

SDF PROJECT



3D PRINTING
SIMULATION
SCANNING

SYSTEM
SMART FACTORY

BIG DATA

THE CLOUD

AUTOMATION **ROBOTS**

INDUSTRY 4.0

INTERNET OF THINGS

ROBOT WORK


ADDITIVE MANUFACTURING

MOBILE DEVICE

AUGMENTED REALITY

CUSTOMIZATION

SOFTWARE **AI**

A group of people is holding a large white sign. The sign is the central focus, with several hands visible around its edges. The people are wearing various casual clothing, including a green sweater on the left and a grey hoodie on the right. The background is a plain, light-colored wall.

**Responding to local business
and the LSIP**

SDF round 2



Our project aims to support the transition towards a more data-driven, automated and digital economy in Kent & Medway by addressing skills gaps in:

- ✓ digitalisation
- ✓ data literacy
- ✓ virtual reality
- ✓ automation

and.. creating a network of 13 interconnected immersive learning labs across Kent & Medway, that:

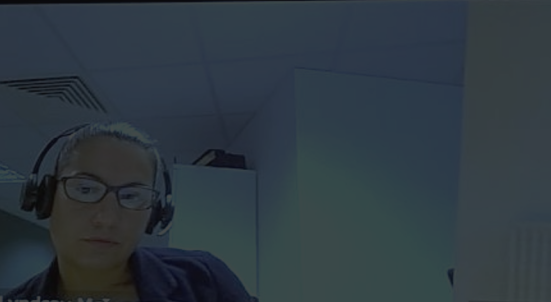
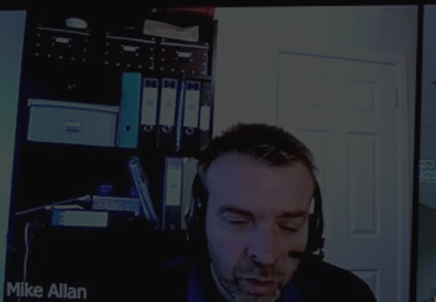
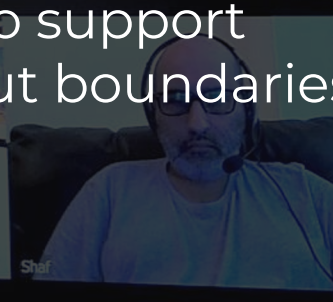
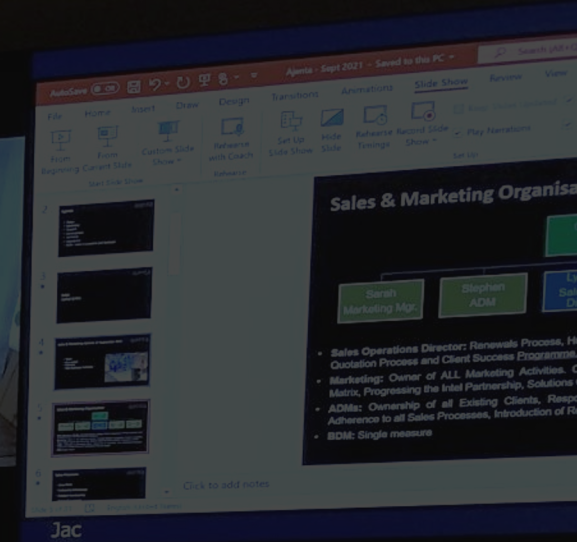
- ✓ provide collaborative delivery
- ✓ provide capability to share hard to secure talent
- ✓ shares experience
- ✓ develops our workforce



Immersive Learning Spaces

Immersive learning spaces to support collaborative learning without boundaries.

➔ Visualisation



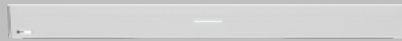
IMMERSIVE LEARNING SPACE: FRONT WITH ULTRA LARGE DISPLAYS AND CONTROL MODULE



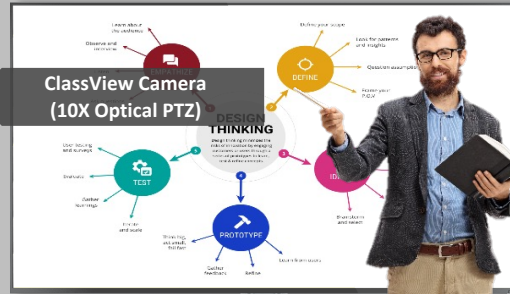
85" QLED Displays



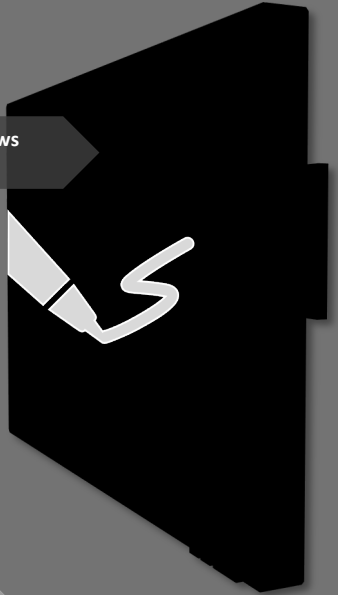
Multimedia AV Lectern
with Control System



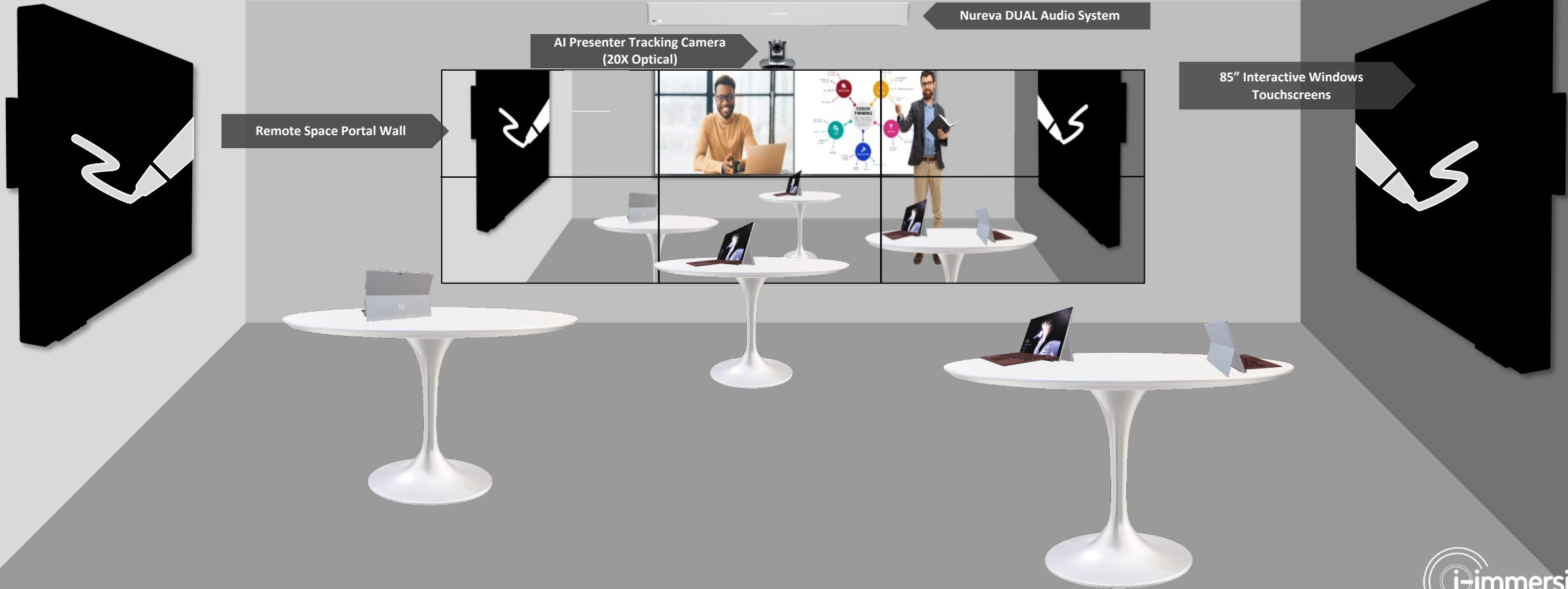
Nureva DUAL Audio System

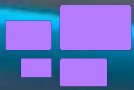


85" Interactive Windows
Touchscreens

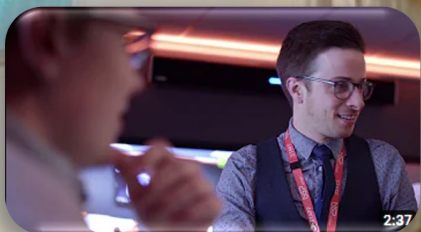
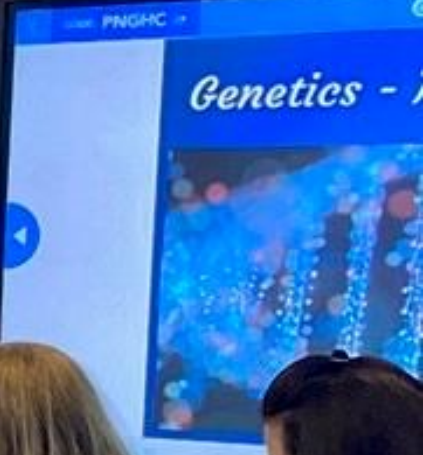
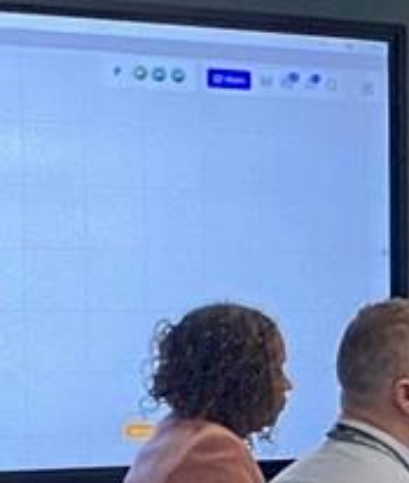


IMMERSIVE LEARNING SPACE: REAR WITH VIDEOWALL GALLERY





ClassView



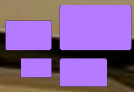
WATCH:
[Immersive Technology - YouTube](#)

NEWHAM COLLEGE LONDON



NEWHAM COLLEGE LONDON





ClassView







The VR Classroom & Extended Reality Solutions

➤ Visualisation

IMMERSIVE VR HYBRID SPACE:
EXTENDED REALITY WALL (5m x 3m)

Infinity LED Wall (5m x 3m)

Nureva DUAL Audio System

Nureva DUAL Audio System

Multimedia AV Lectern
with Control System





Meta Quest Docking & Charging Station



ClassView Auto Tracking Camera



Remote Participant Gallery





W
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WEST
SUFFOLK
COLLEGE

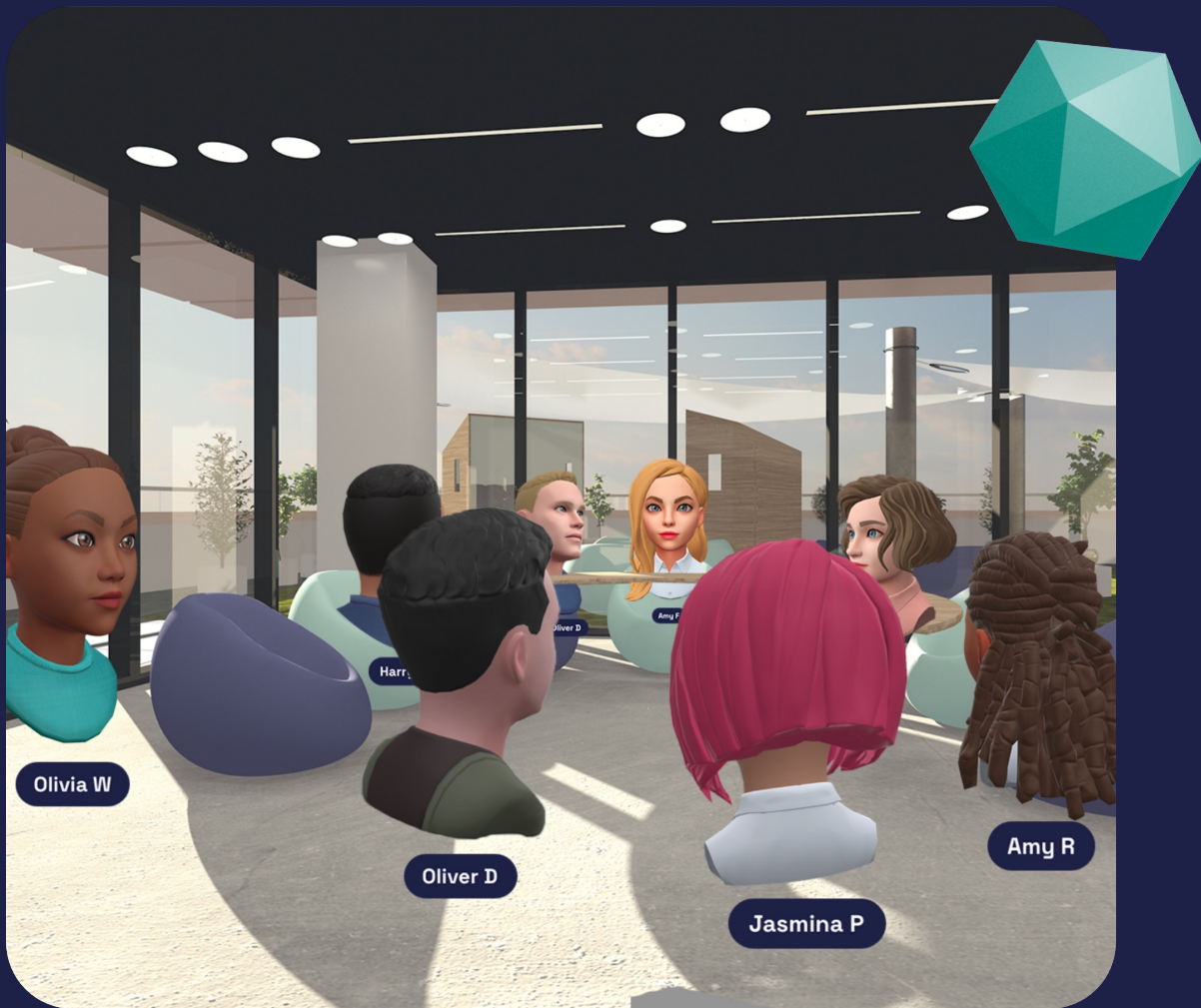


[West Suffolk College XR VR Lab.MP4](#)





VR Campus



Introducing VR Campus

VR Campus is the ultimate virtual learning environment where users will be able to learn in fully immersive environments.

From classrooms to scientific labs, users can access various tools to encourage collaboration and discovery with their peers. Virtual whiteboards and 3D model visualisers offer many different ways to make learning virtually truly immersive.



How does VR Campus work?



User flow




The website

Use the website to create campuses, add students and create lessons that seamlessly translate into VR learning sessions.




Desktop classrooms

As a presenter, you can use the desktop site to launch your classes and access additional features like sharing your desktop screen in VR.



The VR Classroom

Use your VR headset to experience a fully immersive classroom experience. From interactive whiteboards to 3D asset tools.






Core Platform Features





- VR Collaboration Platform designed specifically for teaching.
- Dedicated Campus: Sessions & users managed per campus.
- Desktop (windows) Client for presenters.
- Quest 2 Client App.
- Engage and explore realistic, high-quality 3D assets
- Interactive Learning Spaces – whiteboard & desktop share
- Interactive simulations to enhance curriculum and industry skills





Megan Smith
Subjects: Biology, Physics and Maths







Leave app

Settings

Your sessions

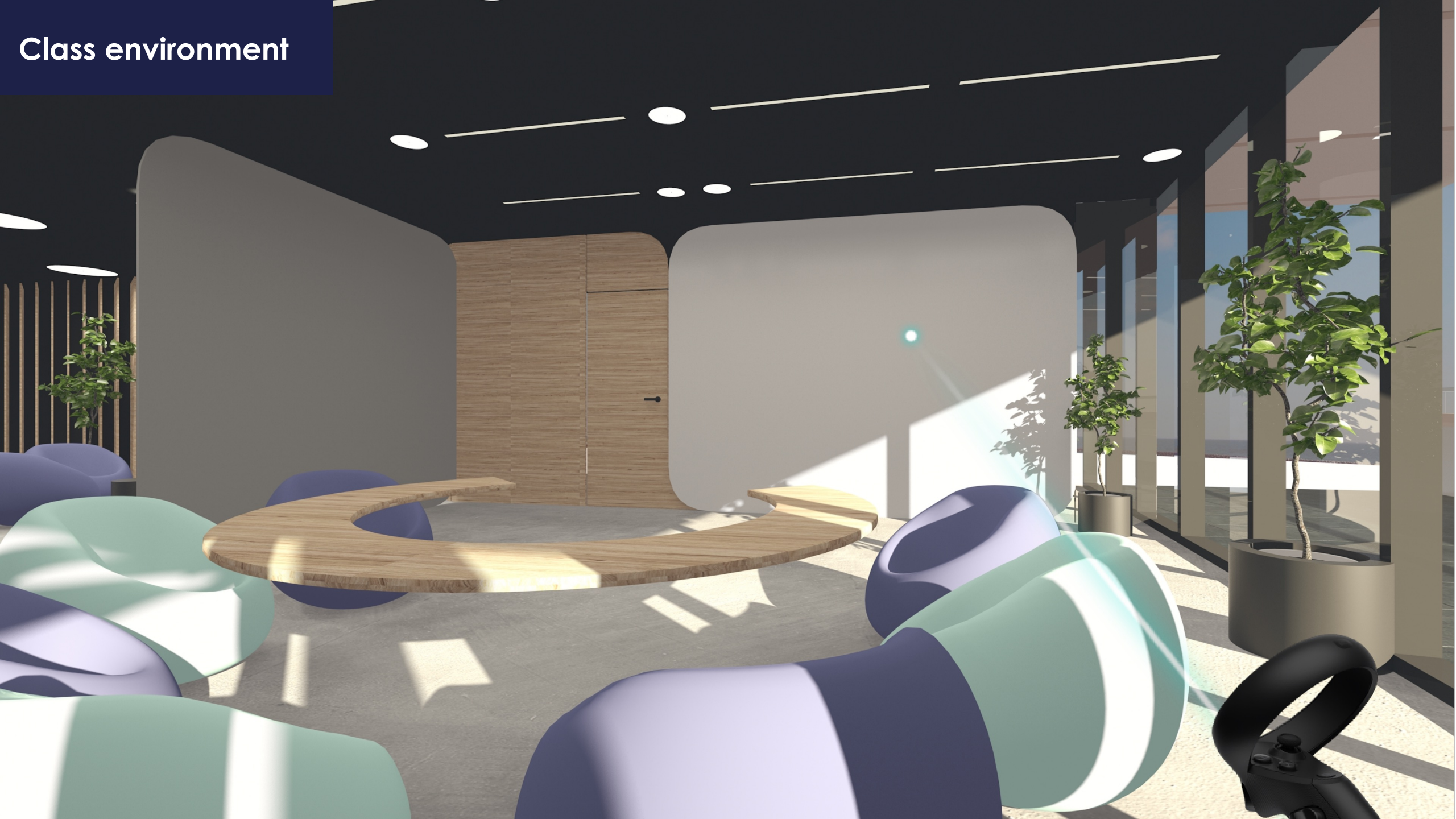
Sign out

Tuesday 17th May

09:00	 Maths A level - Statistics Mrs Smith - 09:00- 09:55	Start	
10:00	 Maths A level - Core 1 Mrs Smith - 10:00- 10:55		
11:00	 Physics - Unit 2 Mrs Smith - 11:00- 11:55		
12:00	 Biology - Unit 1 Mrs Smith - 12:00- 12:55		



Class environment





The Immersive Classroom

Features

- Custom Avatars
- A modern class space
- Presenter Screens
- Interactive Whiteboards
- Interactive 3D assets
- Purpose-built teaching environment



Presenter tools



Presenter tools



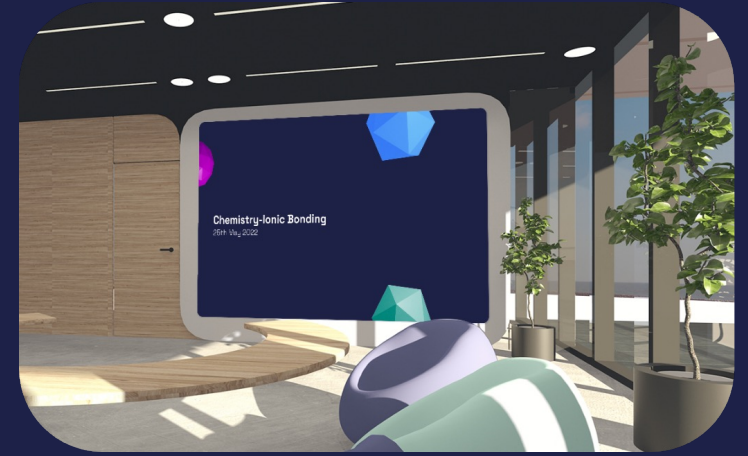
Interactive Whiteboard

Here you'll be able to collaborate with students on a virtual whiteboard with the ability to write in different colours and for presenters to add images to the board too.



3D Asset Launcher

Here you'll be able to view interactive 3D assets to enhance your lessons, from 3D chemical models to historical artefacts.



Presenter Screens

Here you'll be able to share your desktop, images, and videos.

Attendee management



Mute Users



Give reward points



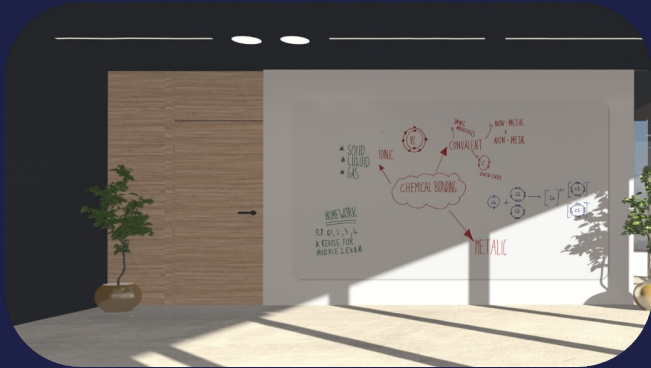
Remove attendees



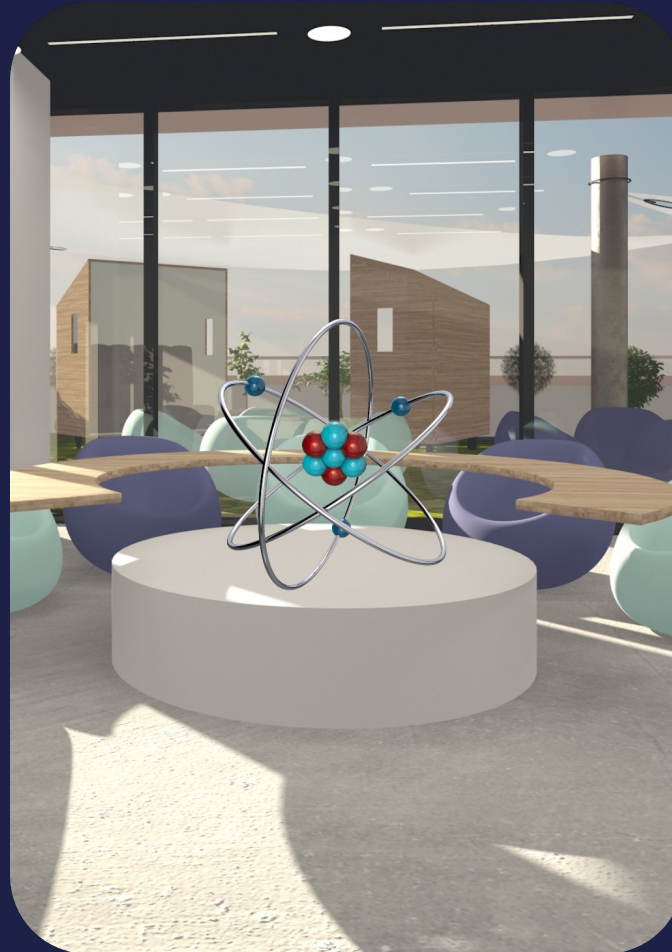
Attendee features



Attendee management



Interactive Whiteboard



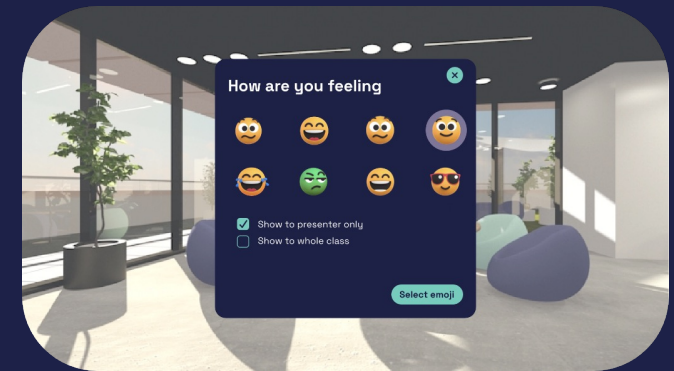
View Interactive 3D assets



Receive XP reward points



Raise a hand



Emoji feedback

Support Model

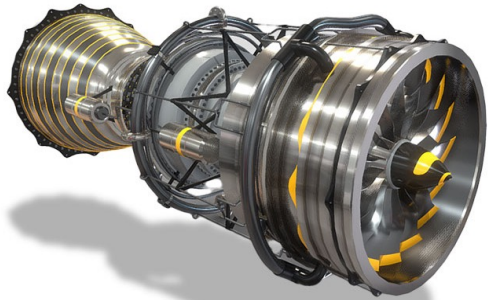


- In-person training sessions for teachers/lecturers
- No just how to use the platform but how to teach in VR
- Online support portal for common issues
- Dedicated support ticket system
- Further requirements may be identified through ALPHA & BETA phases



Enhancing lessons with VR

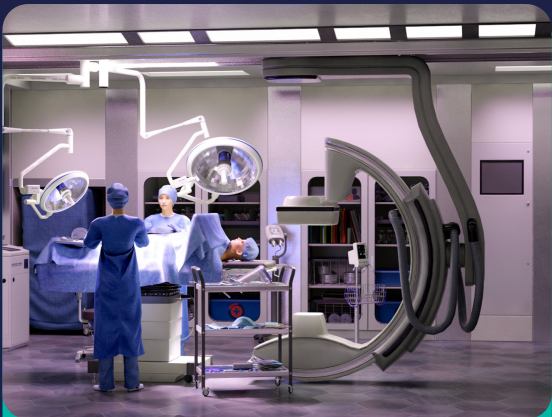




3D assets



Custom environments



Interactive experiences

Interactive elements

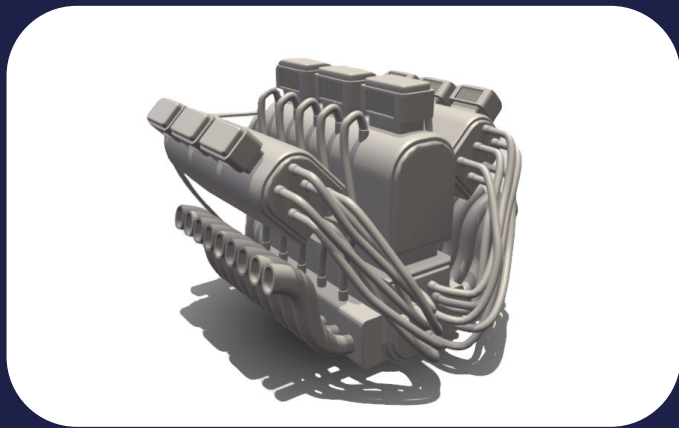
The VR Campus platform supports several ways to enhance lessons.

This includes 3D assets that can be interacted with, custom environments that can be tailored to a subject, or fully immersive, gamified learning experiences that combine these elements.

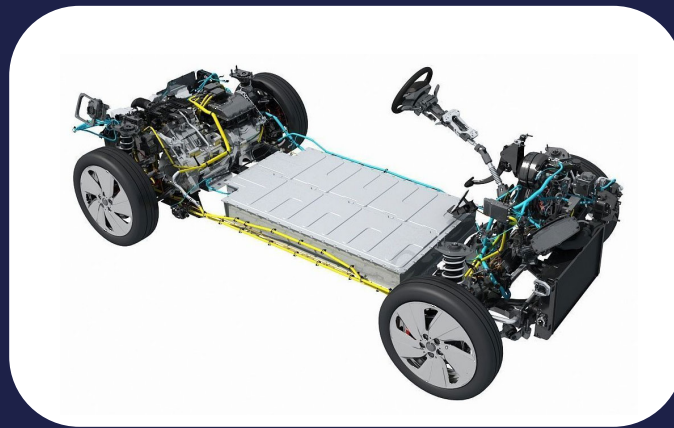
3D Assets

3D asset complexity

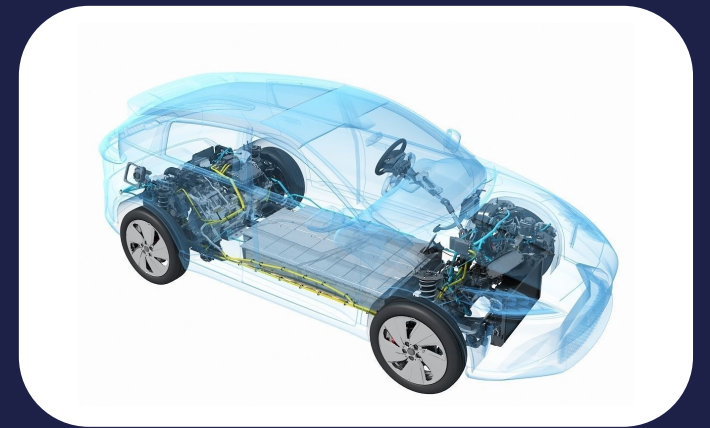
All assets can be controlled by scaling and rotating, but the complexity of the model and its interactivity can be tailored to the level of detail required to explain a particular subject. More complex concepts may require higher levels of detail and interaction, while others may only need simplified assets.



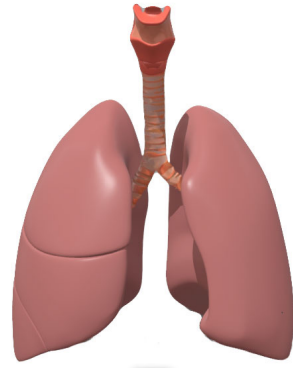
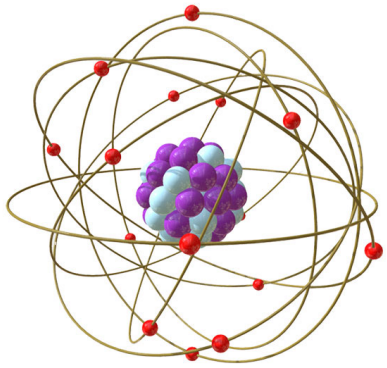
Simple assets



Enhanced assets

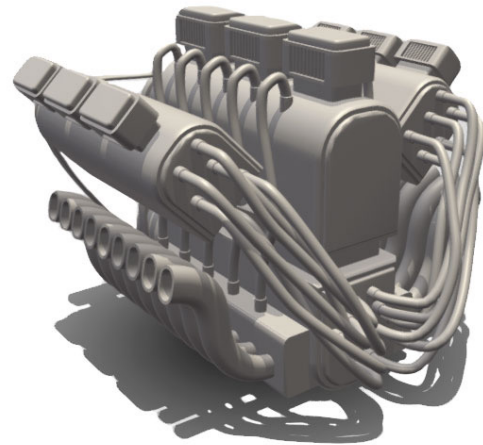


Dynamic assets



Simple assets

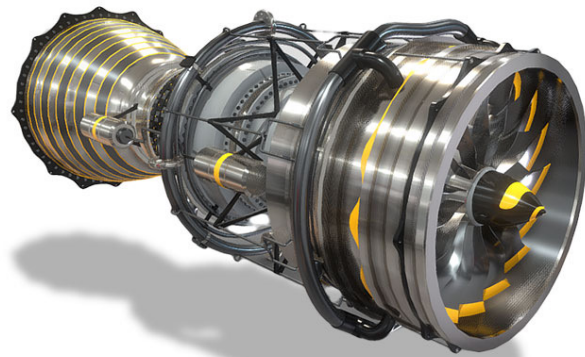
Faster-loading, simplified models that can be rotated. Ideal for explaining general principles without needing additional detail or interactivity.





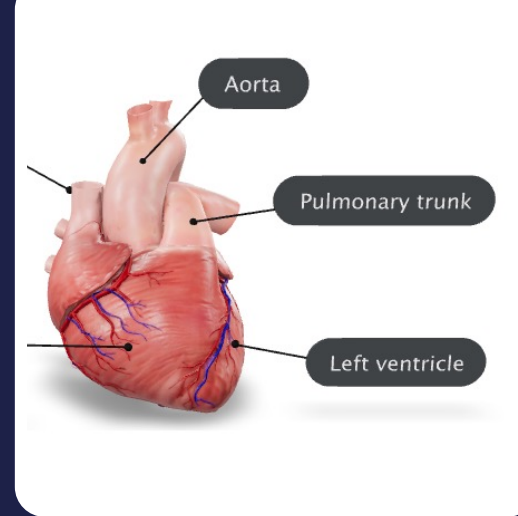
Enhanced assets

Enhance assets provide a high-fidelity provide learners with a detailed and life-like model of the real thing. This can be especially useful when explaining complex subjects where understanding the subject in detail is important.



Dynamic assets

Take assets further, by incorporating complex animations and interactive elements such as hotspots, info overlays, and view modes.



Custom environments

Environments

Users interact in two main virtual environments.



Home environment

The central location all users arrive at when entering the campus.



Teaching environments

Spaces where lessons and educational content will be delivered.

Tailored home environments

The home environment is the first place users are taken when accessing the platform and acts as the central place for them to access other content on the platform.

The home environment will be tailored to reflect our campus or college ethos, which may favour an outdoors feel or a warm interior. College branding including logos and colours can also be incorporated into the environment.

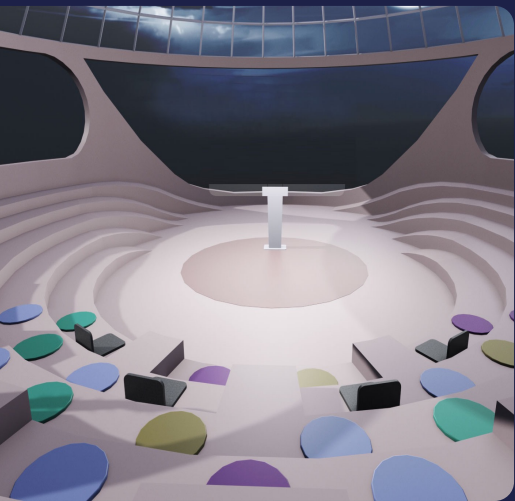




Custom teaching environments

Select classroom environments that are customised to the subject and type of lesson and the number of learners.

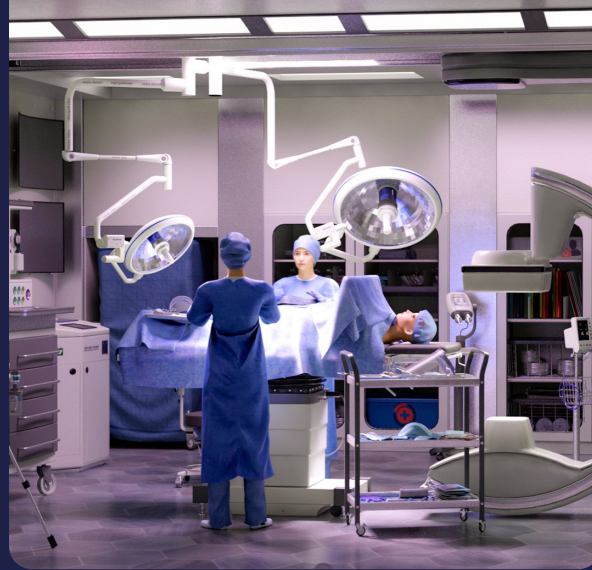
For example, you may want to choose from science labs, lecture theatres, sports halls, drama studios.



Subject-based environments

Conduct lessons in an environment customised to a specific subject, giving learners an engaging, real-world experience.

Immerse learners in industry-accurate environments – for example, construction sites, factory floors, operating theatres and more.



Immersive experiences



Interactive experiences

Dive deeper into a subject with a custom built, in-depth immersive environments.

Include interactive features such as:

- Gamification
- Interactive elements
- Collaborative features





Branded home environment

A unified, branded home environment that will greet learners and trainers when they enter your campus.

Example course content

WIND TURBINE ENGINEERING

Example lesson format





EXAMPLE COURSE CONTENT

Wind turbines: Simple asset

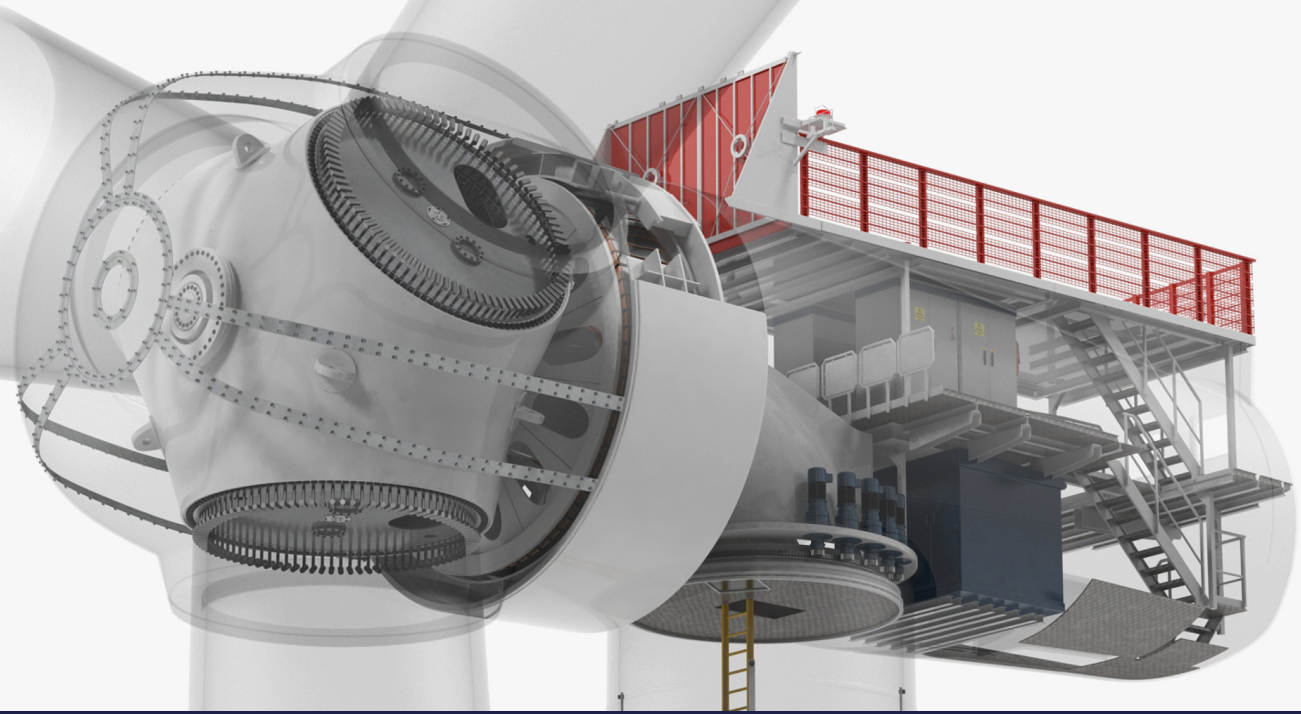
Tutors can import a 3D asset of a wind turbine into their chosen classroom environment, where learners can explore the exterior of the model in 360°.



EXAMPLE COURSE CONTENT

Wind turbines: Enhanced asset

In an Enhanced version of the training model, learners will be able to see the model animating and visual labels can also be overlaid.



EXAMPLE COURSE CONTENT

Wind turbines: Dynamic asset

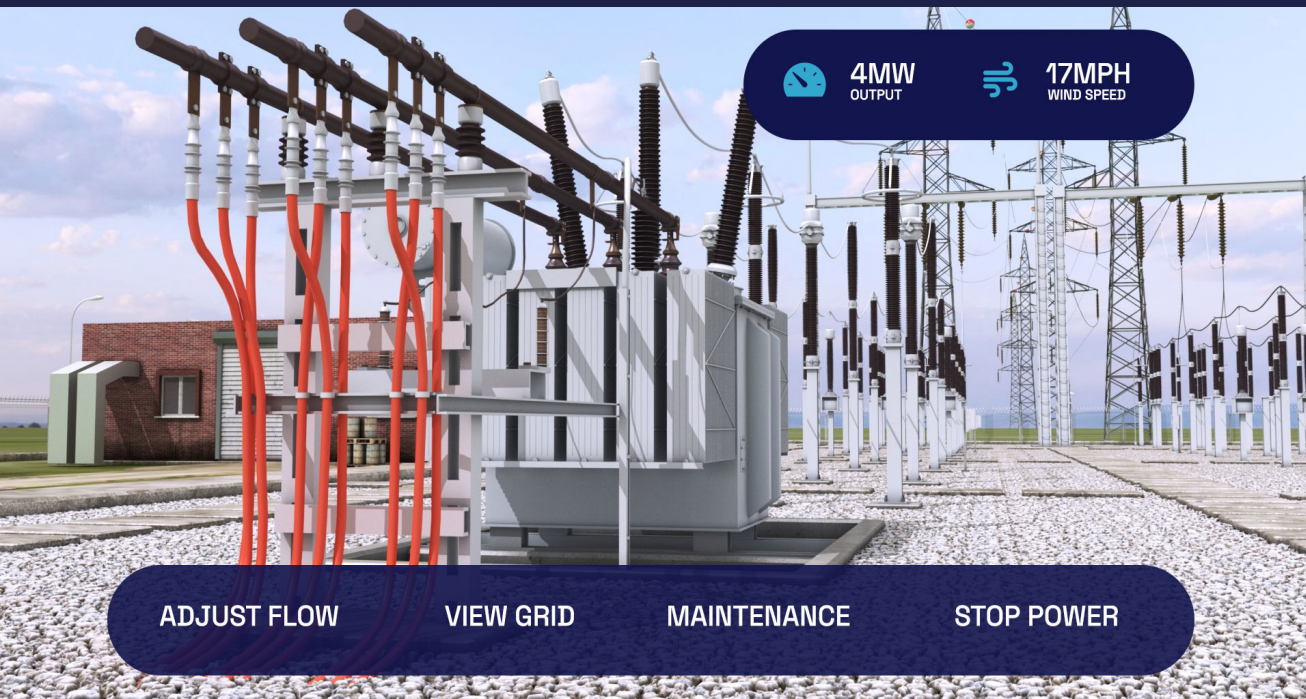
Taking the lesson further, tutors will be able to demonstrate a more detailed view by exploring an 'x-ray' mode, allowing the gears and inner working of the turbine to be demonstrated.



EXAMPLE COURSE CONTENT

Wind turbines: Custom environment

Immerse students in the subject by demonstrating the turbine within a simulated real-world environment. Learners will feel as though they are standing in a power plant, allowing them to understand the subject matter in context.



EXAMPLE COURSE CONTENT

Wind turbines: Interactive experience

To fully explore the subject in detail, the custom environment and Dynamic 3D asset are taken a stage further, by developing a completely bespoke 3D world that learners can interact with. For example; monitoring the flow of energy from the turbine through the power plant, where different elements become interactive and animated as the learner makes decisions.



Any questions

