"Disability is such a rich site for thinking about many different things, but it's often not treated that way."

– Shannon Finnegan

In conclusion, universal museums are a big step towards accessibility, making it possible for everyone, no matter their physical, sensory, or cognitive abilities, to access and enjoy our shared heritage as humans. These institutions represent the idea that knowledge, culture, and history are for everyone and that everyone should have the opportunity to learn and explore without exclusion.

When museums focus on universal design and accessibility, they really show their commitment to fairness and kindness, making sure that people with disabilities feel included and supported.

Individuals with disabilities, just like everyone else, have a natural curiosity and a desire to engage with the world around them. Museums play a crucial role as places of information and culture, and it's important for them to ensure that their exhibits, programs, and spaces are accessible to everyone. Not taking this responsibility seriously would leave out a big part of society and overlook what they bring to cultural and intellectual discussions. An inclusive museum really inspires and teaches every visitor, helping to create understanding and unity among all communities.



This is a worldwide initiative to adopt the idea of a universal museum, making sure that everyone, including those with disabilities, can access the vast amount of human knowledge without any obstacles. We should keep in mind that by making spaces for everyone to join in, we support the ideas of equality and inclusion, helping to create a world that doesn't leave anyone out. Universal museums go beyond just being accessible; they focus on acknowledging the dignity, potential, and humanity of each person.



REFERENCE

1. (PDF) Universal Museums: Cultural and Ethical Implications. (n.d.).
https://www.researchgate.net/publication/299594822_Universal_Museums_Cultural_and_Ethical_Implications
2. Argyropoulos, V. S., & Kanari, C. (2015). Re-imagining the museum through “touch”: Reflections of individuals with visual disability on their experience of museum-visiting in Greece. *Alter*, 9(2), 130-143.
3. Ahmadova, F. (2024, March 26). Keeping museums inclusive for people with disabilities. *UN Today*.
<https://untoday.org/keeping-museums-inclusive-for-people-with-disabilities/>
4. Carole. (2024, June 7). How to make museums more accessible for people with disabilities?. *Inclusive City Maker*.
<https://www.inclusivecitymaker.com/how-to-make-museums-more-accessible-for-people-with-disabilities/>
5. Poria, Y., Reichel, A., & Brandt, Y. (2009). People with disabilities visit art museums: an exploratory study of obstacles and difficulties. *Journal of Heritage Tourism*, 4(2), 117-129.
6. Richardson, J. (2024, December 6). Making museums accessible to those with disabilities. *MuseumNext*.
<https://www.museumnext.com/article/making-museums-accessible-to-those-with-disabilities/>
7. Visitors with physical disabilities. Le Louvre. (n.d.). <https://www.louvre.fr/en/visit/accessibility/visitors-with-physical-disabilities>





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HIDDEN WORLDS: EXPLORING THE UNIQUENESS OF MUSEUMS

INTRODUCTION UNIQUENESS MUSEUMS IN THE WORLD



Museums which are those awesome repositories of history and culture which have always fascinated people. Starting from the largest and most prestigious to the smallest and most specialized, every museum is a possibility to look into the past, as well as the present and the future. This is due to their ability to take us to other worlds, other times and other places. They also make us aware of past narratives and other cultures, which are why they form the foundation of our humanity.

It is impossible to even imagine the number of museums that exist in the whole world. Today there are museums of all kinds: art museums that house ancient Egyptian treasures, science museums that tell the story of aviation, and even museums that are devoted to the toilet. Some museums are located in magnificent architectural masterpieces, others are in plain ordinary buildings, but their true value is inside. For example, **The Louvre**, its famous glass pyramid and a myriad of masterpieces, is a clear example of grandiose museum architecture. At the same time, the **Museum of Bad Art** in Somerville, Massachusetts, rejoicing in the title 'The Artist in Each of Us,' presents works that are both technically crude and interesting in their crudeness.

Besides collections, museums provide the audience with an opportunity to be engaged in some activities that are not directly connected with the study of exhibits. Direct contact with artifacts, games, and some sort of role-play, as well as live performance can be far more engaging than a regular museum visit. As society developed and the global society became more intertwined, museums are no longer just places to store objects, but places of cultural exchange. Museums are a way for people of all different types of professions and backgrounds to be able to relate to each other and the people around them. As much as the more experienced art lover, or as the child who has never been to a museum, there is a museum out there that is capable of sparking the imagination and opening our eyes to new things.

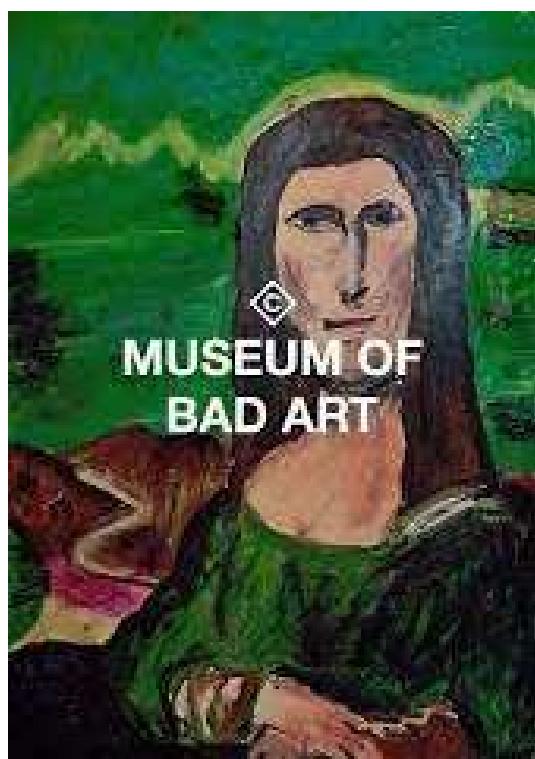


TOP 5 UNIQUE AND INTEREST MUSEUMS THAT MUST BE VISIT IN THE WORLD



Best Museums in the World

Museums serve as cultural repositories, preserving and showcasing the heritage of humanity. The world is full of museums that are not like any others and that can provide their visitors with rather interesting experiences. These are not the stately halls with white walls and hundreds of paintings hung up in lines. We're discussing outstanding museums that are beyond the conventional concept of a museum, which can be dedicated to such themes as failed artworks, the ocean, and even heartbreak. Here is the list of Top 10 unique museums in the world that have been discovered by the people around the globe.

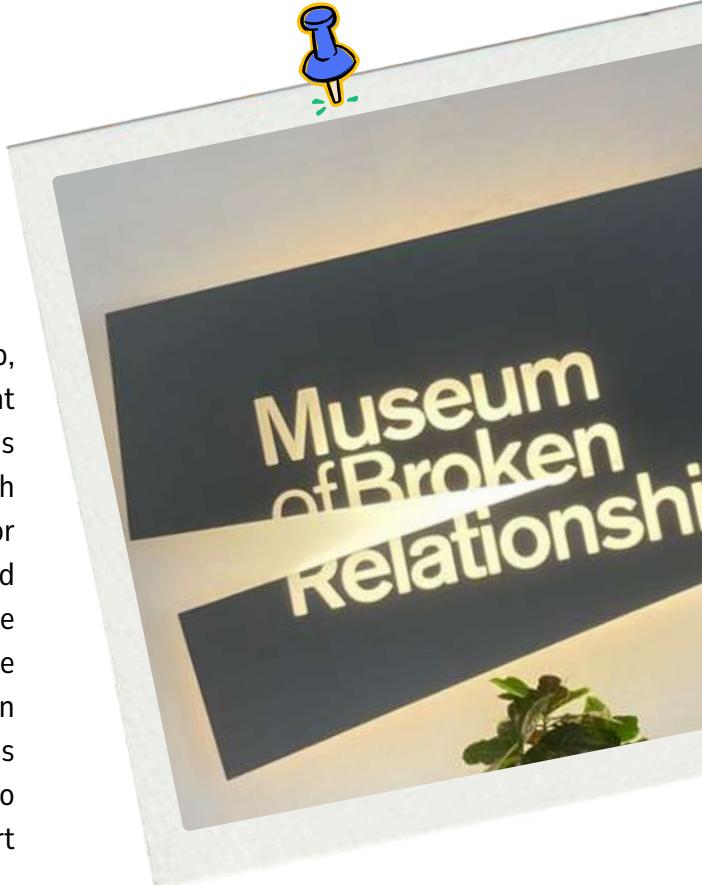


1) Museum of Bad Art (MOBA)

The first museum that can be included in the unique museum is the **Museum of Bad Art (MOBA)** located in Somerville, Massachusetts. This museum is an unusual museum. Rather than sharing great art pieces, MOBA is actually a museum of bad art, but this is great because it means it is a celebration of the artist in each of us. The paintings that are poorly painted, unattractive, and often comical in their intent. However, MOBA doesn't just make fun of these artistic failures. It appreciates the efforts and innovation that people put into creating these products, acknowledging the need of people to express themselves. While the museum boasts all sorts of "masterpieces," some are accidental abstractions, others are just abstracted portraits that don't resemble the sitter at all. MOBA shows a different and sometimes silly side to art; it is never boring and always makes you think about what art is and why people make it even if it is 'bad'.

2) Museum of Broken Relationships

Suddenly, the **Museum of Broken Relationships** in Zagreb, Croatia took part in this topic. It is an interesting and thought provoking place that focuses on the issues with relationships. This museum consists of items left by people after their breakups with descriptions of the event added to the items. It comprises, for example, love letters and photographs, toys, teddy bears, and handcuffs. Every single object represents love, loss and the struggles of people trying to connect with one another. The Museum of Broken Relationships is an outlet where people can come to process and share their feelings over the loss of love. It is also a reminder that no matter how much we may suffer due to broken relationships, there is always a chance for the broken heart to be mended.



3) Cancun Underwater Museum of Art (MUSA)

In many places, the **Cancun Underwater Museum of Art (MUSA)** in Cancun, Mexico is one of the most original art museums in the world. This is a museum that has sculptures of different artists underwater at the Caribbean Sea. The sculptures are sited in a way that they will attract marine life and the formation of artificial reef and coral growth. This creative idea is not only an appealing underwater art for divers and snorkelers but also helps to preserve the sea environment. The establishment of MUSA is one of the best examples of how art can be used to change the world for the better. It also shows how art can be used as a tool in an environmental conservation project to make the experience in the park memorable.



4) The Louvre Museum



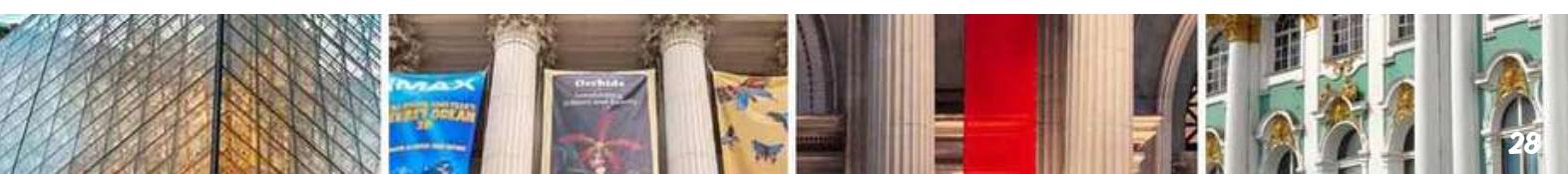
A well interesting place, **The Louvre Museum** is a famous national art museum located in Paris, France, which is located in the former royal palace of the same name of French history. This famous museum contains a huge and miscellaneous stock of art works that are thousands of years old and masterpieces of art of different countries. Starting with the mysterious smile of Mona Lisa painted by Leonardo da Vinci to the beauty of Venus de Milo, the Louvre museum is home to some of the greatest masterpieces that have always been a favorite of art lovers. The museum possesses wonderful architecture as well, the main entrance of which is a glass pyramid which was designed by the famous architect I.M. Pei, differing greatly from the ancient palace. A visit to the Louvre is not only a sightseeing of the artistic pieces, it is a travel through time, evidence of human innovation, and a representation of French culture.

5) The International Spy Museum

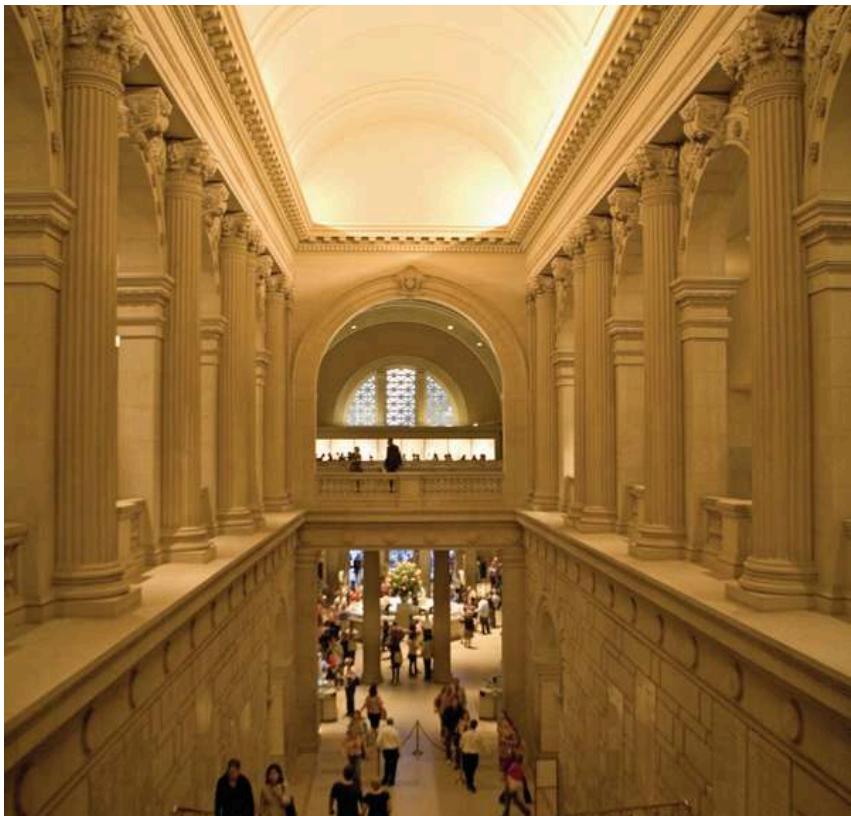


There is a fascinating museum called **The International Spy Museum** located in Washington, DC., USA that impresses the plunge into the world of spies. With special emphasis on spy gadgets, weapons, and items, the museum presents the tools and strategies of intelligence agencies. Game-like features include opportunities to try on a spy and decode messages or stage a surveillance, which makes the experience very realistic. The museum explores the history of spies and spying with legends, double agents and key missions which impacted the world. In covering the various intelligence techniques, it shows a chronological evolution of spying, from prehistoric to cyber spying. Using live actors, a timeline of major events in world history and modern technology, the museum allows the visitors to learn more about espionage and its role in shaping the world while being entertained at the same time

In conclusion, these five museums prove that there are no limits to the variety and ingenuity of museum curating. Every museum presents the different aspects of people's feelings, lives, and even peculiarities, and makes the guests of the museums think about art, history, and culture in a different way. Through visiting such museums it becomes possible to appreciate the many ways through which people try to make sense of reality. It is more than a learning experience when you visit these unique museums; instead, it is a call to appreciate the diverse and creative world we live in, which makes them a must visit for anyone.



THE IMPACT OF UNIQUE MUSEUMS ON SOCIETY AND CULTURE



Museums are unique and important organizations that are involved in the stewardship, documentation, appreciation and display of cultural material. It acts as repositories of history, of knowledge, of art and culture, which offer rooms where individuals can visit in and learn more about a time period, learn about their culture and worlds. Unique museums are different from conventional museums that have already such well-defined categories as art, history, and science. As a network of new-generation museums, these institutions focus on the specific subject, offer rather unconventional exhibits, and encourage the visitors to challenge conventional perimeters of art, culture, and history. This topic will discuss the significance of such different museums in society and culture that contribute to culture and history protection by telling the stories that are not widely known.

The first impact that can be pointed out is an **educational impact** into society and culture. This is because specialty museums are ideal learning institutions since they offer everyone interesting ways of learning through various subjects and experiences. The museums are not akin to the wide ranging historical or art galleries, instead they explore a small subject area that piques curiosity and initiates new discoveries. For example, the International Spy Museum in Washington, D.C. presents an intriguing journey through the world of spies and espionage providing them with an opportunity to investigate the role and effects of secret intelligence gathering. Unique museums help people to learn and think in a new way: knowledge is introduced in an unusual manner and makes people interested in the subject, as well as broadens the understanding of the topic.



In addition, **cultural preservation** is related to this topic. The museums play a very important role in the display of history and culture of a community or people as they put to display histories and artifacts that may not be seen anywhere else. A very convincing example of this type of museum is the Museum of Broken Relationships in Zagreb, Croatia, which is devoted to the objects that are associated with the termination of the Romantic relationships. These artifacts are not just the physical objects but they symbolically represent love, loss and strength. Through the preservation of these essentially human feelings, the museum provides a cultural voice and means of unity among people as they analyze their feelings. This way not only the non-material cultural heritage is saved, but also people develop continuity, identity, and empathy within communities, referring to the human relationships.



Furthermore, museums have contributed to the development of ***social inclusion***. For instance, the museums convince people of different diverse backgrounds with the purpose of improving their flow of experience. The example here is the Museum of Bad Art (MOBA) in Somerville, Massachusetts the museum collects 'art that is too bad to be ignored' and presents a rather optimistic view of creativity. As a museum of bad art, MOBA reveals traditional forms of art as not beautiful and valuable, yet allows visitors to appreciate all crudes and technically imperfect art pieces. This approach erases elitism at the heart of art and gives everyone a chance to appreciate art. By developing a friendly atmosphere, the museum encourages people to freely discuss the very idea of art, creativity, and the relativity of beauty. These interactions work positively towards breaking the barriers between and among different visitors to the center thus creating a joyful environment.

Museums might be viewed as ***subversive and questioning people's perceptions*** and expectations towards the accepted social roles and behaviour. One striking example is the Iceland Phallological Museum in Reykjavík Iceland, which is a museum of phallology, displaying specimens of animal genitalia. To many people, the exhibit topics are curious or even perhaps shocking, but the museum presents them as a science and with a joke. This modern concept encourages visitors to learn about the differences and similarities in the forms of the living creatures and at the same think and often giggle about the representations of the male genitals among different nations. Due to the topics, which are presented in the museum, it encourages people to discuss biology and the views of society. It is unique in this way because it disrupts core cultural expectations and challenges popular opinion and prejudice and seeks to embrace the broader world thus cultivating a stimulus for reflection and learning



Lastly, the museums serve a ***crucial function of nurturing cultural interaction and development*** through representation of different people's customs, beliefs, and perceptions of reality. The Museum of Witchcraft and Magic in Boscastle England is an excellent example of how artifacts have been used to explore the history and workings of witchcraft and magic from different parts of the world. In its large collection of relics, papers, and displays, the museum provides the audience with a complex interpretation of witchcraft as a cultural, religious, and historical phenomenon. Through analyzing these obscure rituals which can be easily misunderstood in some cultures, the museum makes people question and embrace museum diversity in beliefs. This exposure gives way to inter cultural appreciation and this enhances interaction between two or more cultures to settle their disparities.

In conclusion, unique museums are very important in society and the shaping of culture. They are not mere displays, but are effective teaching aids, they are also repositories of various cultures and act as unifying forces since they attract people of all types. These institutions break social norms and expectations and force the visitor to rethink the way they see things. Also, they contribute to cultural sharing by displaying culture and practices from different parts of the world hence creating cultural awareness. Because of their special subject matters and the fun ways they present them, unique museums add a lot to the enhancement of the cultural and social life of society and to the furthering of knowledge about human beings.



CONCLUSION

Therefore, the exploration of the unique and extraordinary museums shows the depth of the phenomenon's influence on society and culture. Unlike conventional museums, these institutions provide unique and compelling stories and points of view that differ from the norm. Special museums are informative institutions which are involved in the process of cultural conservation, social integration and intercultural communication.

The concept of unique museums will create an opportunity for various communities to be open to the public, to interact, and be inspired by other people's creativity as well as the human experience. These museums are recognised for the unconventional artefacts and stories that are being exhibited and as such they make the assumed normative visitor reconsider existing ideas of culture and society. The approach encourages cohesion and acceptance because everyone and all cultural types are included, clarifying that everyone is accepted.

In the end, there are specialty museums that tend to our comprehensiveness of humanity and participate in the cultural and social development of civilization. As we go on discovering 'the other' worlds, we become more sensitive to the extent to which human beings have been trying to search and make meaning of life. As it has been established through their themes and collections, unique museums provide important perspectives into human existence and therefore are important parts of culture.



REFERENCES

"A museum has to renew its collection to be alive, but that does not mean we give up important old works."



Antchak, V. and Adams, E. (2020), "Unusual venues for business events: key quality attributes of museums and art galleries", International Journal of Tourism Cities, Vol. 6 No. 4, pp. 847-862.
<https://doi-org.uitm.idm.oclc.org/10.1108/IJTC-09-2019-0156>

Council for Museum Anthropology. (2022, September 19). Museum Anthropology Journal -
Council for Museum Anthropology. Council for
Museum Anthropology -.
<https://museumanthropology.org/journal/#:~:text=Museum%20Anthropology%20seeks%20to%20be,representation%20of%20the%20material%20world>.

Kratz, S. and Merritt, E. (2011), "Museums and the future of education", On the Horizon, Vol. 19 No. 3, pp. 188-195.
<https://doi-org.uitm.idm.oclc.org/10.1108/10748121111163896>

Morshed, H. (2023, August 30). 5 most fascinating museums around the world. The Daily Star.
<https://www.thedailystar.net/life-living/travel/news/5-most-fascinating-museums-around-the-world-3407416>

Soriano, J. (2021, October 7). 10 of the most unique museums around the world. Tatler Asia.
<https://www.tatlerasia.com/lifestyle/travel/hk-unique-museums-around-the-world>

Visit - Everything you need to know before visiting the museum. (n.d.). Le Louvre.
<https://www.louvre.fr/en/visit>

THE RISE OF DIGITAL MUSEUM

NEW TREND E-MUSEUM SERVICES



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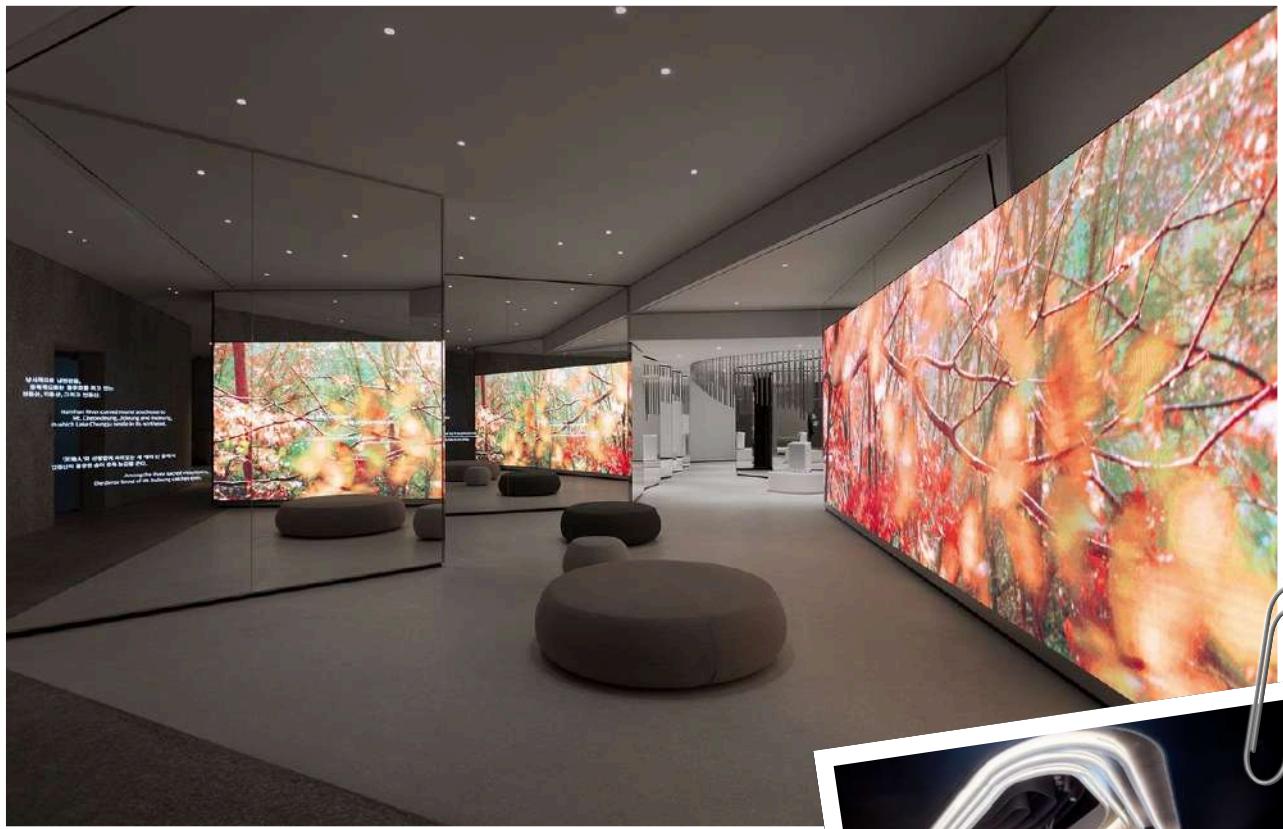
INTRODUCTION: DIGITAL MUSEUMS

Museums have long preserved culture, educated communities, and engaged people. However, the rise of digital technologies has transformed them into dynamic online platforms, offering new ways to experience artifacts, exhibitions, and educational resources. Digital museums address challenges faced by traditional institutions, such as limited accessibility, high costs, and the need to connect with digitally native audiences.

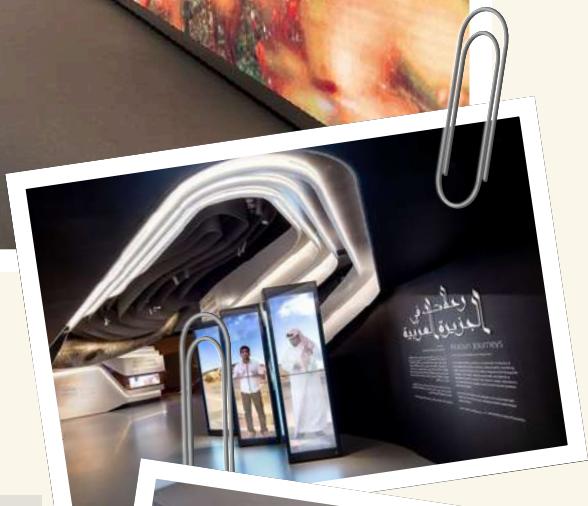


Through advanced web services, multimedia integration, and user-centered interfaces, digital museums redefine cultural preservation and consumption. They offer virtual tours, interactive tools, and global access to cultural heritage, bridging geographic and socioeconomic barriers. These innovations enhance visitor engagement and expand cultural education by incorporating technologies like augmented reality and rich online archives, making learning more immersive and accessible.

This paper focuses on the technologies driving digital museums, their strategies for audience engagement, and their potential impact on the future of cultural interaction.



The Role of Digital Technologies in Enhancing Museum Services



THE RISE OF DIGITAL MUSEUM

NEW TREND E-MUSEUM SERVICES



USER DESIGN AND ENGAGEMENT

Investment in digital museums has moved from being collection centric to user centric where digital museums are centered around user experience through the creation of intuitive interfaces. Real time search, interactive exhibits and recommendations for patrons are among features that increase engagement and satisfaction. The Lanyu Digital Museum is a case in point, fusing feedback mechanisms into reflections of navigation and content delivery to lead to deeper connections with audiences.

Key focus continues to be tied to interactive learning tools. Educational quizzes, virtual tours and AR apps add to the educational experience in a variety of ways to meet different learning styles. Based on a learning concept supporting respectful and empathetic global learning, the Global Digital Museum (GDM) exemplifies multimedia integration where students and educators can explore cross-cultural artifacts in a unified interface.

THE IMPACT OF GLOBAL DISRUPTIONS

The digital transformation in museums as physical spaces closed accelerated during the COVID-19 pandemic. The Louvre and the Metropolitan Museum of Art even jumped on the virtual tours bandwagon and have exploited viral social media trends as well. Technologies such as AR and VR became pivotal, exemplified by the Alice: The use of VR for immersive at home experiences in the Curiouser and Curiouser exhibition at the Victoria and Albert Museum. Innovation in these areas allows us to see this digital museum resilience and adaptability in the face of global crises.

The digital divide, however, is a major problem. But many of the museums in developing regions do not have the resources to build robust online platforms. This needs funding, partnerships and knowledge sharing. UNESCO and ICOM emphasize equality of access to digital cultural resources and digital museum transformation for the equalization of the museums.



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FUTURE DIRECTIONS

Future digital museums will use emerging technologies combined with global collaboration to create cultural experience. Artifacts will come with secured provenance tracking via blockchain, and with AI powered personalization, recommend exhibits to fit individual preferences. It will lead to dynamic and in your face immersive virtual worlds that engage the widest range of people with history and art.

Their impact will further be integrated with formal education. Through interactive resources such as virtual field trips and gamified learning modules, digital museums will allow students and educators to explore cultural heritage in a hands-on way and bridge the gap between academia and public engagement.

Information about a place held in digital museums can be useful beyond education, helping to foster cross cultural understanding. Collective platforms can bring together collections from many institutions and offer visitors a coordinated view of shared histories and various viewpoints. The digitization of museums helps pave their way towards continuous growth, remain vibrant, inclusive, and relevant; making them a deliberate partner to cultural appreciation and preservation in generations to come.

INNOVATIONS IN DIGITAL MUSEUMS

Merging physical and virtual worlds, augmented reality (AR) and virtual reality (VR) have completely changed the way museums put together the customer experience. AR puts digital elements over top of the environment with enriched context and real time annotations such as reconstructed images of ancient artifacts. The appeal of VR for the humanities lies with its ability to explore fully virtual environments of curated historical sites or inaccessible exhibitions for users. It's a good way to see how these technologies can help to augment emotional and intellectual engagement, as with Tate Modern's Modigliani VR experience and the VR Mona Lisa tour of the Louvre.

Artificial Intelligence (AI) and Machine Learning also change digital museums. Demos simplify navigation through vast collections by finding personalized exhibits based on user behaviors. The continued monitoring of environmental conditions to protect valuable items, artifact conservation, includes the prediction of degradation, the detection of deterioration, and the detection of deterioration.

Global Digital Museum is a collaborative platform that aggregates resources from various institutions, and makes them available together for a global access to collections. They promote cross-cultural understanding and enable reach of smaller museums, demonstrating that digital ecosystems can be global in a networked world.



THE RISE OF DIGITAL MUSEUM

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New Article

CHALLENGES AND OPPORTUNITIES

Digitally, digital museums face challenges when managing distributed archives, which are characterized by dispersed metadata standards. Since without CIDOC CRM (or other frameworks) data structures would not harmonize, it's important to harmonize data structures by providing interoperability between institutions who are able to share their collections seamlessly. While this is the case, it's not without its hurdles. To solve data heterogeneity, huge amounts of training and infrastructure are necessary to create the requisite expertise and systems. Otherwise, the value of digital archives will suffer from inconsistencies and inaccessibility.

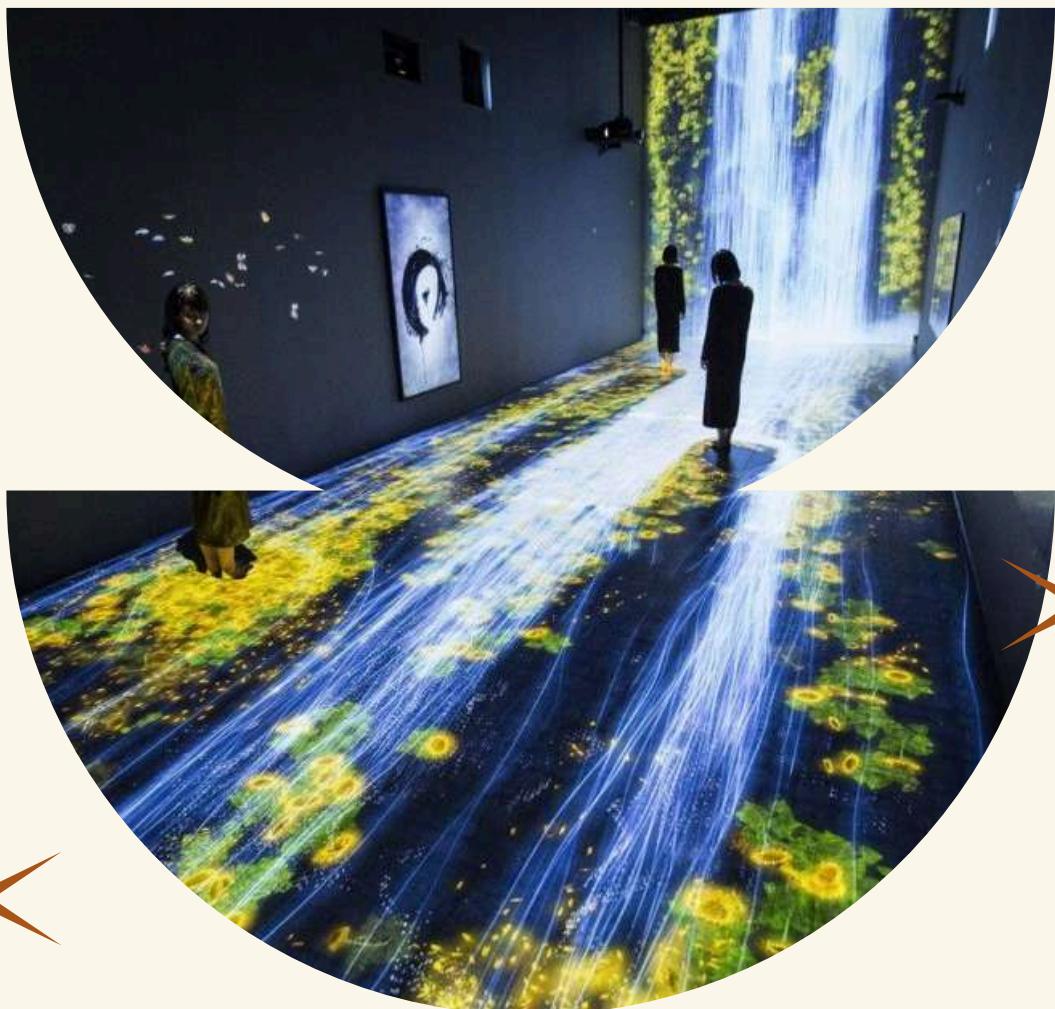
The reality of the digital museum also finds sustainability to be a pressing concern. Considering the rising demand for energy intensive museum systems such as cloud computing, the balancing between these is imperative. Biochemical energy efficient servers and digital preservation techniques can help reduce the ecological footprint of these actions so that institutions can bring their technological advances in line with broader environmental objectives. Addressing these challenges allows digital museums the opportunity to be leading in cultural preservation AND environmental stewardship.

There is as well, another pressing issue, the money and technology restraints that so many museums (and, beyond that, most artists) face. However, advanced technologies are resource intensive and smaller institutions can't compete with large ones. Technology firms and governments can aid partnerships that provide vital assistance with equitable access to the most cutting-edge tools and reduce financial burden on resource constrained museums. Such collaboration is important to enable all institutions, small as well as large, to enjoy the benefits of digital transformation.



THE RISE OF DIGITAL MUSEUM

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CONCLUSION

Such integration of digital technologies into the museum services transforms the museum experience. These tools help museums meet this rapidly evolving cultural landscape by enhancing accessibility, enriching visitor engagement and promoting economic sustainability. Institutions can be strategic about their adoption of digital innovations and preserve their cultural legacy, while assuaging modern audiences.

For institutions, like the Bukhara State Museum, to make their way through this digital frontier, we are shown how making an investment in innovation, collaboration, and inclusion ensures that relevance and impact. Digital tools give museums the opportunity to establish bridges to connect across cultural and geographical divides to help us understand and appreciate the world in which we live. Museums can use AR, VR and AI to give them reach and increase educational offering as well as to make all feel included.

I conclude by assuming that the museums of tomorrow will be hybrid digital and traditional yet seamlessly integrated, and cultural heritage will be protected and commemorated in deep, meaningful ways. As digital museums continue to evolve, not only will they connect people with history but pioneer generations to come to become involved with the world's inspirational tapestry of art and culture.

REFERENCES

*"Real museums are places where Time
is transformed into Space."*

Marty, P. F. (2008). Museum websites and museum visitors: digital museum resources and their use. *Museum Management and Curatorship*, 23(1), 81–99.
<https://doi.org/10.1080/09647770701865410>

Kurbanov, F. G. (2021). The Role of Digital Technologies in Enhancing Effectiveness of Museum Services. In Bukhara State University, *International Journal of Business, Technology, and Organizational Behavior (IJBTOB)* (pp. 315–316) [Journal-article].
https://uniwork.buxdu.uz/resurs/13106_1_AC88A4F93D3A405B660766E2C7A3CD6FB365C1A2.pdf

Gay, G. (2015). Global digital museum: multimedia information access and creation on the Internet.
www.academia.edu/https://www.academia.edu/18533988/Global_digital_museum_multimedia_information_access_and_creation_on_the_Internet

Giannini, T., & Bowen, J. P. (2022b). Museums and Digital Culture: From Reality to Digitality in the Age of COVID-19. *Heritage*, 5(1), 192–214. <https://doi.org/10.3390/heritage5010011>

Bertacchini, E., & Morando, F. (2013). The Future of Museums in the Digital Age: New Models of Access and Use of Digital Collections. *Dipartimento Di Economia “S. Cognetti De Martiis,”* 15(2), 60–72.
https://www.researchgate.net/publication/254455846_The_Future_of_Museums_in_the_Digital_Age_New_Models_of_Access_and_Use_of_Digital_Collections





VISITOR INSIGHT:

ACCEPTANCE AND RECOMMENDATIONS IN MUSEUMS INNOVATION OF VR



LIFESTYLE DIVERSION

People's lifestyles have changed dramatically as a result of the internet and digital technology, which has forced museums to reevaluate their relationship with their patrons.



People are becoming more and more dependent on gadgets like computers and smartphones to obtain information as consumer-grade digital technologies and personal smart devices become more widely used. The conventional reliance of museums on in-person visits is being questioned in light of this trend. Many museums have aggressively adopted the newest online digital technologies to address this issue, working with specialists from a range of disciplines to create a variety of digital materials, such as virtual reality (VR).

The dynamics of the interaction between museums and society, as well as between museums and individuals, are changing significantly as a result of the efficient use of online digital resources like social media and virtual exhibitions. The use of digital technology into museums, however, involves a wide range of intricate aspects that might affect their effectiveness while making it difficult to evaluate related risks and causing hesitation, especially among those with little resources.

MUSEUM VR

MUSEUM VR EXHIBITION USER STUDY

Although the summer transfer window has closed, many big-name players still have their futures unresolved.

The recent COVID-19 epidemic exposed gaps in digital resources while also hastening the museum industry's digital transition. Due to the pandemic, fewer people visited museums in person and many of them had to close, which forced these organisations to accelerate the creation of digital resources for the internet. Nonetheless, museums' digital resources continue to have drawbacks. The absence of tight communication between people and digital resources in museums is one important factor.

Due to the unpredictability and complexity of digital technology, many museums frequently contract with technical staff and specialists to produce their digital resources. This can cause a gap between the new technologies in museums and the real requirements and perceptions of their patrons.



The term "virtual reality," or "virtual environment," was first used in the 1960s in the United States. VR has significantly improved educational and entertaining experiences in the decades since its first. The term "virtual reality," or "virtual environment," was first used in the 1960s in the United States. Since its beginnings, virtual reality (VR) has significantly improved educational and amusements. Systematic user studies are limited, as early research has mostly concentrated on the basic problems and approaches of integrating VR into museum contexts.

VR EXPERIENCE



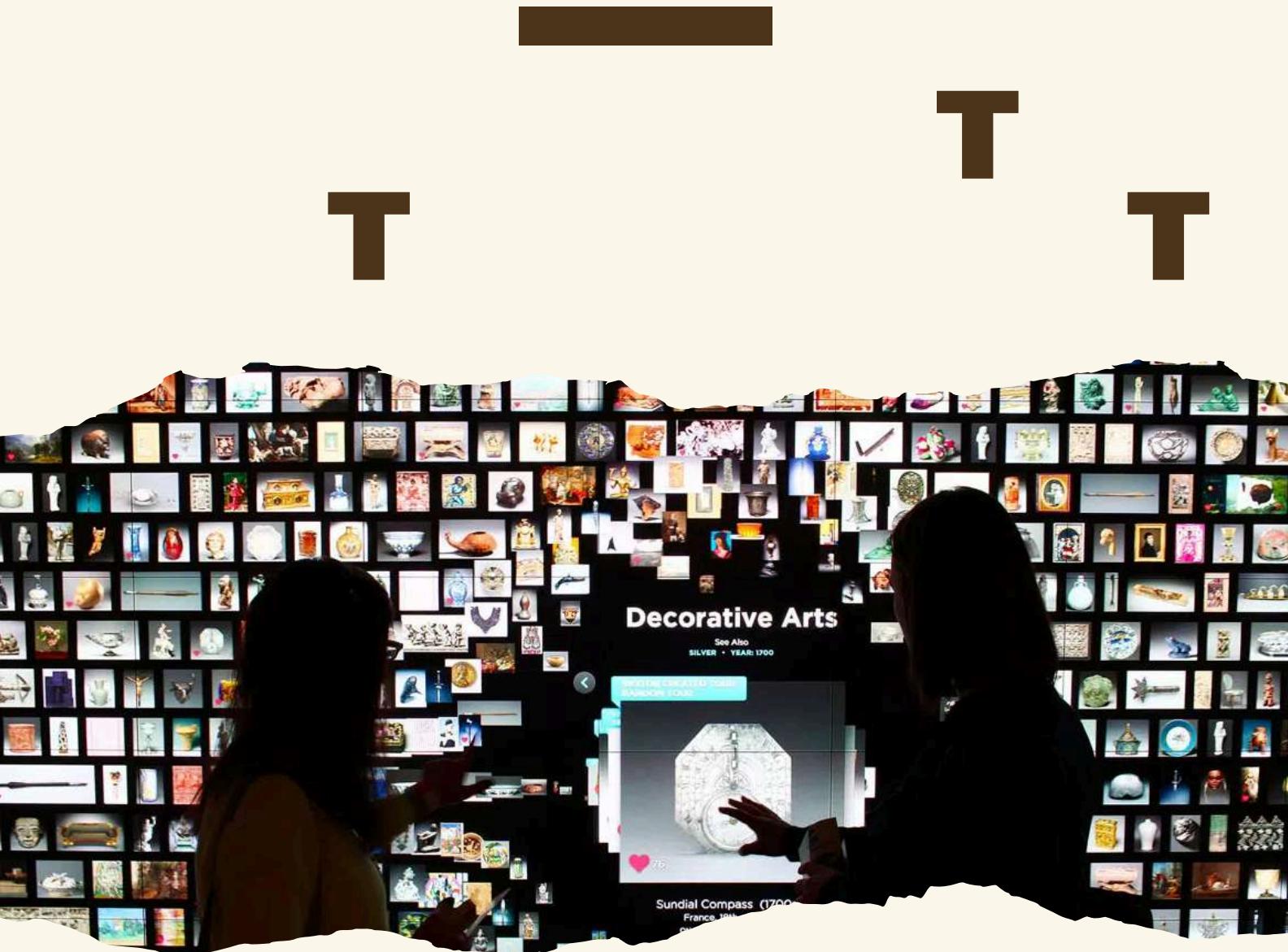
VR TOO BENEFICIAL

Immersion media can provide museums a "wow" effect that attracts visitors and boosts attendance, according to research. Since many people have never used virtual reality (VR), more people will be prepared to pay to visit museums and experience it if they can include VR headsets in their displays. The majority of visitors have a limited comprehension and appreciation of the story, especially in regard to art, which presents another obstacle to promoting inclusivity. The fact that not everyone can decipher the significance of a museum collection's black and white writing must be addressed. These kinds of communication barriers frequently keep museums from reaching a larger audience.

VISITOR QUALITY EXPERIENCE

VR is a powerful tool for expanding their audience and boosting visitor counts. A growing number of museums have made diversity a priority in recent years as part of their audience growth efforts, but they are also facing several obstacles. The first is because recreational activities are highly competitive. In contrast to earlier times, the growing growth of the internet and information visitors now have a wide range of options for how to spend their free time thanks to technology. Therefore, one could argue that the growth of the leisure and entertainment sector has unavoidably brought museums to a new stage of growth.





"Blending the timeless allure of the Mona Lisa with modern VR art, where tradition meets innovation in a new dimension."

The brilliant application of virtual reality's accessibility, inclusivity, and democratisation is demonstrated by Mona Lisa's Beyond the Glass in the Louvre. The Louvre's reaction to using virtual reality to increase its visitor base is this. For many years, the congestion at the Louvre, the most visited museum in the world, has been a problem.

These kinds of crowds turn off tourists who are interested in the Mona Lisa and don't draw in prospective tourists who aren't accustomed to going to museums. As a result, the Louvre launched its first virtual reality project in partnership with HTC's Vive Arts program, a manufacturer of VR headsets. Visitors may see details about the artwork up close and relive one of the most well-known paintings in the world throughout the seven-minute digital experience, which immerses them in an undisturbed area through interactive design, sound, and animated visuals.

The Mona Lisa is the reason why 80% of the National Gallery's 10 million annual visitors come .Usually, visitors can only see the piece from a distance in a packed room where everyone is fighting for a photo. This is because it is carefully positioned behind a layer of bulletproof glass.

VR POTENTIAL

INCREASING USER ADAPTABILITY



Based on the quality of visitor experiences (such as immersion, display modes, and resolution), determined visitor demands for VR exhibitions and offered crucial insights for associated design and development. VR has the potential to provide museum visitors with high-quality visual aesthetics and interactive experiences for information cognition, according to a study on an immersive VR exhibition system for cultural heritage by Roussou. However, the high application and maintenance costs cannot be disregarded.

Lepouras and Vassilakis used inexpensive 3D gaming technology to test a desktop-level VR exhibition system prototype in a small-scale informal user evaluation research. According to Carrozzino and Bergamasco, virtual reality (VR) allows nonprofessional users to efficiently learn from museum exhibits while stimulating visitors' senses with sights, sounds, and other information.

"VIRTUAL REALITY IS THE ULTIMATE TOOL FOR IMMERSION, ENABLING US TO STEP BEYOND THE BOUNDARIES OF THE PHYSICAL WORLD AND INTO THE INFINITE POSSIBILITIES OF IMAGINATION."

As virtual reality technology continues to advance, its possible use in museums has been investigated more and more, and user research has gotten more methodical in recent years. Izzo emphasised the benefits of virtual reality (VR) in terms of information richness and experience customisation based on information and communication technology features. A user study on cross-object user interfaces in VR exhibition contexts at museums was carried out by Su and Teng.



CONCLUSION

Despite the benefits of digital technology, museum virtual reality shows must nonetheless take into account the various needs of consumers. According to the interviews, there are notable variations in what museum visitors want from virtual reality exhibits. Digital and network technologies broaden museum visitors' horizons, but they also make them harder to comprehend.

Lester noted that visitors to virtual exhibitions are much more varied than those who visit traditional museums; these differences may be due to the complexity of deeper cultural and social backgrounds as well as their skills, perceptions, and demands regarding museums and digital virtual exhibitions. Promoting the sustainable growth of museums requires an understanding of these issues over the long run, particularly in light of social diversification, democratisation, and economic

More case studies of other museum kinds should be included in future studies. A museum is one of the many different kinds of museums in the world; it is a medium-sized to big cultural heritage museum that mostly displays local archaeological artefacts. Further interactive confirmation through various case results by future researchers is necessary to determine whether the findings of this study are applicable to museums of varying sizes and sorts. Additional research on various visitor kinds is also required. Visitors to virtual exhibits vary widely, as was previously indicated. Future studies should take into account samples of various visitor demographics, such as families, tour groups, the elderly, kids, and those with varying physical and mental capacities.



Reference

- 01 Byerly, A. (2007). "A Prodigious Map Beneath His Feet": Virtual Travel and The Panoramic Perspective. *Nineteenth-Century Contexts*, 29(2-3), 151–168.
<https://doi.org/10.1080/08905490701584643>
- 02 Clerkin, C., & Taylor, B. (2021). Online Encounters with Museum Antiquities. *American Journal of Archaeology*, 125(1), 165.
<https://doi.org/10.3764/aja.125.1.0165>
- 03 Damala, A., Ruthven, I., & Hornecker, E. (2019). The MUSETECH Model. *Journal on Computing and Cultural Heritage*, 12(1), 1–22.
<https://doi.org/10.1145/3297717>
- 04 Enrico, B., & Federico, M. (2011, December 1). The Future of Museums in the Digital Age: New Models of Access and Use of Digital Collections. *Ideas.repec.org*.
<https://ideas.repec.org/p/uto/eblawp/201105.html>



CONCLUSION

In today's fast changing world, we as students navigate an era of rapid technological transformation with very rapidly changing. Museums are emerging as dynamic institutions that can merge the past with the future. Once viewed as passive containers of objects and history, they are becoming dynamic, experiential environments in which technology is crucial to the re-creation of the visitor encounter. Now that VR, and AI technologies are available, the potential of what museums can do is growing at a geometric rate. These innovations not only improve the method of presenting exhibits but also make exhibits come alive through the use of multi-sensory experiences.

People can now explore new things, communicate with historical characters or observe the transformations of the art movement, within a gallery or even at home. Through the use of technology, information is made easily accessible and culture and history are not limited to any region or class making museums more of a learning institution for all. But the changes in museums are not limited to technology only. Museums as cultural institutions are today assuming social responsibilities and becoming community landmarks.

Museums are no longer simply places to visit and observe but places to visit and interact and cooperate. They allow marginalized groups to be heard and give people a chance to think about the current global matters and become a part of the big picture. Museums are gradually turning into locations where history, art, and science converge with present social issues as well as promote action.

Thus, museums are building a future in which technology and culture are not in conflict but in which museums remain relevant, telling histories, educating, and preserving, all in the modern world. They can help us to realize that there is a future in which knowledge, art, history are common property and the history of humanity will go on.

