ABP - VR Safety Training

virtual reality port safety induction and training

the challenge

Associated British ports (ABP) is the UK's largest ports operator, handling around £150bn of trade across our network of 21 ports every year. Ports are busy places and safety is a core value for ABP, which is why we continue to invest in upskilling our workforce. We have an in-house training provider, ABP Academy, which has developed an innovative Virtual Reality (VR) health and safety training course for employees. Watch demo HERE.

Ports can be dangerous places and having the right health and safety measures in place, as well as adequate training is vital to ensuring that everyone goes home safely at the end of the day. The use of VR makes the training more realistic and impactful, in turn making it more effective and improving safety in our ports. This technology provides a safe proactive way of experiencing and learning about the dangers faced in a port, without real-world near misses.

the innovation

Our VR safety training course is set in a simulated port environment, which incorporates different scenarios encountered by employees, including working at height and safely navigating the port estate and the office. This design is based on cross-regional and functional elements, focusing on the highest risks and widest outreach. The module can be applied not just for current use cases but to enable many more, laying the groundwork for a port metaverse, which could, in future, be used by all port users and customers. ABP owns all the models and code and is using open-source software platforms to build the applications that run the experience in a modular cost- effective way. In future, there is scope to expand the training so that it covers the use of port equipment, which will increase efficiency by eliminating the need for employee travel and for equipment to be taken out of service for training.

Research[2] has proven that using VR in training courses makes learning 4x faster than via traditional, classroom- based methods. Attendees are 4x more focused in VR training than in e-learning training sessions and 275% more confident to apply what they learned after training. Our analytics platform gathers data from randomised groups of participants and trends performance data automatically. The cloud-based engine receives data automatically from every user and adds to our data sets, helping the ABP Academy team quantify engagement and employee performance and identify future training gaps. A core objective is to reduce the number of incidents and near misses and increase awareness of 'Spot-It's' (ABP's tool to log potentially dangerous incidents).

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[2] 'The Effectiveness of Virtual Reality Soft Skills Training in the Enterprise' by PwC pwc-understanding-the-effectiveness-of- soft-skills-training-in-the-enterprise-a-study.pdf

Sustainability

ABP is committed to the long-term use of this technology. As VR technology continues to advance, we can continue to increase realism and provide new and more immersive training courses for all our staff. By building and owning this technology, ABP unlocks multiple uses beyond just the proposed VR application. These include simulation modelling for operations, safety department toolbox talks and virtual port tours/experiences and more, resulting in an increase in efficiencies like reducing duplication and employee travel and delivering faster training.

how it was implemented

Associated British Ports (ABP) implemented its Virtual Reality (VR) health and safety training course through strategic steps using an agile process. This project was built with solution partners, ABP Innovation and the ABP Academy, working together to co create this imersive experience. The design, based on cross-regional and functional elements, focuses on high-risk scenarios with broad applicability. ABP owns all models and code, utilizing open-source software for cost-effective, modular applications.

Cloud-based analytics built using similar existing ABP architecture collects data from users, facilitating performance benchmarking and identifying training gaps. The program's scalability and potential expansion cover not only current scenarios but also future training areas like port equipment operation, reducing travel and downtime. ABP's commitment to sustainability involves long-term use of VR technology, enabling continuous improvement and realism enhancement.

The implementation aims to enhance safety by providing a realistic and impactful training experience, reducing incidents, near misses, and increasing awareness through existing safety tools like 'Spot-It.' Beyond training, ABP sees multiple uses for the technology, including simulation modeling, safety talks, and virtual port experiences, resulting in increased efficiencies and reduced duplication. Overall, ABP's approach integrates innovation,

ownership, and adaptability to leverage VR for effective, sustainable, and multifaceted improvements in port operations and safety.


result

ABP has constructed and implemented this initiative, and it is currently effectively utilised for safety training across a considerable number of employees and functions throughout its network of 21 ports. The strategy of building rather than buying enables ABP to maintain flexibility in deploying VR within its self-constructed Metaverse, all the while remaining a cost-effective method for constructing and implementing modules.

Saheed Onisemo, ABP HSE Trainer, who delivers the H&S training, comments: "It is great that we were able to give colleagues an imersive insight into what learning within a 360 degrees virtual port is like." "Whilst any decisions made in this virtual environment do not have real life consequences, participants do experience deeper learning results due to the realistic nature of the training, which helps them apply their knowledge to the real world more effectively."

conclusion

In summary, ABP's implementation of the Virtual Reality (VR) health and safety training initiative highlights the company's commitment to innovation and employee safety. The success of the program, applied across ABP's network of ports, demonstrates a proactive approach to safety education. The VR training, providing a realistic insight into port

environments, proves effective in fostering meaningful learning experiences. ABP's initiative aims to reduce incidents and near misses, empowering employees to apply their knowledge confidently in real-world situations.
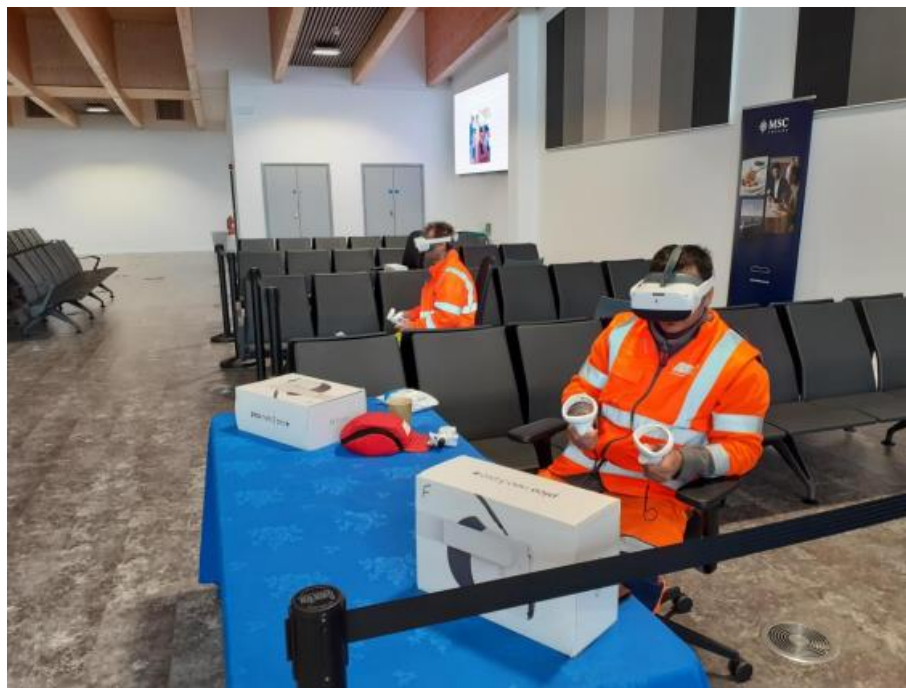
The broader impact of companies adopting VR and immersive experiences for safety training is significant. As shown by ABP, these technologies make training more efficient, with sessions typically four times faster, and increase participants' confidence by 275% in applying learned skills. The virtual approach minimizes real-world risks while enhancing the overall effectiveness of safety education. This not only improves employee safety but also suggests the potential for VR to reshape safety training in various industries. ABP's commitment to advancing VR technology sets an example for companies seeking practical solutions to enhance safety outcomes in their operations. Embracing immersive experiences in training contributes to a culture of continuous improvement and heightened awareness in workplace safety, fostering a safer working environment for all.

LINK: https://www.abports.co.uk/about-abp/safety/