MAKE VIRTUAL A REALITY...

VR FOR ASSET MANAGEMENT...

VIRTUAL REALITY DELIVERS TIME & COST SAVINGS

Infrastructure Asset Management (IAM) covers the management of the entire lifecycle, including the design, risk assessments, construction, commissioning, handover, operation, maintaining, repairing, modifying and decommissioning of physical and infrastructure assets. Virtalis has proved that VR delivers significant time and cost savings in all of these interrelated spheres.

We can take pre-existing CAD data, transform it into an immersive 3D VR environment and, by setting it in its landscape, integrate that data into the terrain. Pipes, cables, roads and rail sited within their actual terrain can be experienced in 3D via GeoVisionary or Visionary Render software in real-time at 1:1 scale, fully reviewed with the impact on the landscape assessed. Teams can then collaborate in this virtual world, improving communication, increasing understanding and diminishing project development times.

Virtalis' Visionary Render and GeoVisionary software as part of a Virtalis ActiveWorks display system provide full virtual tracking, sound and even virtual touch (haptics). Our users are convinced that information becomes better understood and assimilated by all stakeholders more easily through life-like immersive virtual experiences.

"The ability to create a "Digital Twin" and harness that to VR capability, so that it becomes an intelligent resource to foster superior decision making is something that many blue chips are now exploring. With the virtual model continually updated to mirror its real-world sibling, improvements in collaboration and deeper understanding of the information represented, improvements in productivity of up to 80% are possible."

Prof Mark Skilton, Head of Digital Strategy Centre of Excellence, Enzen Global Limited

KEY BENEFITS:

- Improves communication and therefore decision making
- Real-time, interactive virtual models enhance learning and allow tasks to be rehearsed
- Interaction between departments and remote sites improves efficiency
- Re-use data already created
- Highlights construction clashes
- Improves data quality

Institute of Asset Management IAM CORPORATE MEMBER

VIRTALIS
MAKE VIRTUAL A REALITY

SOLUTIONS FOR HAZARDOUS ENVIRONMENTS AND COMPLEX CONSTRUCTION PROJECTS

VR for Maintenance

The planning of routine maintenance can be made much simpler through the use of VR. Using Virtalis VR software and ActiveWorks display systems, staff can visualise all the assets in the infrastructure together. Schedules can be updated to ensure that they are maintained in sync with one another, none is overlooked and the appropriate engineer is assigned.

As well as eliminating risks and decreasing project timescales, Virtalis systems add a "wow" factor. Starting with just about any data, including major and specialist niche CAD packages and other information sources, you can create highly realistic virtual environments, incorporating scripted tasks and animations, as well as reflecting real-life consequences.

Working in hazardous environments such as with high pressure gas, with very high electric current or on an operational railway, is transformed with VR. In a virtual world, staff are completely safe to make mistakes, to rehearse user/maintenance tasks and to perform actions safely.

Virtual construction of a facility prior to its actual physical construction reduces uncertainty, improves safety and simulates and enables analysis of potential issues. Throughout construction, VR can be deployed to review designs and update plans, so the right decisions can be made. The high quality of the VR data means every trade can input critical information into the model before beginning construction. The VR model will prevent errors by enabling 'clash detection' with the computer model, visually highlighting parts of the building that conflict e.g. structural frame and building services pipes or ducts. This VR model can then be used in the operation and maintenance of the assets, ensuring that the asset owners know everything about their assets without having to leave the office.

"With VR, we can even show it at 1:1 scale to teach students how it works without having to climb to the top of a utility pole. The technology is familiar to many of our students, as they grew up with virtual world computer games."

Patrick Hallihan, Senior Training and Engineering Instructor at National Grid.

"VR is enabling us to do and see things that we can't in real life. In the virtual world, our cabinets have current running through them, making all the sounds and reacting in all the ways you'd expect in real life."

Stephan Pradal, Schneider Electric Technical Institute Director.