



CASE STUDY

3D virtual reality (VR) training solution for the
hydrocracker unit-Honeywell India

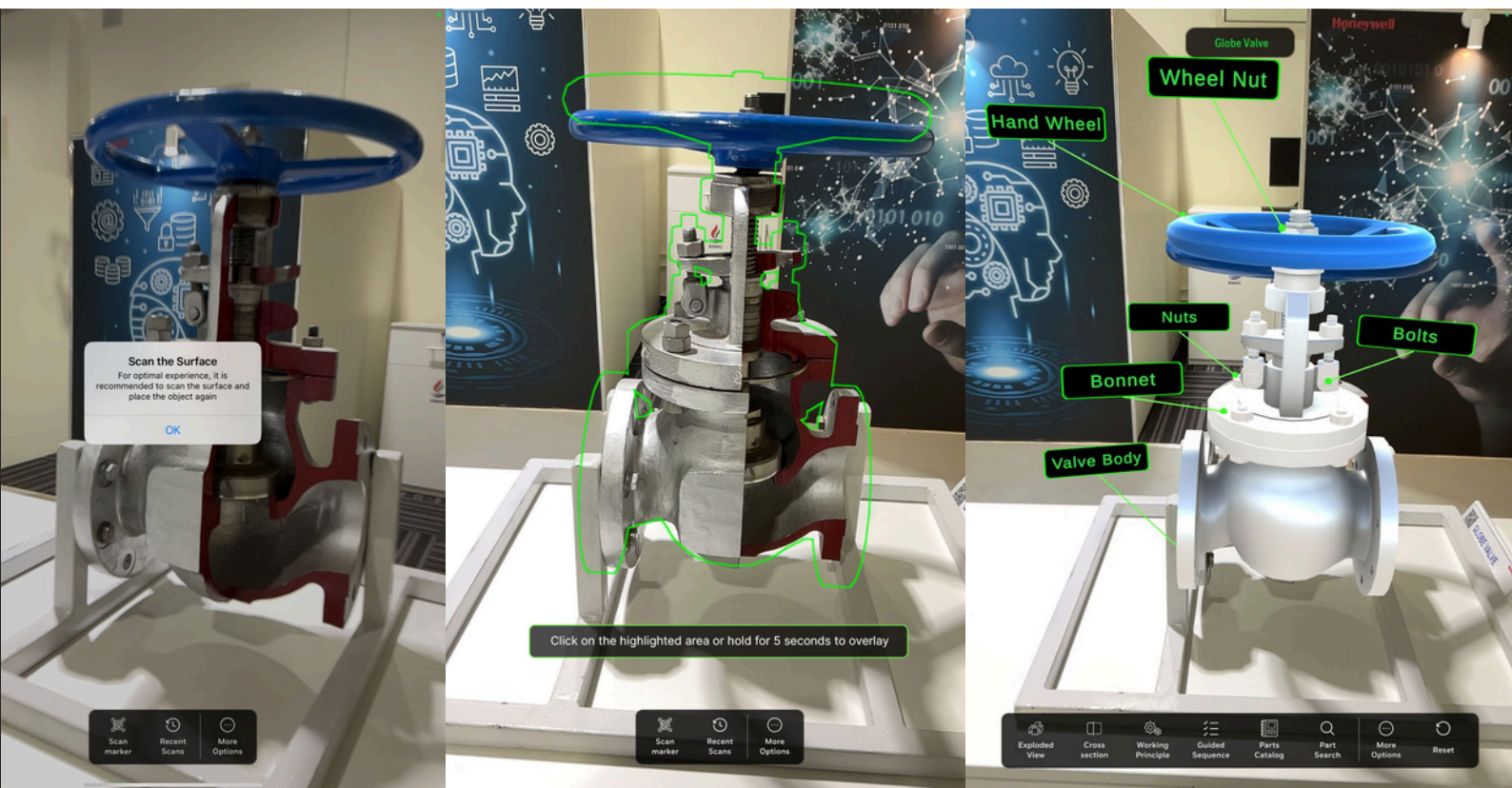


TILT LABS
A PRODUCT REALIZATION COMPANY



EXECUTIVE SUMMARY

TILTLABS, a leading provider of immersive learning solutions, partnered with Honeywell India to develop a cutting-edge 3D virtual reality training environment for their hydrocracker unit. This state-of-the-art solution aimed to revolutionize workforce training, enabling Honeywell's personnel to acquire hands-on experience in a safe, controlled, and cost-effective virtual environment.





PROJECT CHALLENGES



Accurate Replication

Creating realistic 3D models of the hydrocracker unit and its components while ensuring authenticity and fidelity.



Dynamic Simulations

Integrating dynamic simulations and interactive scenarios for realistic training experiences.



Seamless Integration

Incorporating Honeywell's proprietary data and simulations into the VR environment for a cohesive user experience.



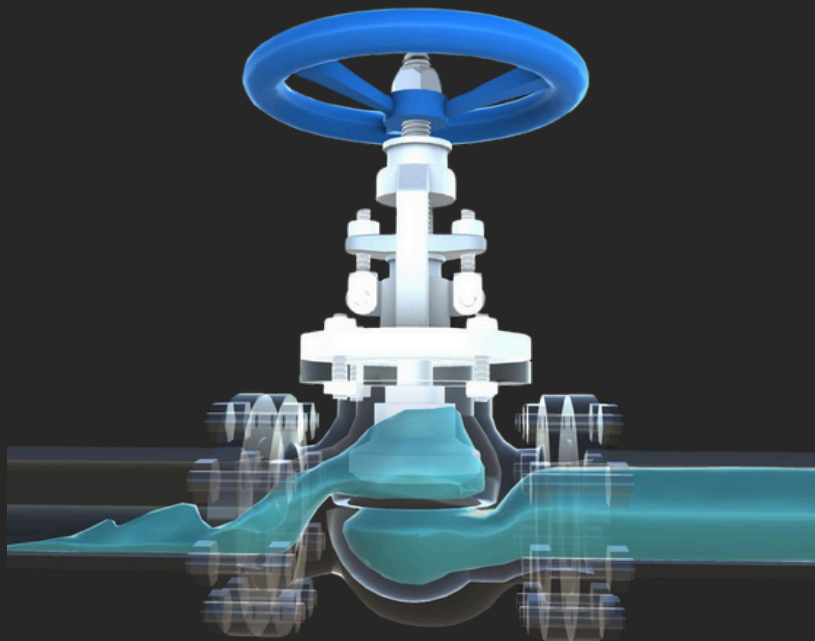
Resource Optimization

Optimizing models and assets for performance without compromising visual quality.



GOALS AND OBJECTIVES

- Develop a highly immersive and interactive 3D virtual training environment for Honeywell's hydrocracker unit.
- Provide a safe and cost-effective alternative to traditional hands-on training.
- Enable trainees to practice critical procedures, troubleshoot issues, and respond to emergency scenarios in a risk-free virtual space.
- Enhance knowledge retention and skill development through experiential learning.
- Improve workforce preparedness and operational efficiency.



SOLUTIONS AND METHODOLOGY



TILTLABS leveraged its virtual reality (VR) and 3D modeling expertise to create a comprehensive solution. The project involved:

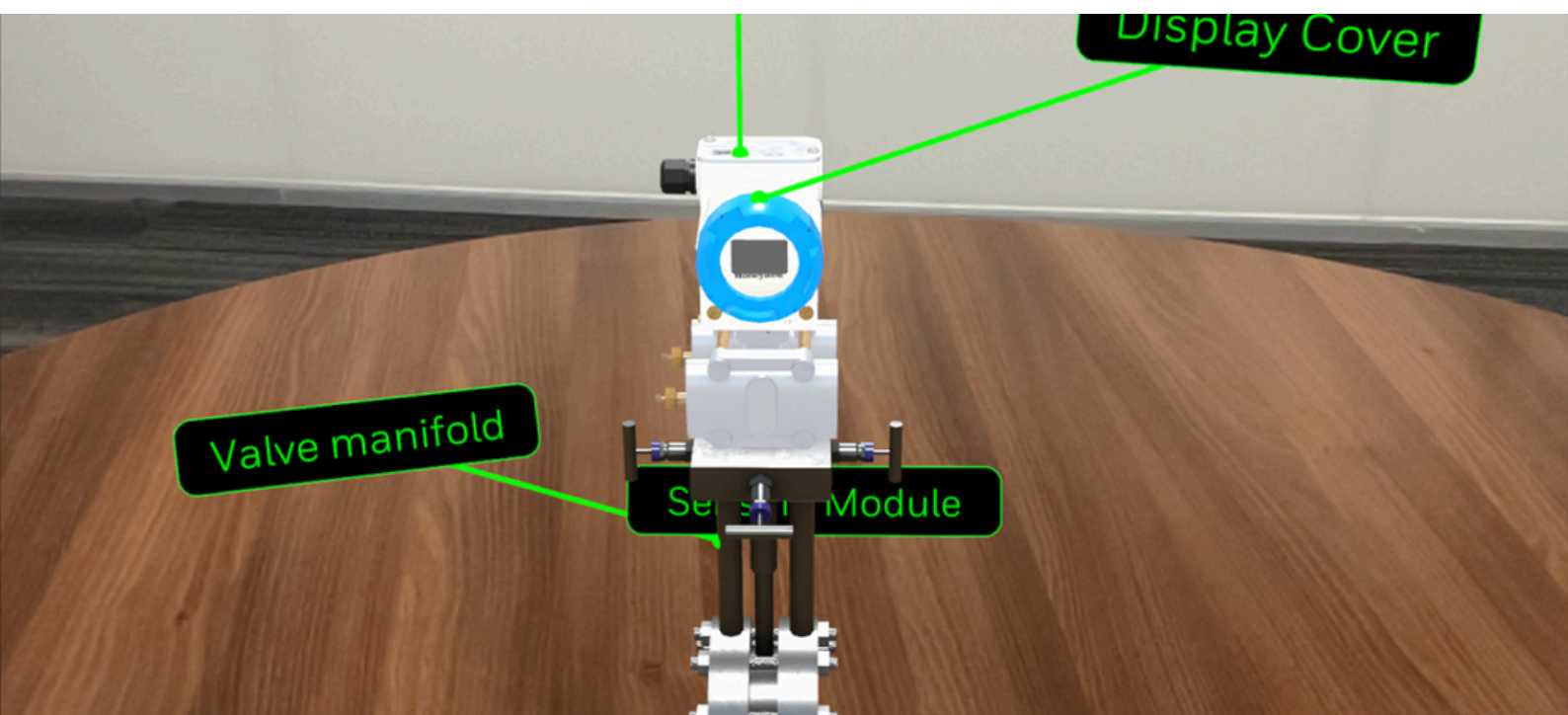
- Conducting on-site surveys and data collection to ensure accuracy.
- Developing photorealistic 3D models of equipment, piping, structures, and the overall plant environment.
- Incorporating dynamic animations and simulations to replicate real-world processes and behaviors.
- Implement interactive scenarios and standard operating procedures (SOPs) for training.
- Integrating Honeywell's proprietary data and simulations for a seamless user experience.
- Deploying the solution on industry-standard VR hardware for immersive training.

OUTCOME AND RESULTS



The 3D virtual reality training environment developed by TILTLABS has yielded significant benefits for Honeywell India:

- Improved workforce preparedness and competency through experiential learning.
- Reduced risk exposure and associated costs for hands-on training.
- Enhanced knowledge retention and skill development among trainees.
- Increased operational efficiency and productivity through better-trained personnel.
- Ability to replicate and practice emergency scenarios in a safe, controlled environment.





BENEFITS OF THE PROJECT

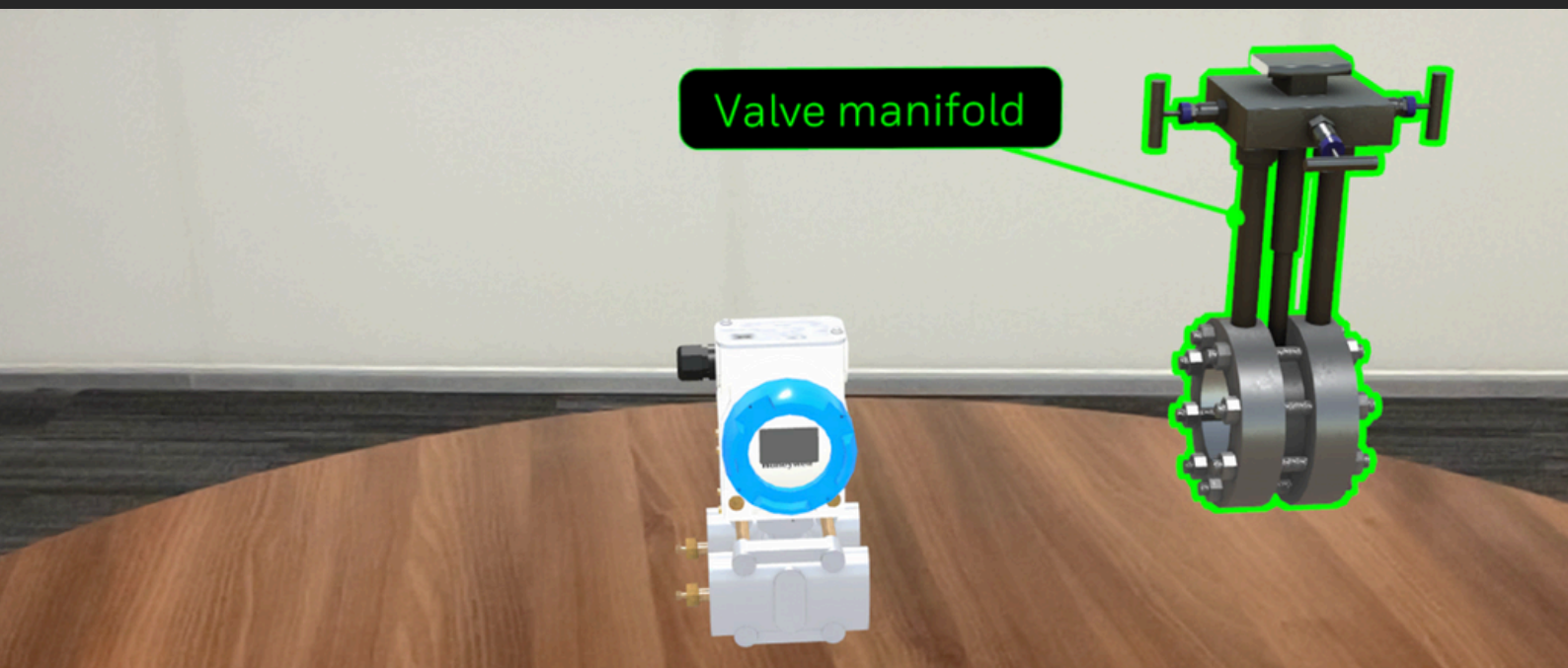
Safe and Risk-Free Training: Trainees can practice critical procedures and respond to emergency scenarios without exposing themselves to real-world hazards.

Cost-Effective: Eliminates the need for expensive physical mockups or shutdowns for training purposes, reducing overall costs.

Experiential Learning: Immersive and interactive experiences lead to better knowledge retention and skill development.

Scalability: The virtual environment can be easily scaled and replicated to train larger workforces.

Data-Driven Insights: Comprehensive data collection and analysis provide valuable insights for continuous improvement.





WHO THE PROJECT WILL BENEFIT

The 3D virtual reality training environment developed by TILTLABS will benefit a wide range of stakeholders within Honeywell India and the broader industry:

- Operators and Technicians: Gain hands-on experience in a safe, controlled environment, improving their skills and preparedness.
- Trainers and Instructors: Leverage advanced technology to enhance the effectiveness of their training programs.
- Health, Safety, and Environment (HSE) Professionals: Ensure adherence to safety protocols and reduce risk exposure.
- Plant Managers and Operations Leaders: Improve workforce competency, operational efficiency, and productivity.



TESTIMONIAL

"TILTLABS' 3D virtual reality training solution has been a game-changer for our workforce development efforts. The immersive environment has improved training effectiveness and enhanced our safety protocols and operational efficiency. We are delighted with the results and look forward to expanding our partnership."

- Honeywell India Executive

CONCLUSION

The collaboration between TILTLABS and Honeywell India has resulted in a cutting-edge 3D virtual reality training solution that addresses the critical needs of workforce development in the energy industry. By leveraging advanced technology and immersive experiences, this innovative approach has revolutionized traditional training methods, enhancing safety, reducing costs, and improving overall operational excellence. As the industry continues to evolve, partnerships like these will play a pivotal role in shaping the future of workforce training and development.

THANK YOU!



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