

VR & AR in Construction



Speaker
Dan Deery

Speaker: Dan Deery

- Dan is a BIM & 3D specialist with 30 years experience in the AEC industry & over 20 years in BIM (Building Information Management).
- He delivers BIM, Visualisation and training services. He has worked on BIM projects throughout the world including Ireland, UK, Norway, France, Nigeria & Canada. The services he has delivered as part of these projects include BIM Management, BIM coordination, BIM Implementation, BIM Support. BIM modelling, BIM Training, 3D animation, Visualisations & Interactive animations.
- He is an authorised Autodesk trainer and delivers training to companies throughout Ireland & UK. He also delivers training for Autodesk resellers in Ireland & the UK. These resellers include Diatec (Irl), Paradigm (Irl), Benchmark (UK) & Excitech (UK). These courses include Revit (all disciplines), Navisworks, 3DS Max, Microstation, AutoCAD, Unity Pro & Unity Reflect.
- He is actively working with clients helping them Implement BIM and advising on digital technologies within the AEC industry.

What is Virtual Reality (VR)

- VR is a simulated experience which allows the user to interact with a 3D model
- VR allows you to interact with your model and experience the space

Types of VR

Static VR: 360 Panoramic / 360

Immersive VR

Static VR: 360 Panoramic / 360

- Allows you to view the space in 360 Panoramic View
- Examples of static VR devices



Google Cardboard

- Not Immersive
- Can't Move Through the Space
- Can't Interact with Objects in the Space
- Low Cost



Gear VR

Immersive VR

- Allows you to walk through the scene
- Allows you to interact with objects in the scene
- Requires full VR headset
- Examples of Immersive VR Devices



HTC Vive



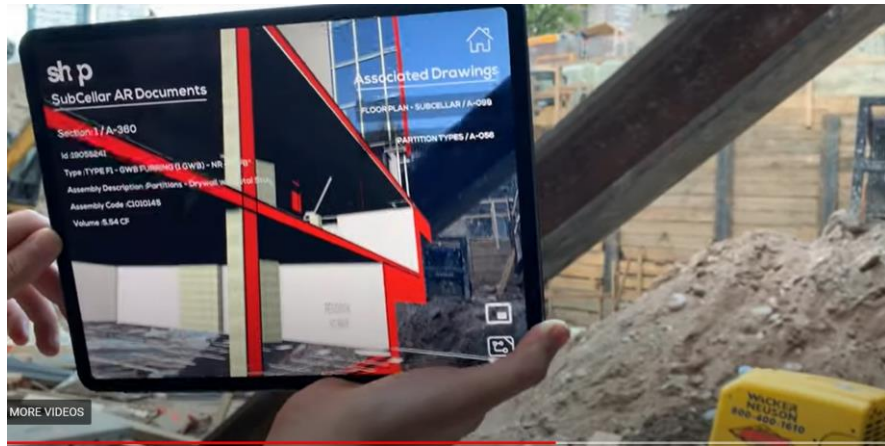
Oculus Quest

Benefits VR in Construction

- Improved client Experience giving them a better understanding of the project
- Improved Tendering
- Enhance Decision Making
- Improve Collaboration
- Enhance Clash Detection
- Improve Training Safety

What is Augmented Reality (AR)

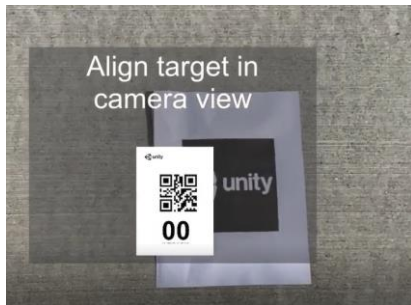
- Incorporates the BIM Model into real surroundings



What is Augmented Reality (AR)

Image Based Tracking

- Place a marker in the model and in the real world location



User scans the marker and hold up their device



What is Augmented Reality (AR)

GPS Based Tracking

- User holds up their device and uses GPS to position model



Benefits of AR in Construction

- Preview Design building in it's Environment
- Review Design Model
- Overlay the model over existing Site Conditions
- Compare Built Design with the Design Model



VR & AR Workflow

Software Options for BIM Models –Below are some software options to move your BIM model into VR & AR

Unity 3D (VR & AR)

UnReal Engine (VR & AR)

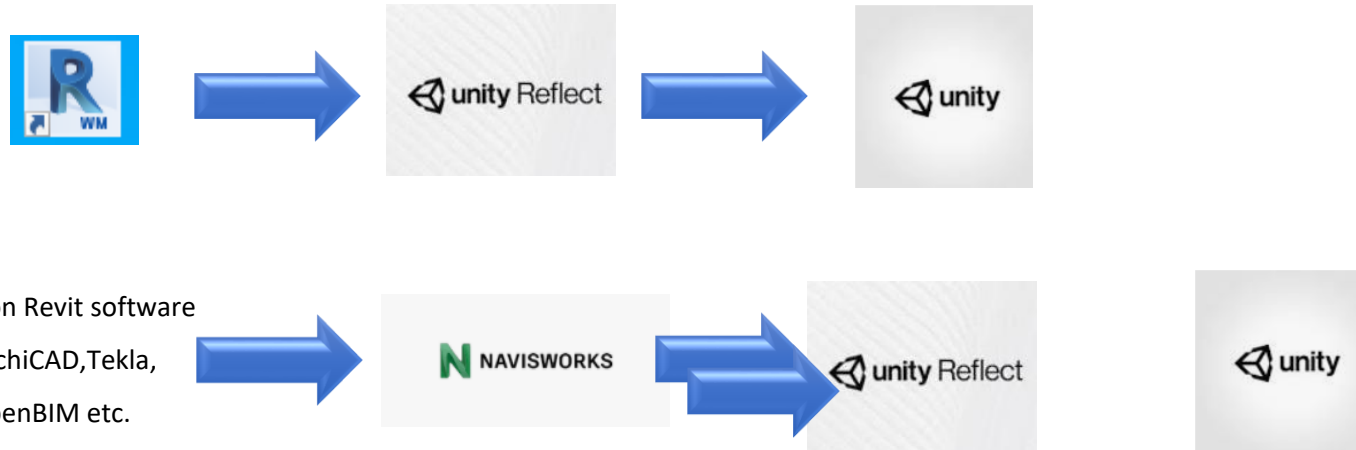
3DS Max Interactive (VR & AR)

IRIS VR (VR Only)

Enscape for Revit (VR Only)

VR & AR Workflow

Our Work Flow:



Thank You for Listening

Any Questions



Contact: dan@dandeery.ie