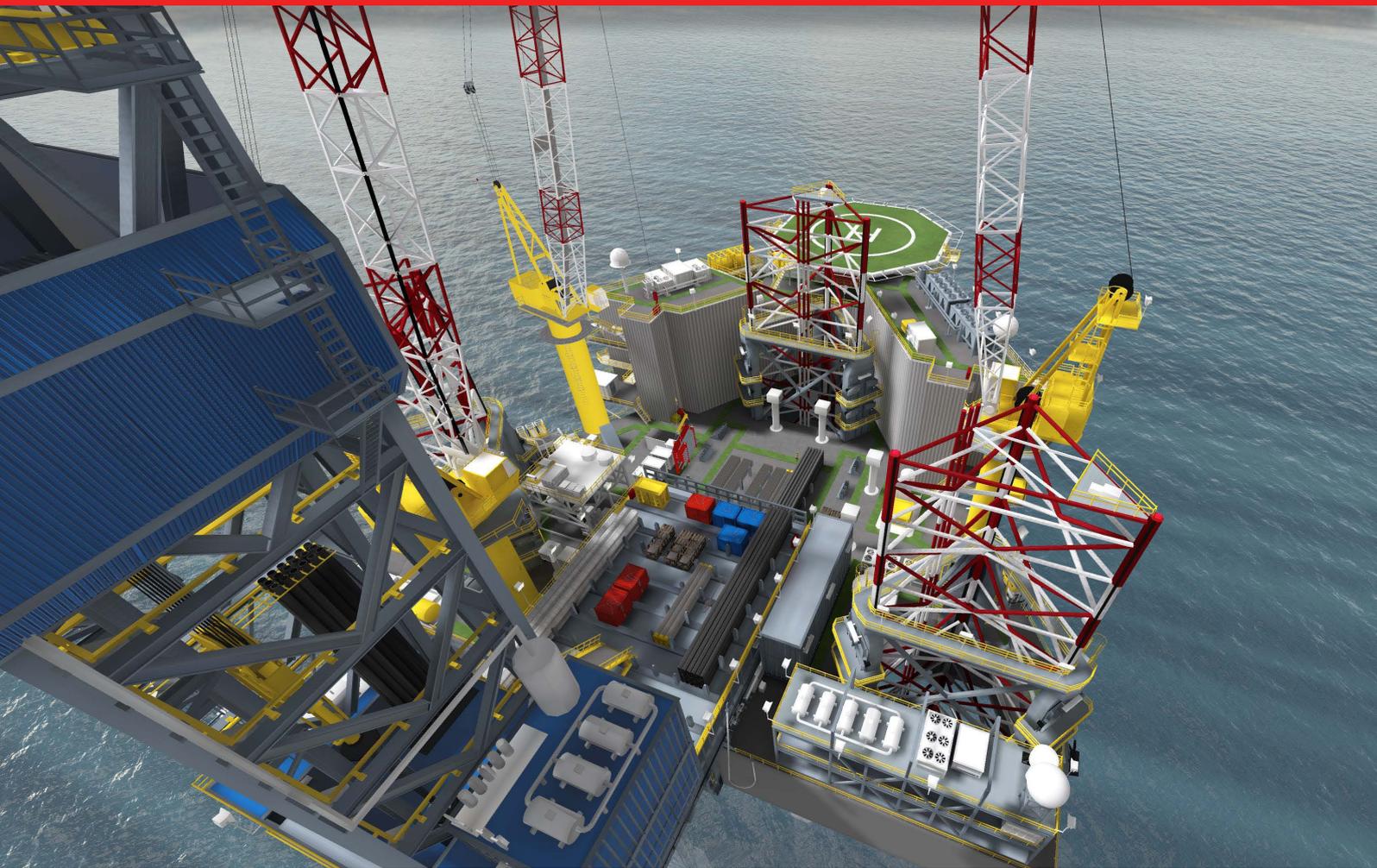


Virtual Reality Capability Overview





Our current assessment tool project uses the **Oculus Quest 2** headset. It is a lightweight piece of equipment, with the benefit of being completely wireless, the first commercial VR headset to achieve this.

The portability of the device means that a VR scenario could be deployed anywhere, to any location or environment, without needing to be tethered to a PC or any external equipment.

VR scenarios are loaded onto the headset and can be managed remotely using **Oculus for Business**. This means that the user doesn't need to have any additional software or hardware to use the headset. When they receive a file, they can simply put on the headset, load up a scenario and start. Having the scenarios pre-loaded onto the headset means they can also be used in locations without wi-fi or an internet / cellular signal.

While our current projects use the **Quest 2**, this is at the client's request based on their needs and use-case scenarios. We can develop for other, more powerful headsets, such as the **Valve Index** or **HTC Vive**, without needing to restructure our workflow.

The benefit of these tethered headsets, is a much higher processing power, allowing for the development of more immersive environments. However, this comes at the cost of portability, as these headsets must be connected to a powerful PC to function and could not be managed remotely with **Oculus for Business**.

The **Oculus Quest** is a better choice for this kind of development, especially if the use of VR is going to be rolled out to multiple different locations, as despite the lower processing power of the device, with our experience and workflow, we can develop high fidelity scenarios with immersive graphics.

VR can provide a huge range of opportunities across a variety of fields, such as training, onboarding / orientation, assessments, health and safety exercises, and many more. Virtually any step-by-step procedure that needs to be carried out can be replicated in VR; by recreating the procedure in an immersive, interactive and safe virtual environment, users can complete and practice the procedure multiple times, without the need for extra equipment or personnel.

Aside from the immersive interaction, the VR scenarios can also measure and record details of the scenario and the user's performance. While the user is engaging with the scenario, the system is recording all of the interaction, which can be saved and assessed, e.g., to determine the user's performance during a procedure.

Rigging Assessment Scenario

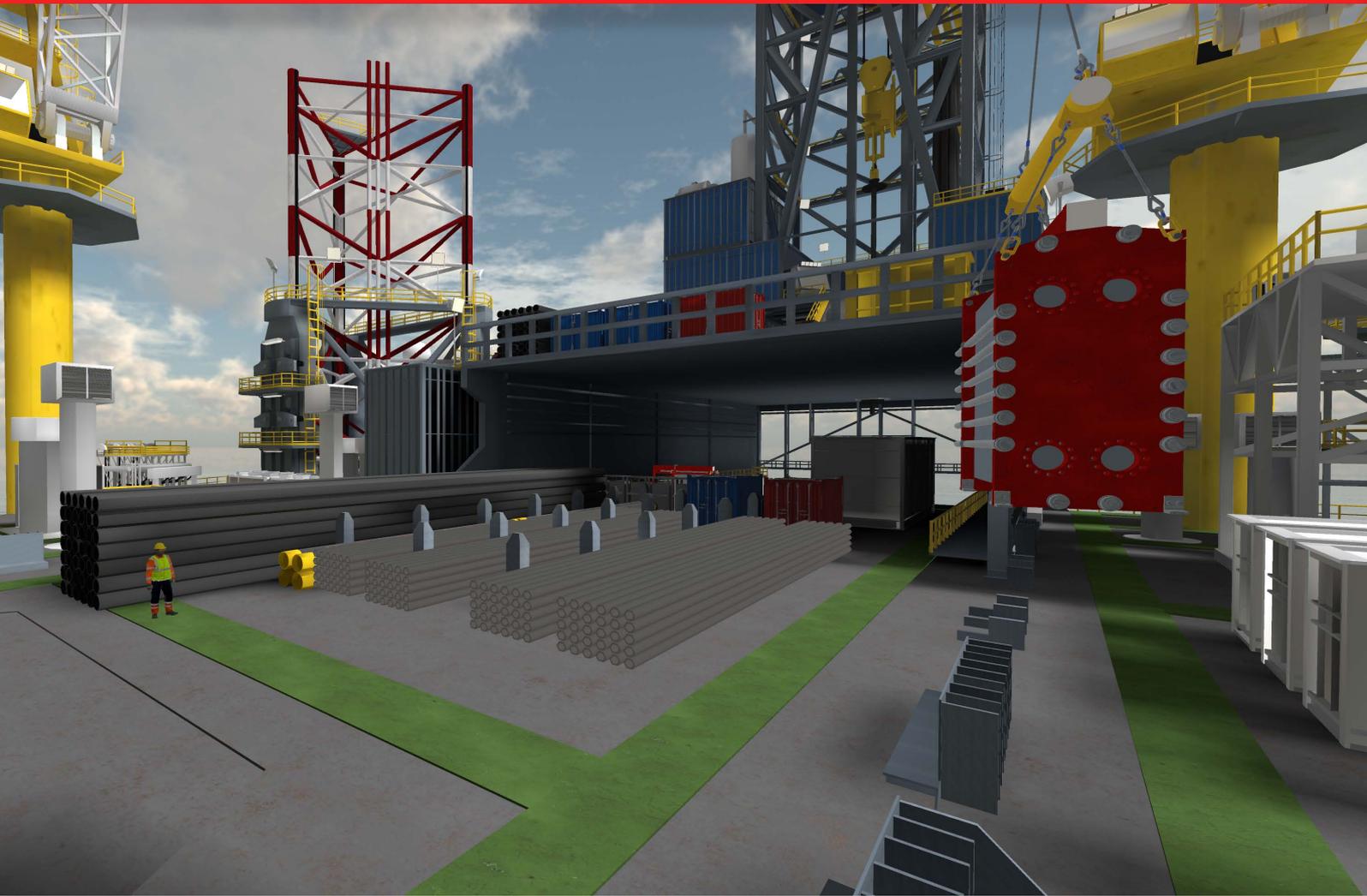


- Starting from a locker room, users can select the appropriate PPE, then move to an office and inspect lift plans and appropriate documents
- The relevant documents can contain built-in interaction, e.g., acknowledgment of reading the plan, multiple choice questions, etc.
- Surveying and inspecting the lift site, identifying hazards within the virtual environment
- Selecting appropriate equipment from a rigging loft, inspecting it for defects, adding them to your inventory or rejecting them to quarantine and keeping track of them using a T-card system within the scenario
- From the inventory, selecting the correct rigging equipment, installing it at various lift points, connecting it to a load and instructing virtual riggers to lift and manoeuvre the load
- Derig equipment and return it to the correct location in the rigging loft

First competence can create unique assessment scenarios tailored to you. With functionality that allows you to track progress, have detailed tutorials, invigilator spectating mode and the sending of results.

Assessments can be created for any on or offshore scenario such as Rigging Safety, Drilling Procedures, Working at Heights and Electrical & Mechanical Safety.

These scenarios can provide hands on training where the Quest device can track your movements and the order tasks are carried out. Simple question and answer layouts can be built into these scenarios with voice over instructions



- Induction and orientation for new employees before travelling to the asset
- Full walkaround of the location, with the environment modelled to accurately reflect the real-world asset
- Allows users to learn the layout of the asset before setting foot in the location, gaining familiarity with the facilities on location, allowing them to plan routes and necessary activities remotely
- Added possibility of performing emergency evacuation procedures or preparing the user for various health and safety procedures
- Sections of the asset can be made interactive, with 3D in-scenario animations or user interaction showcasing functionality of different equipment or facilities that may be unfamiliar to the user
- Allowing the user to experience the asset virtually, before travelling there in person, can greatly speed up their orientation, letting them begin their work faster by reducing the time needed for in person training, and saving costs by removing the need for frequent transport to and from offshore facilities

Our VR development team can replicate environments to improve the quality of training you provide. Creating detailed layouts that match your companies assets.

With this technology we can create, detailed inductions and orientations for new employees, full walkthroughs of new asset for anywhere in the world, evacuation procedures and many more.

Detailed tutorials can be provided during training, with voice over instructions within the environment. These training scenarios can provide a hands on refresher, with a lot more detail than standard written training. Users can also fully interact with the environment by moving and using any required tools.

Scenarios such as, drilling tool safe use, start-up / shutdown procedures, deck and crane operations can be created.

Module 8



- Interactive experience to allow a user to prepare for and react to an emergency
- Starting a scenario in the accommodation cabin, the user will see / hear fire and alarms, to alert them of an emergency
- Immersive effects can be utilised to give the impression of a hazardous environment (fire / smoke, gas leak) without placing the user in real danger
- Can be used to assess the user's response to a situation, and their ability to follow the appropriate procedure, including wearing the correct safety gear, identifying the hazard and following the instructions given to evacuate, interacting with the environment and using the correct tools to deal with the situation if called for (identifying the correct fire extinguisher and using it correctly), moving to the correct muster point, etc.
- While running, the scenario can keep track of the user's responses to any questions asked during the emergency situation, and track their position throughout the scenario, to assess their reaction to the situation and ensure they acted safely and appropriately
- VR can also be used to recreate incidents and accidents that occur on locations, which can then be used as a training tool to assess a user's response to the incident, and to assist in determining how the incident occurred, and how any future incidents of a similar nature could be prevented

Hazardous situations can be replicated into virtual reality scenarios without the risk of injury. These can be tailored to your exact asset layout so users are better prepared.

Trainees can interact with the environment, for example using fire extinguishers, setting alarms and activating switches. Detailed voice instructions can be added to these scenarios.

Some examples of scenarios we can create are: fire safety training, drilling shutdown, evacuation response and incident & accident response.

Virtual Reality Capabilities

With the wireless Oculus Quest 2, it has opened up a realm of possibility that has very little limitations. Scenarios can be created for any circumstance, and custom designed to fit your needs.

If you have any virtual reality concepts or ideas that haven't been mentioned here development is a possibility. Get in touch to see how we can develop your vision.