

INDUSTRY BRIEFING:

# WHAT NEXT FOR XR?



## Global Insights

Key points from the University of York report XR Futures: International Perspectives on the Trajectory of Immersive and Interactive Media and Technologies.

# What's the report about?



This report examines how the **immersive and interactive media and technologies sectors** are growing and changing, and considers a variety of challenges (current and future) in the fields of VR, AR and MR.

It contains insights from leading XR sector companies and professionals from around the world:

- employees, the self-employed and freelancers working in VR / AR / MR
- XR sector researchers and consultants

The report explores the future of the XR sector in three key areas:

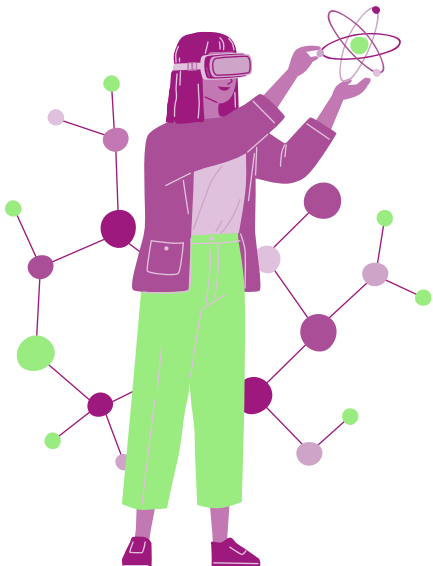
- equality, diversity and inclusion (EDI)
- skills and training
- hardware

## XR

**Extended reality:**  
An umbrella term used to describe various immersive and interactive media and technologies that integrate the physical world with the virtual world.

## VR

**Virtual reality:**  
VR content immerses users into digital environments either through a headset or a surrounding display. VR environments can be either computer-generated or 360-degree video content.



## AR

**Augmented reality:**  
Through mobile devices or headsets, AR overlays digital information and content in the real world. This content appears either as graphical displays or as realistic 3D objects.

## MR

**Mixed reality:**  
Similar to AR, but with additional real-time interactivity between digital content and the real world. MR content is accessed through specific MR headsets.



## Context and new insights

### Equality, diversity and inclusion (EDI)

XR professionals are concerned that the sector could develop structural inequalities similar to those found in the wider creative industries.

Inequalities of **ethnicity, nationality, gender** and **class** in XR would:

- limit the quality and diversity of content
- exclude talented people
- reduce access to the industry for people in under represented groups

But this research shows that many industry professionals around the world are determined to avoid these negative outcomes by making XR more inclusive and diverse. They are optimistic that EDI issues in the wider media and technology industries can be avoided in the still-emerging XR sector.



### Skills and training

The XR professionals described specific gaps in the technical skills required to build XR content. This shows that higher education needs to be more responsive to this sector and engage with the industry more.

Participants suggested that where educational pathways into the industry are less established, some key competencies are being developed informally online, in community-driven learning spaces.

Participants also drew key distinctions between the 'technical' and 'creative' skills or job functions required across XR teams, and identified that it is important to integrate them by creating:

- 'slash' roles – these roles are carried out by multi-skilled individuals, and are common in microbusinesses / SMEs where multitasking is often needed
- 'bridging' roles – these roles are carried out by skilled communicators or translators who connect specialist teams, and are common in larger companies

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## Hardware

Most participants agree that head-mounted displays (HMD) are still too expensive to allow audiences to grow significantly. This situation is made worse by the disparity between the way products are advertised (which drives up expectations) and the hardware and content that the XR industry can currently deliver.

The tension between the need for 'value' and the importance of 'quality' makes mass adoption in consumer markets challenging. But this is less true for B2B use. And beyond the European, North American and Oceanic markets, 'entry-level' headsets and mobile VR are helping to attract new users and grow audiences.

Innovations in hardware that engage non-visual senses, for instance through haptics and other sensory technologies, will help to create the more sophisticated XR experiences of the future.

## What next / action points?

### Equality, diversity and inclusion (EDI)

- Practise inclusive recruitment and develop inclusive HR policies and practices.
- Provide skills and training specifically for underrepresented groups.

### Skills and training

- Call on higher education institutions to:
  - develop XR courses that cover a wider range of skills: creative and technical skills, plus the communication, team-working and problem-solving skills required for bridging roles
  - encourage XR courses to operate collaboratively.
- Access community-driven learning spaces online e.g. Epic Games forums: <https://forums.epicgames.com/>
- Microbusinesses and SMEs: create and train / be trained for 'slash' roles that combine creative and technical skills.
- Larger companies: incorporate bridging roles into company structure to build effective and cohesive teams and successfully connect the technology with creative talent.

### Hardware

- Affordability: explore the potential market reach for mobile-based VR / AR, especially in developing consumer markets and for new users.
- Develop / use headset designs that enable people with locs / dreadlocks, braids or hijabs to wear them comfortably.



## About the author

Dr Sam Stockley-Patel worked as a Research Associate at XR Stories (University of York). As well as international XR sector horizon scanning, his research explored the plural roles of intermediaries in creative R&D projects.

Sam led a project exploring the dynamics of collaboration between academics and creative industries companies, and co-ran a screen industries research network.

## Links / further reading

Read the full report: <https://xrstories.co.uk/wp-content/uploads/2021/05/XR-Futures-Report.pdf>

Read more about factors shaping the XR sector in Africa: <https://documents1.worldbank.org/curated/en/182461570551586114/pdf/Africas-Pulse.pdf>

Find out how the British Film Institute sees the future of screen media (video): <https://www.bfi.org.uk/industry-data-insights/reports/bfi-insight-exchange-2030-vision>

Read the 2019 PwC report **Seeing is Believing: How Virtual Reality and Augmented Reality are Transforming Business and the Economy**: <https://www.pwc.com/gx/en/technology/publications/assets/how-virtual-reality-and-augmented-reality.pdf>

Read Anna Maria Ozimek's 2020 research report **Equality, Diversity and Inclusion in the Screen Industries** (University of York): <https://screen-network.org.uk/wp-content/uploads/2021/02/Equality-Diversity-and-Inclusion-in-the-Screen-Industries.pdf>

## Disclaimer

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