BEYOND THE BOOKSHELF: VIRTUAL REALITY AS A TOOL FOR

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AGENDA

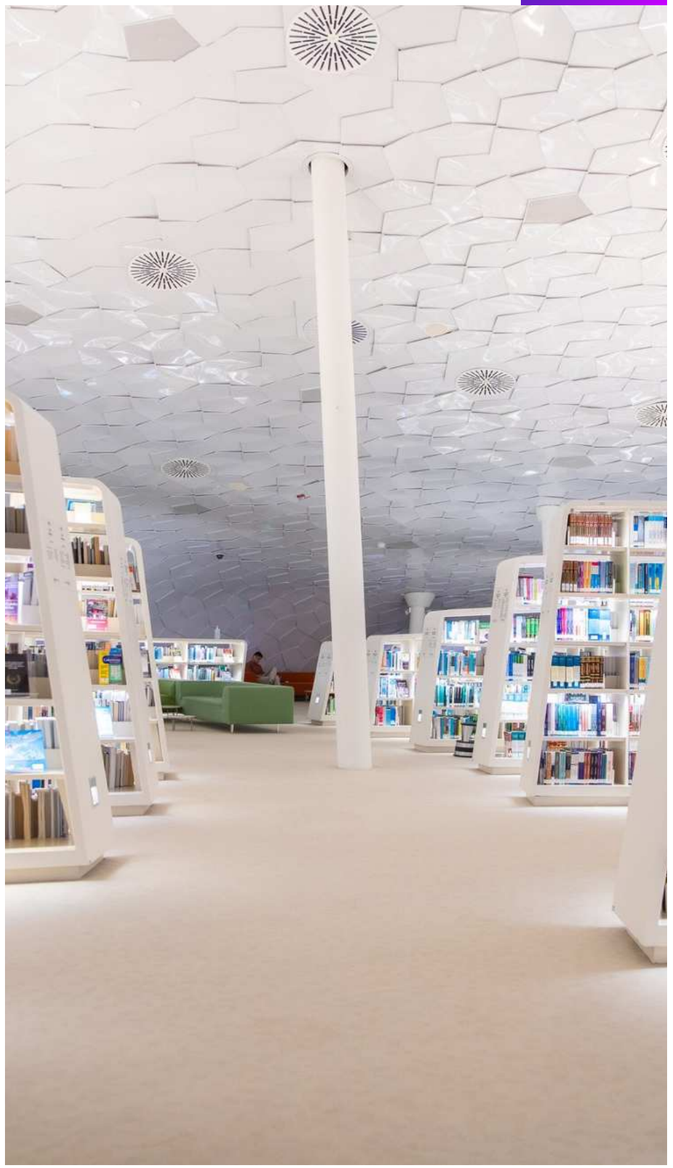
1. Introduction
2. VR for Library Design and Visualization
3. Advantages of Using Virtual Reality (VR) in Library Design
4. Challenges and the Road Ahead

INTRODUCTION:
A NEW CHAPTER FOR LIBRARIES

01 Libraries evolving into **dynamic, immersive hubs**

02 **VR** transforms **design & user experience.**

03 Beyond books: **interactive, engaging spaces** for learning & community

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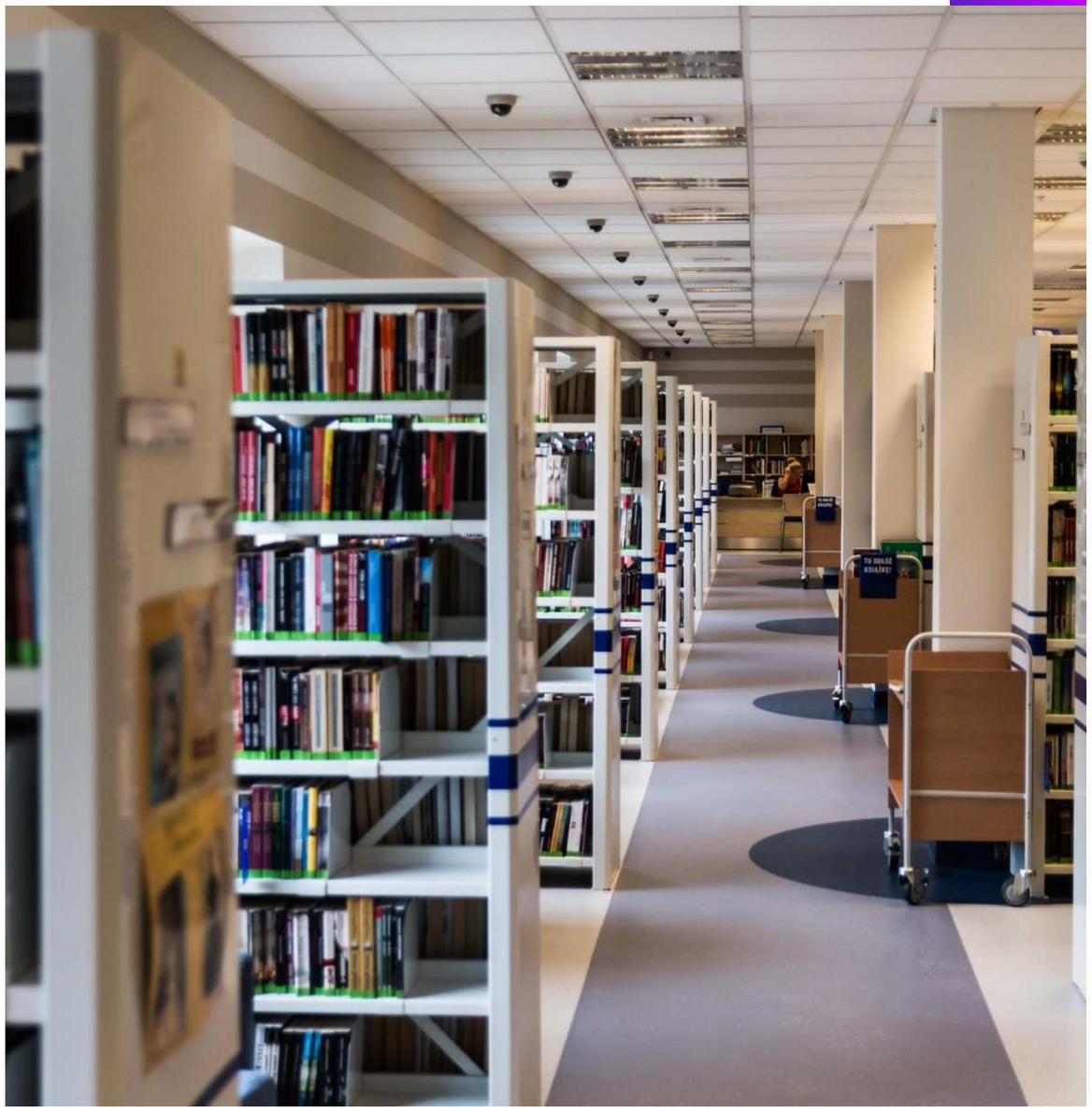
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THE CHALLENGES OF TRADITIONAL LIBRARY DESIGN

Lack of Spatial Understanding

Hard to visualize spaces, leads to inefficient layouts.

Costly Revision

Errors found late, cause expensive changes and delays.

Limited Collaboration

Communication is mostly one-way, restricting input from librarians, users, and other stakeholders.

“Imagine being able to walk through a library that hasn’t even been built yet. What do you feel?”

PART I

VR LIBRARY DESIGN AND

WHAT IS VIRTUAL REALITY?

Virtual Reality (VR) is a computer-generated simulation that allows users to interact with a three-dimensional environment using specialized equipment such as headsets, gloves, or handheld controllers.

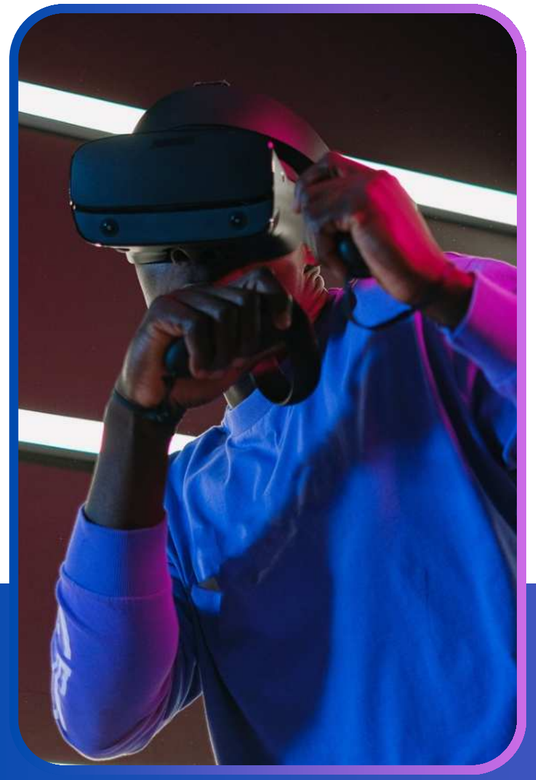
VR technology relies on a variety of components, including:

- Head-Mounted Display (HMDs)
- Motion Tracking
- Controllers and Input Devices
- Audio Systems

https://youtu.be/tmL3T28Ud1k?si=KH48O0G1pjQeDKS7

TYPES OF VR EXPERIENCES

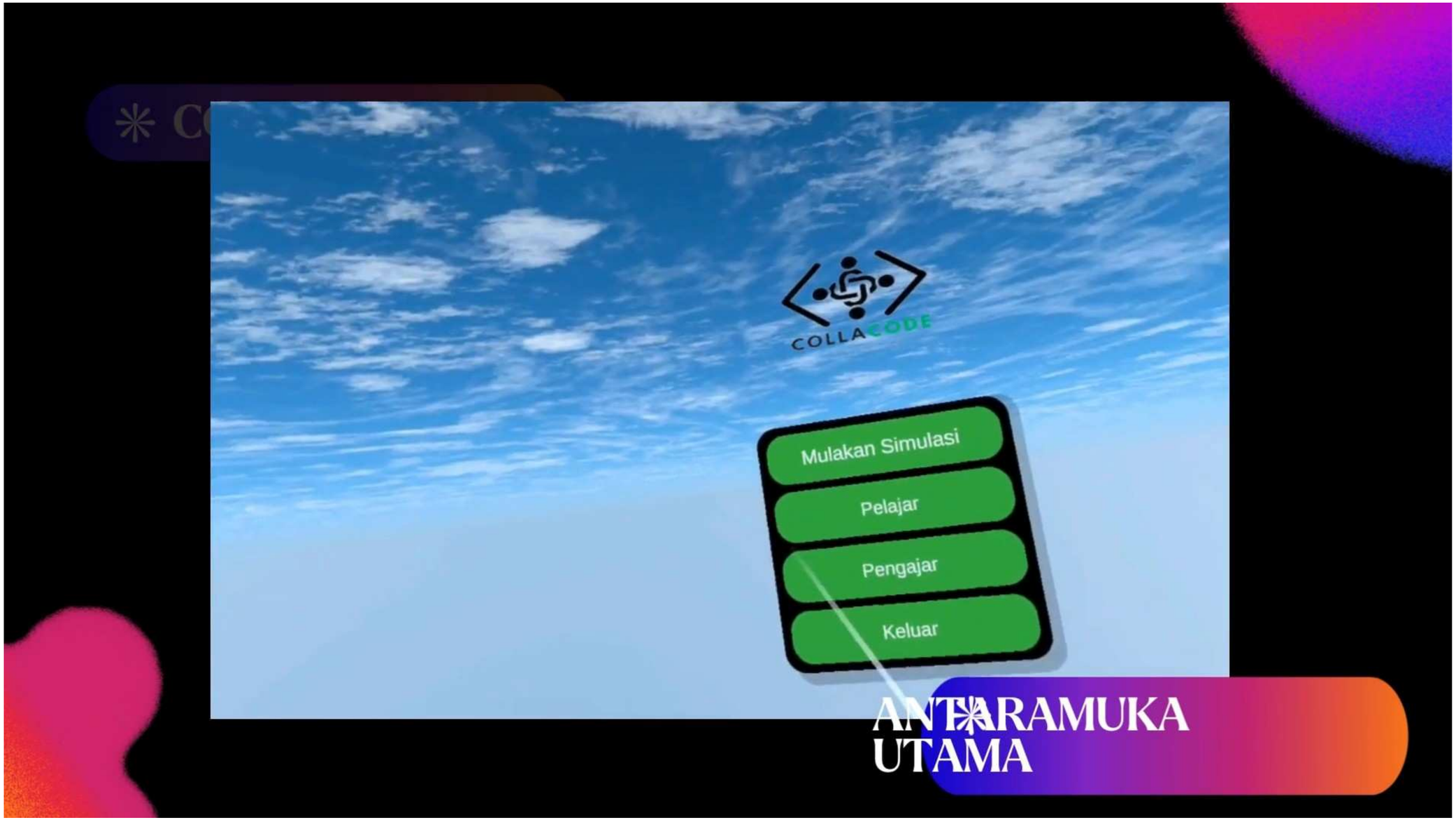
Immersive VR



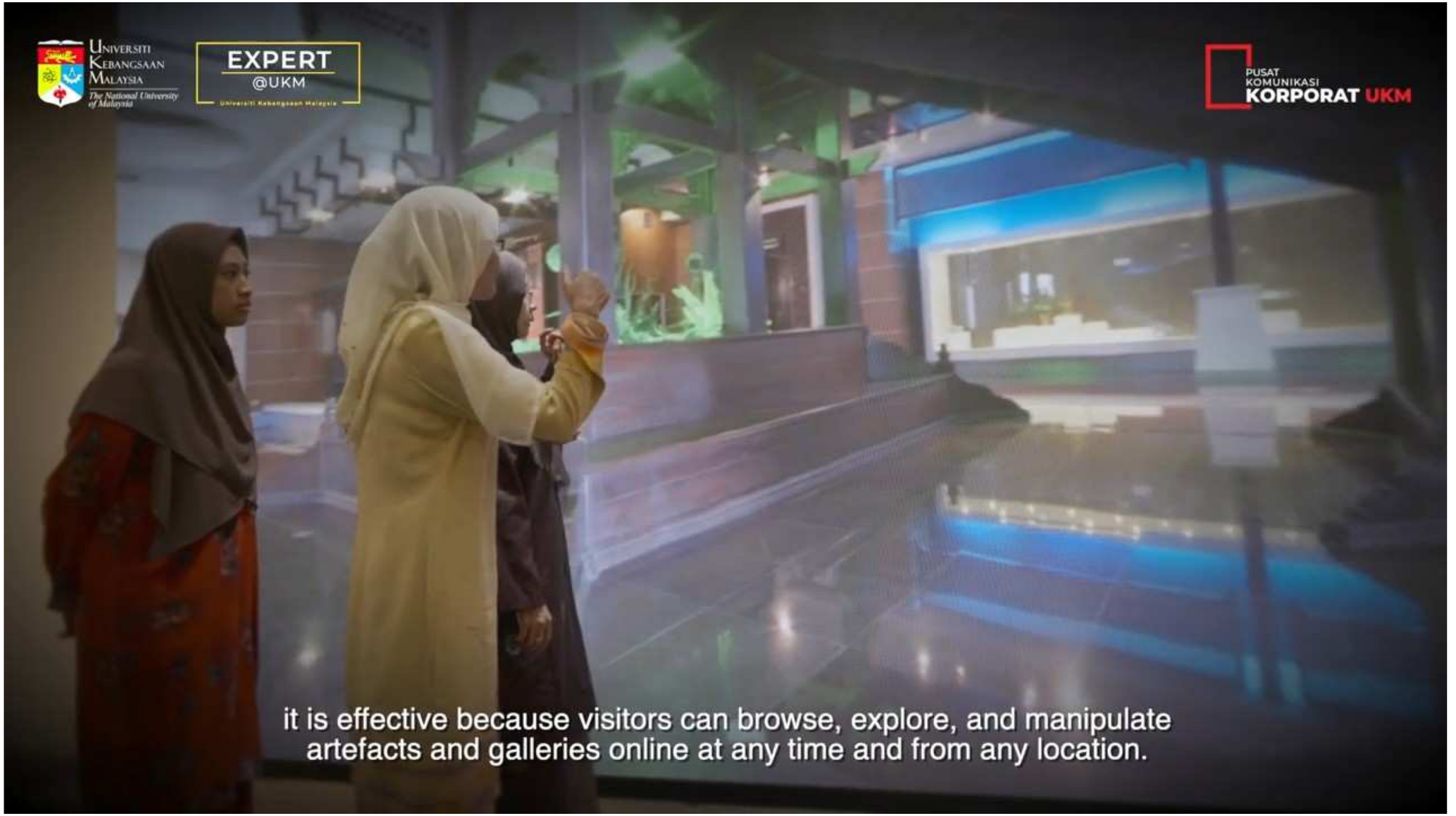
Interactive VR

Augmented Reality (AR)

Immersive VR



Interactive VR



Augmented Reality (AR)

PART 1

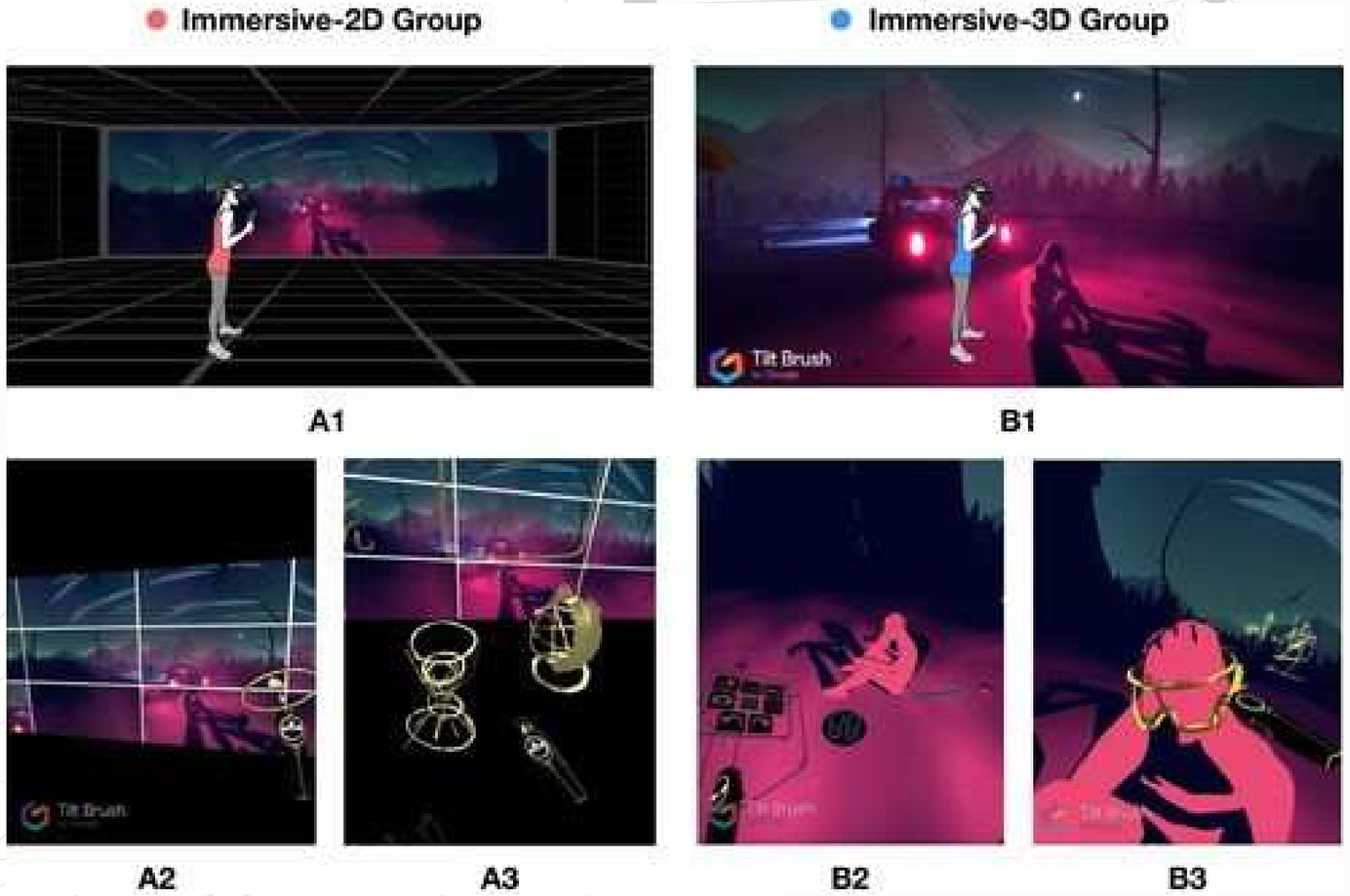
ADVANTAGE OF USING VIRTUAL REALITY

a) Immersive Space Planning

- Virtual walkthroughs of library design before construction
- Explore bookshelves, study areas, labs in 3D
- Real-time layout adjustments possible

b) Cost-Effective Design Iteration

- Avoids costly mistakes in physical redesigns.
- Multiple layouts can be tested virtually.
- Faster, evidence-based decision making.



Chai, C., Zhang, X., Chai, Q., Yin, Y., Li, W., Shi, J., ... Zou, N. (2023). Immersive 2D versus 3D: how does the form of virtual reality inspirational stimuli affect conceptual design? The Design Journal, 26(6), 856–877. https://doi.org/10.1080/14606925.2023.2248815

c) User-Centered Experience

- Patrons enter VR models and provide feedback.
- Ensures accessibility and inclusivity.
- Supports diverse learning and mobility needs.

d) Enhanced Collaboration

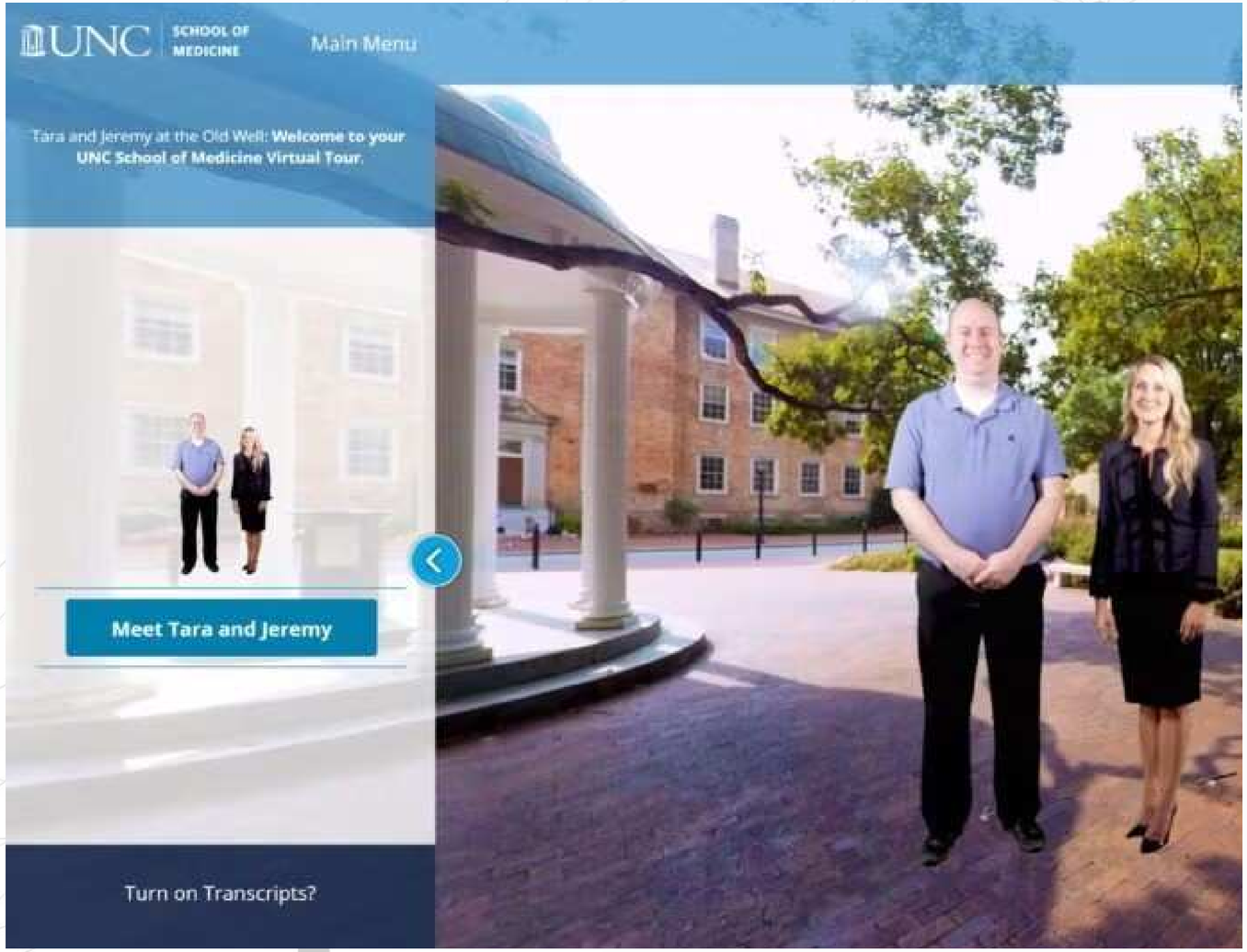
- Design teams and librarians co-create in VR
- Remote collaboration across locations
- Balances aesthetics, function, and usability

e) Testing Future Technologies

- Simulate AI kiosks, AR pods, digital stations
- Prepare libraries for hybrid learning environments
- Evaluate new technologies before investing

f) Engagement and Training

- VR tours for students before library opens.
- Staff training in simulated environment
- Reduces orientation confusion and saves time



CONCLUSION

01 VR makes design immersive, cost-effective, and inclusive

02 Improves collaboration and future-proofs libraries

03 Libraries of the future blend imagination and digital foresight

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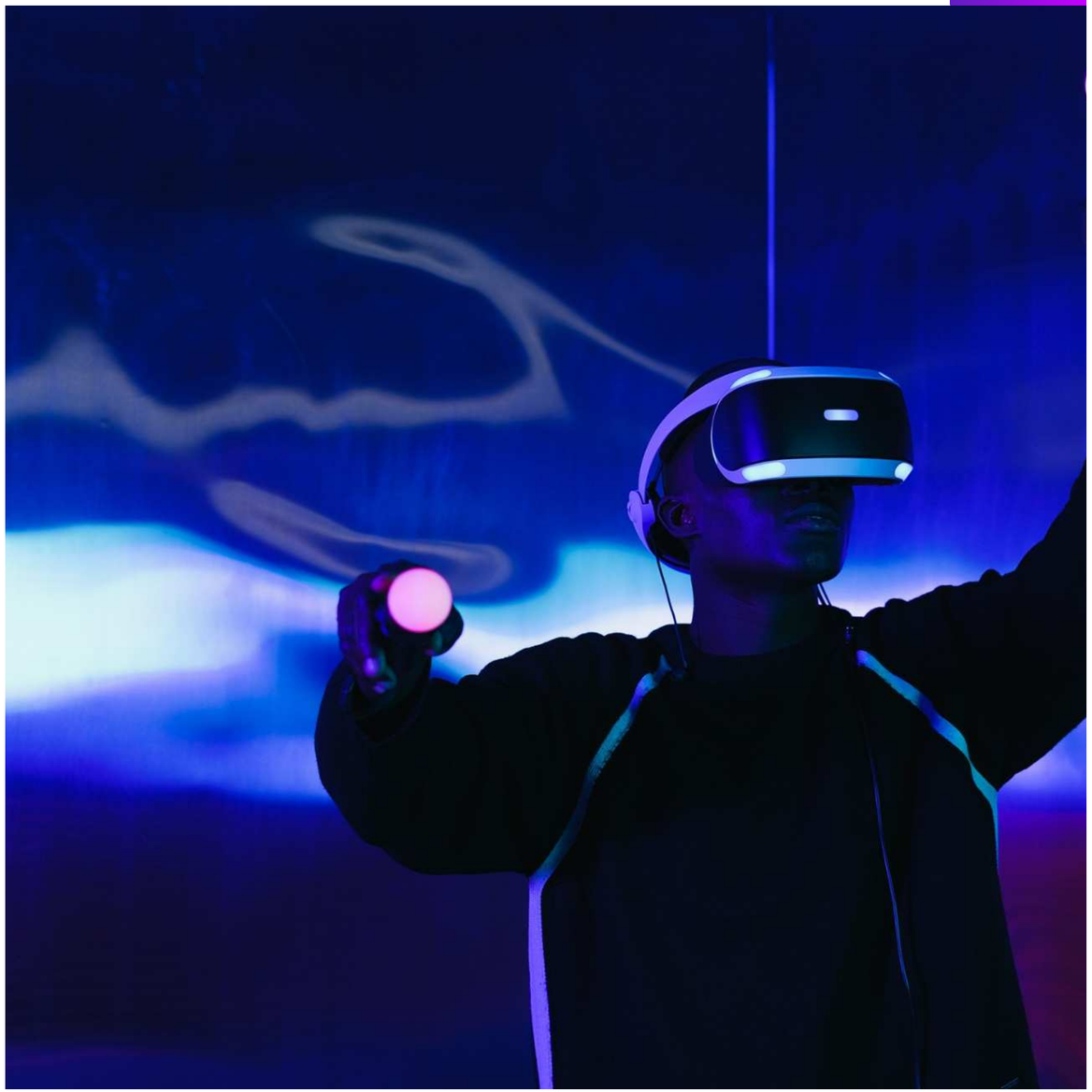


a) Cost & Equipment

High-quality VR headsets and powerful computers can be expensive, posing a significant barrier for many libraries.

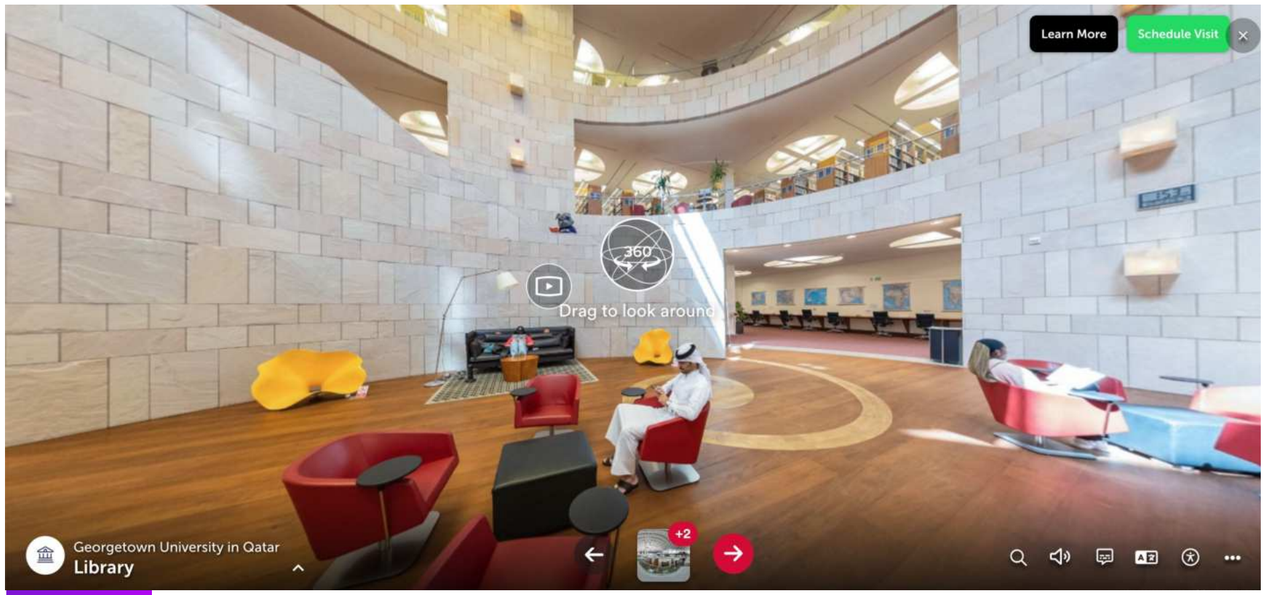
b) Technical Expertise

Librarians need training to manage and troubleshoot VR technology, as well as to create new content.

c) Accessibility

Ensuring that VR is inclusive for all users, including those with disabilities, requires careful planning and design.

Despite these hurdles, the future of VR in libraries is promising. Libraries like the **San Jose Public Library** and **Georgetown University Library** are leading the way by creating dedicated VR labs and spaces, demonstrating a commitment to being at the forefront of technology and information access.



QUIZ
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CONCLUSION & REFLECTIONS

- Recap: From static libraries to immersive experiences
- VR as a tool for empowerment, accessibility, and engagement.
- Future outlook: VR+AI-driven library assistants, VR classrooms, and global access.

Thank You