As Jeremy Horgan, Head of Software Development at Royal HaskoningDHV, I initiated a technology research project with Luke Courtney, focusing on visualizing 3D simulation event trace output using a browser. This project is valuable for our research and development efforts, giving us the confidence to make a technology change.

Our current simulation product faces a few restrictions that limit its usability and collaborative potential. These limitations include desktop-bound 3D visualizations and a lack of real-time sharing features.

This project showed that using the same simulation event trace that the desktop application produces, a different visualization technology can be used to render the same content to a web browser.

On the 11th March 2025, I demonstrated the output of this research project to our simulation group of 40 people as a component of our 3D strategy update. I received a lot of questions relating to future possibilities and very positive feedback.

The project was approached in a structured manor with two-week sprints, followed by a review meeting with some members of the simulation development team. This allowed for an appraisal of each increment with feedback for improvements that could be made.

In conclusion, this impressive work gives us the confidence that we can utilize a web visualization technology such as WebGPU, using a library like Babylon js, to extend the reach of dynamic 3D simulation visualization beyond the desktop.

Jeremy Horgan
Head of Software Development - Simulation

T +44 (0)121 709 6520 | **M** +44 (0) 7818 428 727 | **E** jeremy.horgan@rhdhv.com | **W** twinn.io

Royal HaskoningDHV, 6th floor, Cornerblock, 2 Cornwall Street, Birmingham, B3 2DX, United Kingdom

Follw us on LinkedIn | Follow us on Twitter