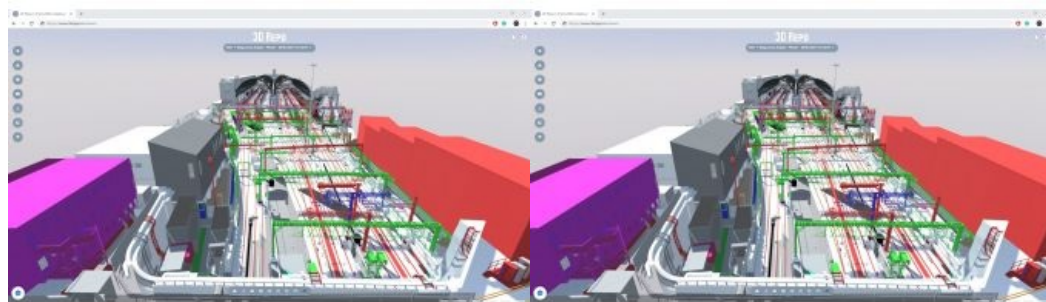


Remodelling King's Cross Station



London's King's Cross railway station is one of the busiest stations in the United Kingdom, serving close to 40 million passengers each year. But it has been 25 years since any major intervention has taken place on the railway, and it's now in need of some major renewal and remodelling work. The remodelling will allow for an increase in the length and number of long-distance trains and

facilitate future improvements to journey times.

[Specialist Project Integration](#) (SPI) are undertaking this massive £250 million project which includes extending passenger platforms, recommissioning an unused tunnel, optimising the track layout and modernising the signalling control system. One of the major challenges for this complex project is that the new railway needs to be built on top of existing railway whilst it remains open.

Improving Coordination

With about 300 designers, contractors, and managers across multiple companies, and some 3,500 CAD files; SPI knew that traditional methods of communication and design coordination were not appropriate. Furthermore, they needed to be sure that disruption to one of the UK's busiest railway stations was kept to a minimum.

Despite using [ProjectWise](#) as a common data environment (CDE), there was also a need for a design coordination and collaboration tool that could run easily in a web browser. 3D Repo's digital platform for Building Information Modelling (BIM) was chosen as the platform to help SPI with coordination due to the fact that it required minimal training, and it could be accessed from any computer without the need for software installation or licencing.

The Digital Construction Platform

SPI are using 3D Repo as a design coordination tool and also as a communication tool to help them bring this project together. A predicted saving of about 10,000 hours of on-site work thanks to the combination of software applications being used including [Bentley Microstation](#), [3D Repo](#), and SPI V-RAM.



SPI is using 3D Repo as a design coordination tool and also as a communication tool to help them bring the Kings Cross station project together.

One of the key features used is Instant Clash, which identifies issues e.g. steelwork clashing with overhead lines, highlighting the exact intersection point to save potential re-work during construction. Designers and engineers simply sign-in from a web browser to view the latest models and log issues and comments into the platform as a central hub for communication – no more lost emails.

3D Diff detects changes made to the model regardless of file type, making it easy for multidisciplinary teams to collaborate when different design software applications are being used. It compares actual geometry changes between models, highlighting new elements in green and deletions in red. 3D Repo supports many popular file formats including [Autodesk Revit](#) and [Navisworks](#), Bentley DGN, IFC, FBX and many more.

Communication Tool

3D Repo is also being used to host a "reality model" of the project with the purpose of democratizing data and reducing complexity for all other stakeholders, as they do not necessarily understand CAD drawings and BIM models.

The reality model is a realistic version of the design, adding context to the remodelling project and removing the need for interpretation. SPI have found that this has helped to minimize time scales in decision making from local authorities, station management, train operators etc. as they are able to relate the reality model back to a real-world context.

Other tasks that 3D Repo is being used for during the [King's Cross](#) remodelling project:

- Stakeholder engagement
- Engineering meetings
- Planning e.g. site logistics
- Obtaining consents



<https://www.gim-international.com/content/news/remodelling-king-s-cross-station>
