

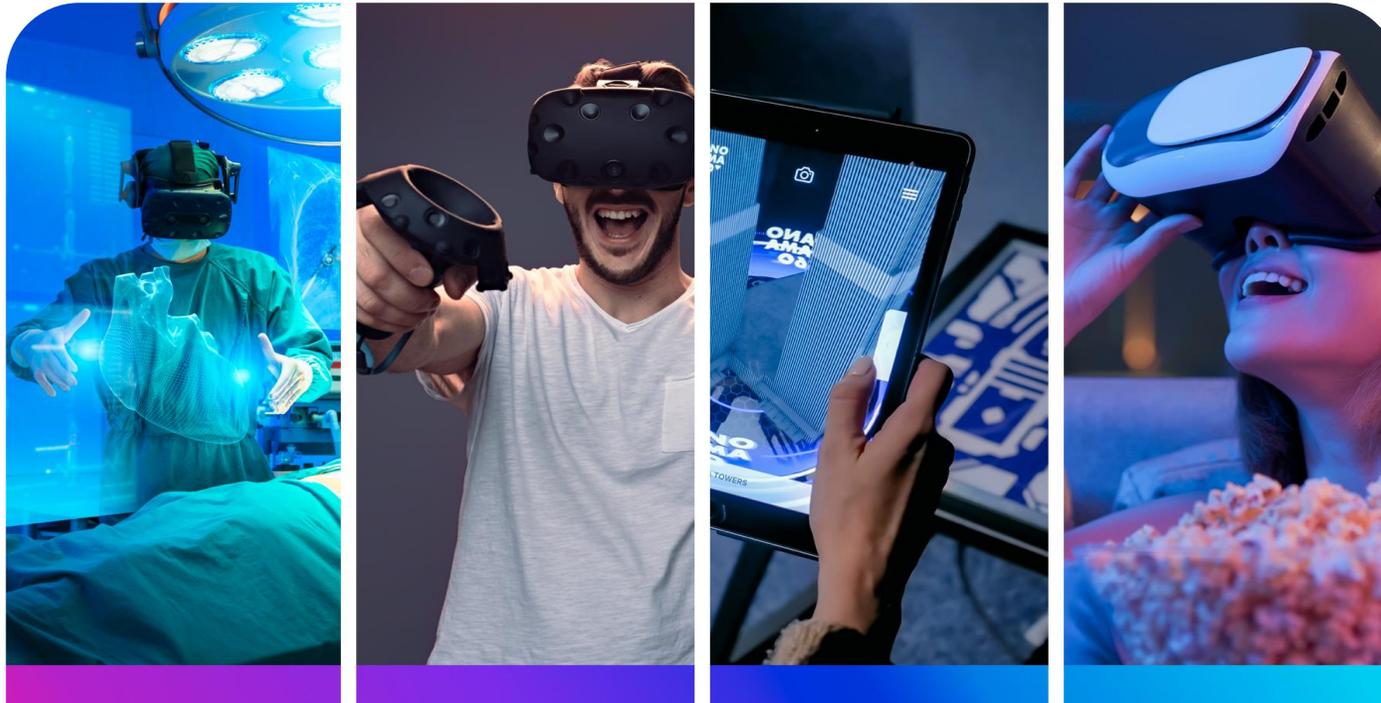
ORGANISE IMMERSIVE CLUTTER – AR, VR, MR, METAVERSE

To drive sensible choices across medical applications

By Devi Kolli, CEO



Who We Are

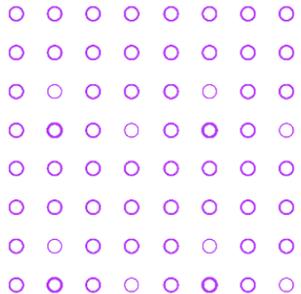


Team of technology specialists with over **15 years of experience in innovating immersive, interactive and intelligent extended reality (XR) solutions** for Healthcare and Education markets. **i3 Simulations is a dedicated healthcare focused entity** committed to learn and meet the training needs of medical professionals.

Flagship product: Resus VR



ResusVR is aimed at the healthcare market to improve staff training when involving high-stress, critical care environments. It is aimed to train junior doctors and other medical staff in CCU's across hospitals. Sponsored by Facebook/Meta, this emergency and trauma application was first deployed in at Children's Hospital Los Angeles and its success results got published in medical journals. This led, 80+ Global institutes to adapt this pilot programme.



Engaged with 80+ global hospitals and healthcare partners



University Hospitals
of Leicester
NHS Trust



SingHealth
Defining Tomorrow's Medicine



THE UNIVERSITY OF MISSISSIPPI
MEDICAL CENTER



Seattle Children's
HOSPITAL • RESEARCH • FOUNDATION



JOHNS HOPKINS
MEDICINE
JOHNS HOPKINS
HEALTHCARE



Lucile Packard
Children's Hospital
Stanford

Stanford
Children's Health



McGill



Children's
of Alabama®



INSELSPITAL
UNIVERSITÄTSSPITAL BERN
HÔPITAL UNIVERSITAIRE DE BERNE



Oxford University Hospitals
NHS Foundation Trust



NYU School of Medicine
NYU LANGONE MEDICAL CENTER

NewYork-Presbyterian Kids
Morgan Stanley Children's Hospital



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Oxford University Hospitals
NHS Foundation Trust



NYU School of Medicine
NYU LANGONE MEDICAL CENTER

Yale
NewHaven
Health



MEDIZINISCHE
UNIVERSITÄT WIEN



UNIVERSITY
CHILDREN'S HOSPITAL
ZURICH

Children's Research Center CRC



University of the
West of England



St George's
University of London

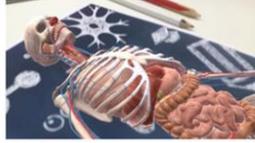


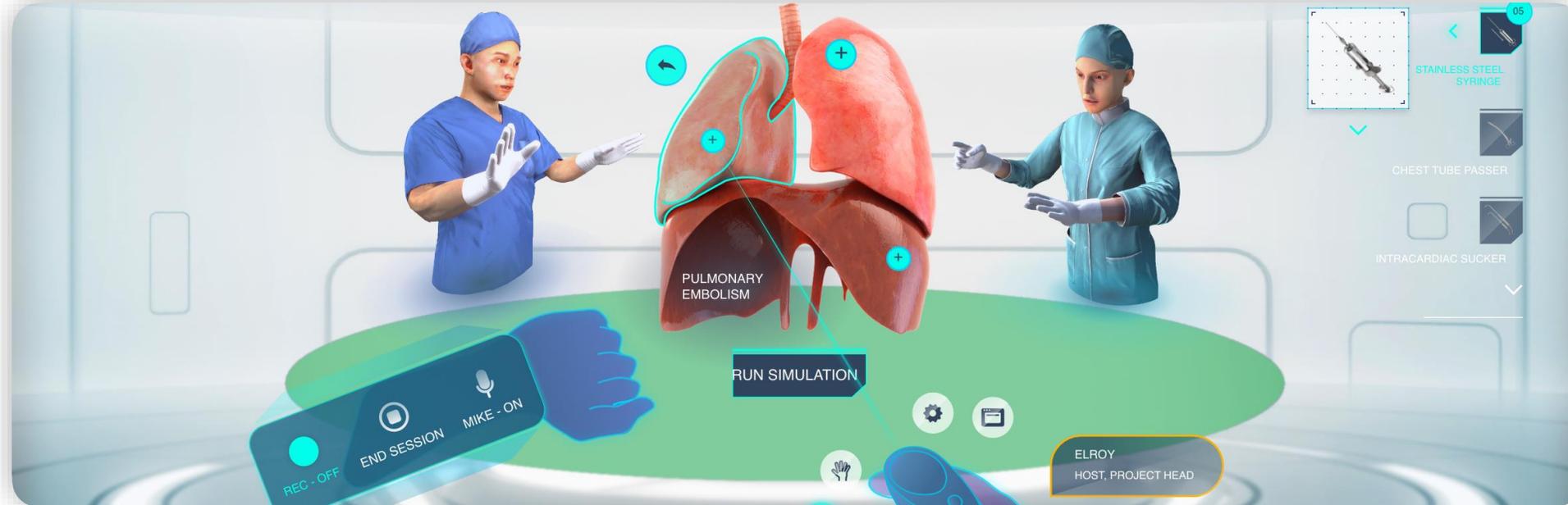
improving health
increasing wealth



Continue to expand our Healthcare Modules



Content 1 Paediatric Seizure	Content 2 Paediatric Anaphylaxis	Content 3 Adult Seizure	Content 4 Paediatric SVT	Content 5 Human Anatomy	Content 6 Heart Visualisation
					
VR	VR	VR	VR	AR/ MR	AR/ MR
Hardware: Free roam headsets, portable headsets Users: Single Player • Prolonged seizure, teaches recognition and management of infant status epilepticus	Hardware: Freeroam headsets, portable headsets Users: Single Player • Allergic reaction, teaches recognition and management of anaphylactic shock	Hardware: Freeroam headsets, portable headsets Users: Single player • Prolonged seizure, teaches recognition and management of status epilepticus	Hardware: Freeroam headsets, portable headsets Users: Single Player • Arrhythmia, teaches recognition and management of Supraventricular Tachycardia	Hardware: Tablet, MR Headset Users: Single & Multiuser • Trainees will be able to learn about human anatomy in more detailed, by expanding and examining any component	Hardware: Tablet, MR Headset Users: Single & Multiuser • View the heart from the inside by rotating and scaling and taking a deeper look into each part.

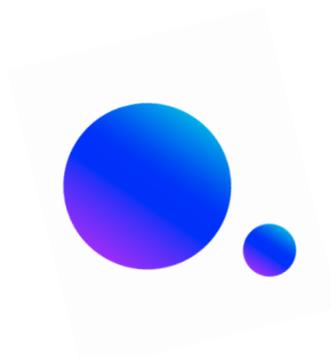
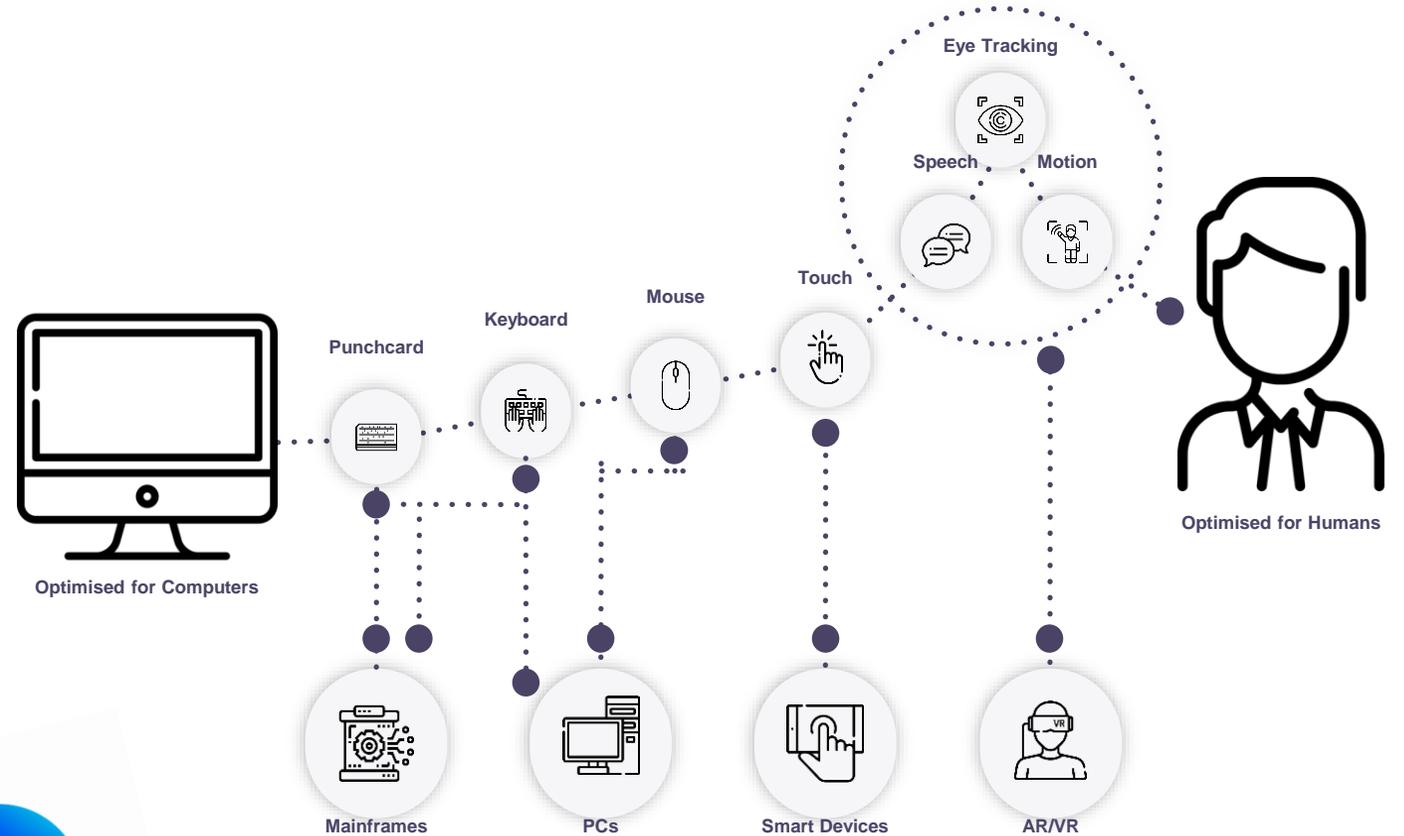


Technology Landscape

Technology Today

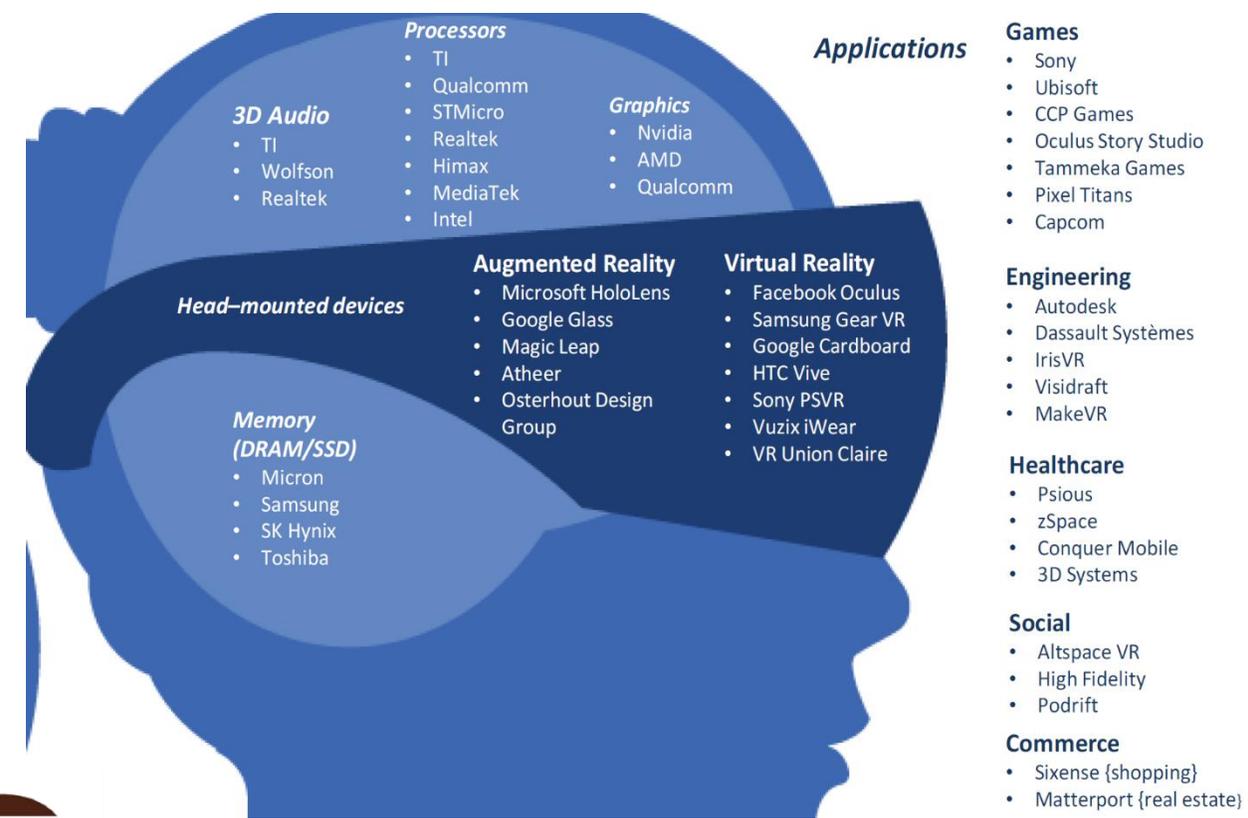
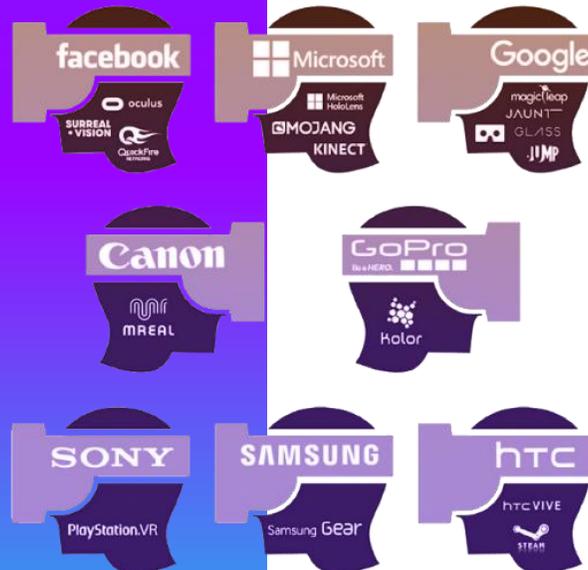
Human computation evolved from **mainframe computing to virtual & mixed reality wearables.**

We've moved from **punch cards to touch interface & now to voice recognition & eye tracking** to deepen our immersion with natural ways of engagement.



Technology Landscape

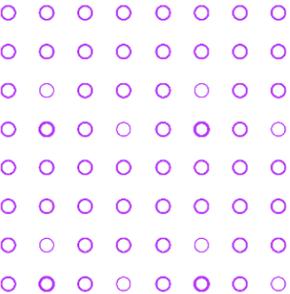
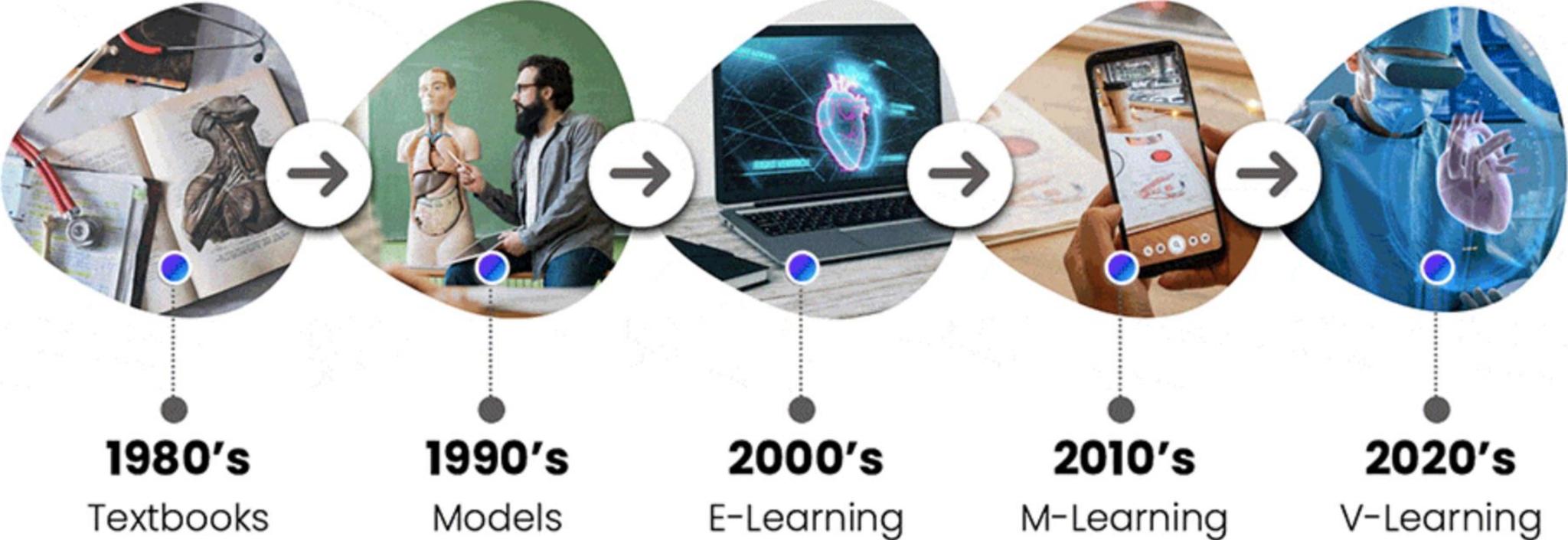
- ✓ Humans engage better through 3D and natural intuitive ways
- ✓ Artificial Intelligence and data are now driving unimaginable transformations
- ✓ With 5G, XR and AI we are at the dawn of a new age of computing and communications.



Top consumer facing brands have invested in AR/VR



Learning Evolution



All this took place in just about 5 decades.

But are healthcare organisations catching up with this fast moving evolution?

Do we understand **Extended Reality (XR)**



360 Video, Virtual Reality, Augmented Reality, Mixed Reality



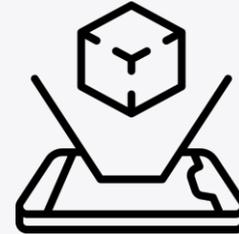
360 Camera

Captures 360-degree panoramic footage of the real-world environment in a single shot



Virtual Reality

Immerses users in a fully artificial digital environment.



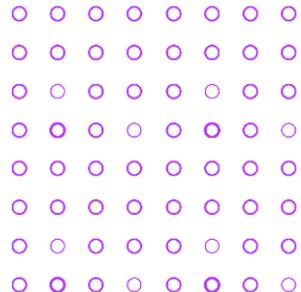
Augmented Reality

Overlays virtual objects on the real-world environment



Mixed Reality

Not just overlays but anchors virtual objects to the real world

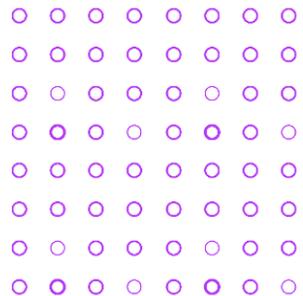


360 Video Content



360 Camera

Captures 360-degree panoramic footage of the real-world environment in a single shot



Study Conducted by a device manufacturer in October 2020



Conclusion

It seems that patients', radiographers' and radiography students' experiences of 360°VCE respond to patients' needs by improved knowledge and reduced fears. Thus, current counselling practices can be usefully complemented with spherical panoramic imaging technology and online information delivery.

Virtual Reality (VR) Content

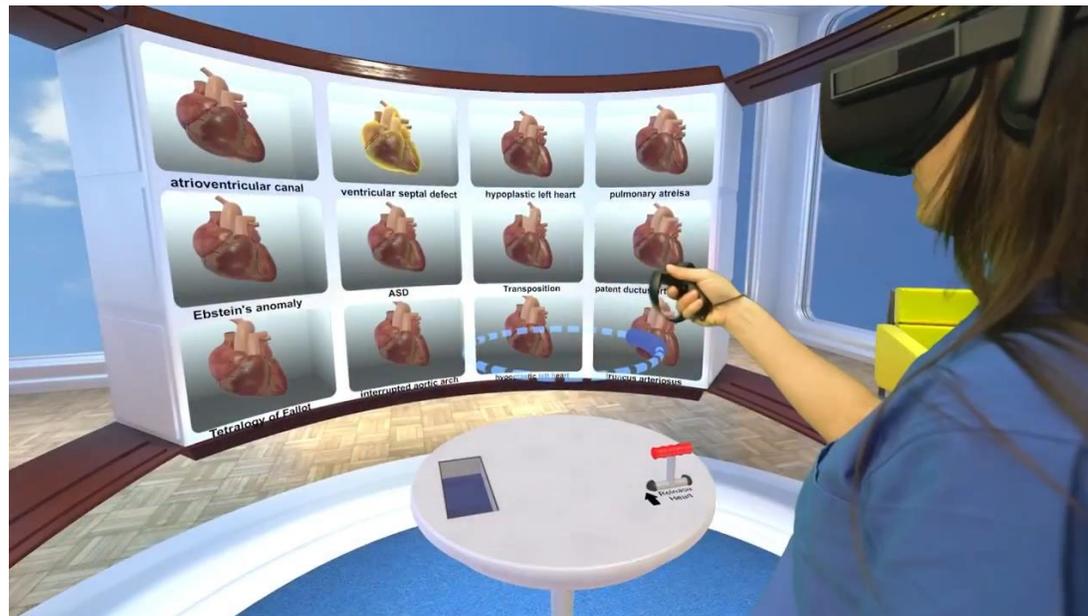


Virtual Reality

Immerses users in a fully artificial digital environment.

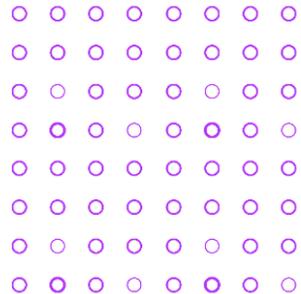
Linear VR

Computer Generated Imagery (CGI)

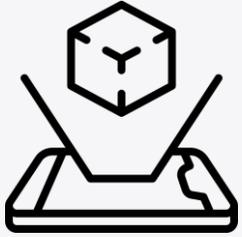


Non-Linear VR

Computer Generated Imagery (CGI)



Augmented Reality (AR) Content



Augmented Reality

Overlays virtual objects on the real-world environment

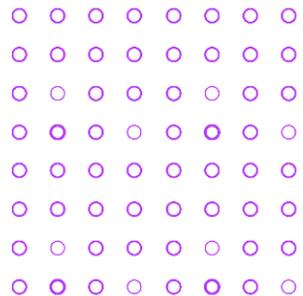
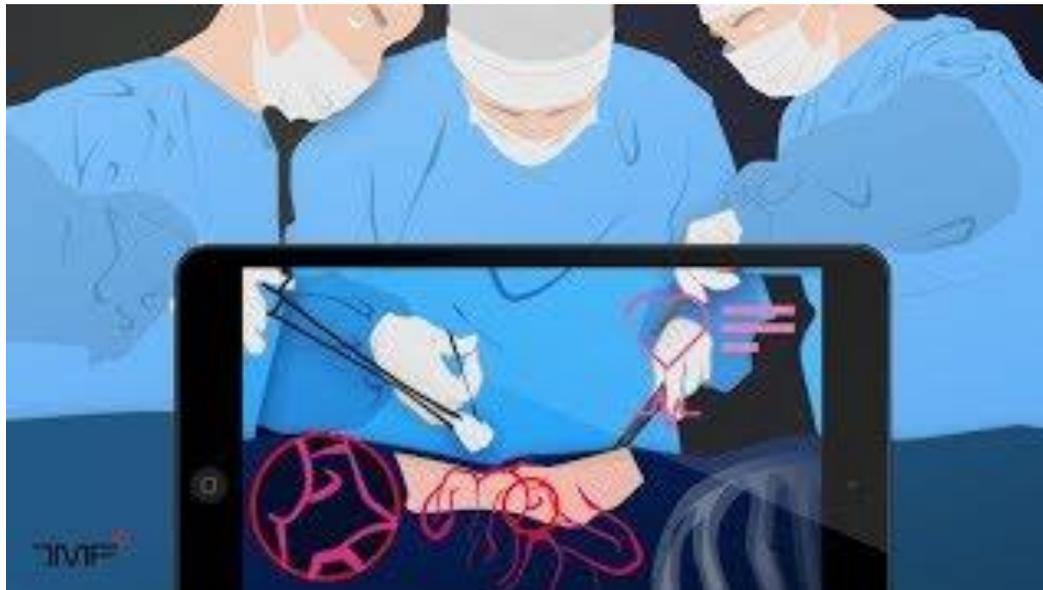
AR (Smart Devices)

Assisted Surgery, diagnosis & treatment



AR (Smart Devices)

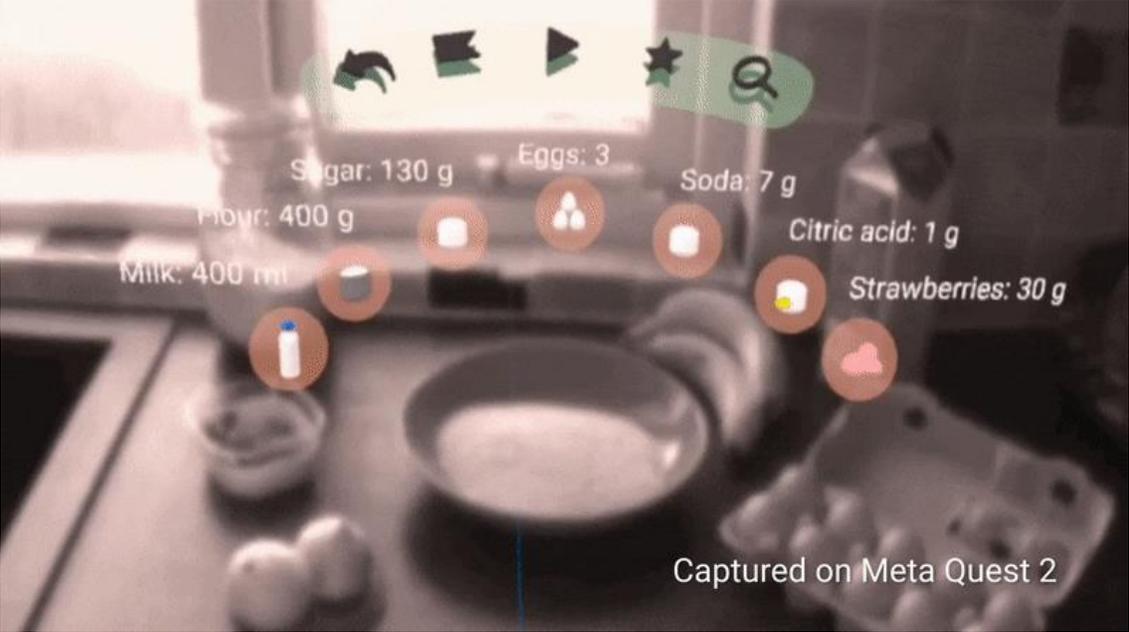
Visualisation



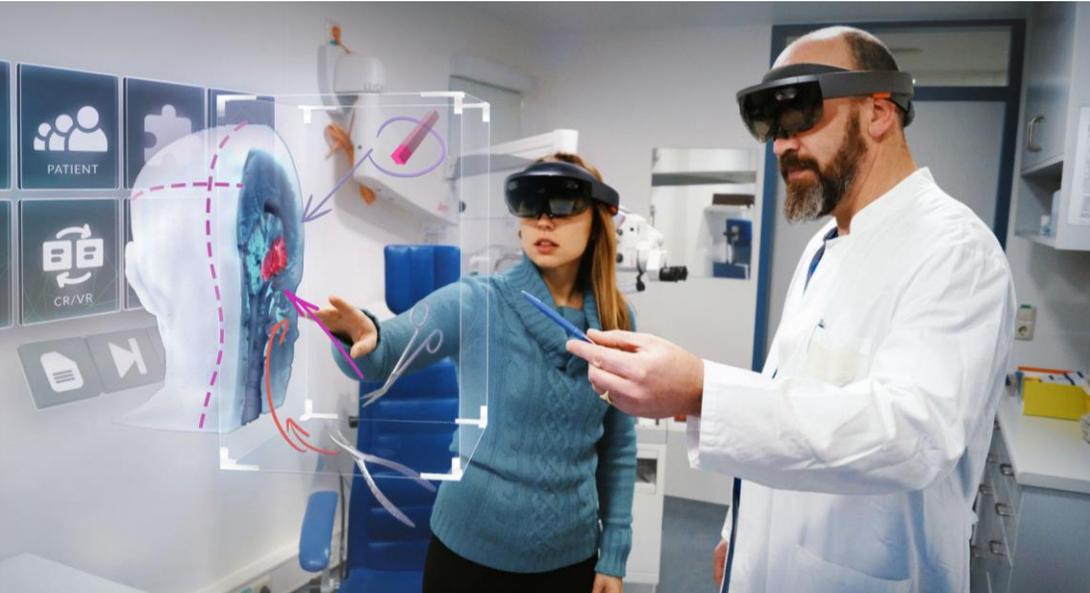
Mixed Reality (AR) Content



Mixed Reality
Not just overlays but anchors virtual objects to the real world

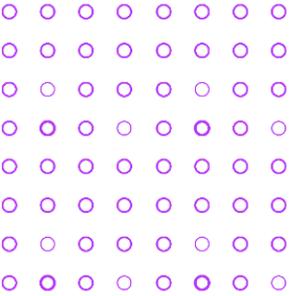


Mixed Reality (MR) Head Mounted Display



Advancements in MR

Meta Quest Pro, Pico Interactive, Apple, and others.



Benefits of Extended Training (XR)



XR training provides a new level of experiential learning



Real Situations

Immersive learning is effective at emphasising things through visualisation. By providing environments closely mimic real-life situations, employees can reach greater levels of expertise in less time.



Remote Collaboration

Through immersive experiences, businesses can tap expertise in thousands of skills from anywhere in the world. XR can also provide remote guided tours and remote collaboration.



Reduced Costs

Organisations can cut expenses on employee travel and transporting equipment to training locations. Trainers themselves can also be part of the XR programming, so companies can reduce faculty costs.



Increased Engagement

With the ability to build-in gamification, immersive learning can be fun. When trainees are engaged and interested, it leads to better retention.



Safe Learning

Training for hazardous environments, as well as simulations, reduce behaviours that do not support inclusion or that could negatively impact a client deal can all be achieved through XR.



Better Analytics

XR captures enriched user data-behavioural, eye tracking, heat maps and gesture tracking.

Market Evidence



Intel® forecasts its **XR training courses to generate a 5 year ROI of 300%**. Studies confirm **learning quality to improve by 75%**. The global demand for XR will exhibit a CAGR of 45% to reach **\$346.39 billion in 2026**.

World Economic Forum predicts that **1 billion people will need to be re-skilled by 2030**.

Improves Retention Rate and Engagement



75%

Retention rate through VR-training

10%

Retention rate Through traditional Training

Minimises Risk to People



43%

Reduction in injury rates through VR-training in high-consequences workplaces

Contextualised and Immersive Training



91.7%

Of medical researches approve of AR's capability to render 3D organs

86.1%

Of medical researches approve of immersive technologies educational value

Endless Opportunities For Learning and Development



70%

Higher rate of long-term memory retainment as opposed to immersive learning



**What to look out for
when implementing immersive tech**

What to look for

Pre-Production



- ✓ Is there a storyboarding/ dependency?
- ✓ Involves filming/ consent & timeframes?
- ✓ CGI Assets / dependency & timeframes?

Production



- ✓ Uses pre-existing tools /library
- ✓ Are they pre-defined interactions?
- ✓ Custom development /3rd party integration

Distribution



- ✓ How is it deployed /distributed
- ✓ Operational/maintenance support
- ✓ Is it turn key offer – software/hardware



Portable Kit or Location
Specific Equipment



Stationed or free roam.
With or without haptics.



Specific platform or
platform agnostic

What to look for

DIGITAL &
360 VIDEO
BASED
TRAINING

Data!

LINEAR XR
TRAINING
SIMULATIONS

Data!

NON-LINEAR
AI POWERED
XR TRAINING
SIMS

Data!

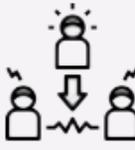
Software Package

 Content Development Support	 Content Management Software	 Real-time User Analytics
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Hardware Package

 360 Video	 Cardboard	 Mobile VR	 Room-scale VR
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Support & Maintenance

 Standard tech support	 Remote network monitoring	 3rd Party app support	 Network Maintenance
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Thank you

Devi kolli, CEO

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