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Immersive Safety: VR Training for Gas Mask Proficiency and H2S Response

Problem:

Exposer to Hazardous Gases

In the oil and gas industry, workers face frequent exposure to hazardous gases like hydrogen sulfide (H₂S), which can severely affect their health. Traditional training methods for using gas masks and handling H₂S scenarios often fall short in realism. They struggle to engage trainees fully and don't provide sufficient hands-on practice. As a result, workers may not be adequately prepared, which raises the risk of accidents and fatalities.

Adding to this challenge, many workers come from foreign countries, particularly low-cost labor in the Middle East, with limited education or background in the oil and gas field. This lack of foundational knowledge further complicates their ability to grasp and effectively apply safety protocols, increasing the overall risk in these high-stakes environments.

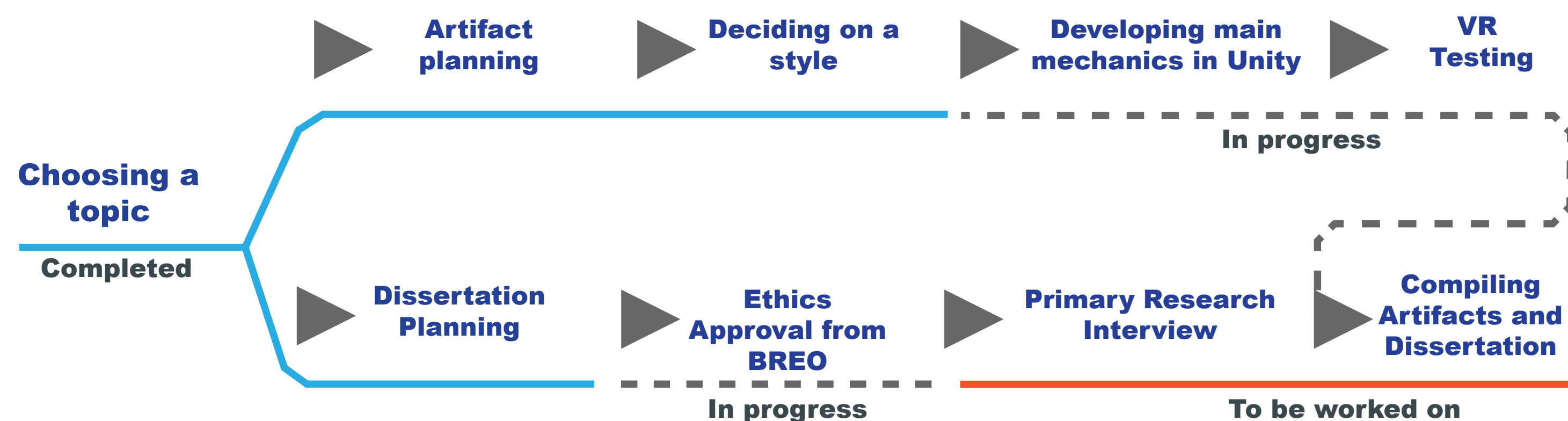
Solution:



Imagine being able to train for dangerous situations without taking any real-world risks. Virtual Reality (VR) training enables this. VR creates lifelike environments and scenarios, providing aengaging and interactive learning experience. Workers can practise using various gas masks and handling H₂S incidents in a safe, virtual environment. This approach improves

their memory of safety protocols and allows them to learn skills faster. Furthermore, they can practise as much as they want without depleting physical resources. What is the best part? VR training provides instant feedback, allowing workers to improve on the spot. For the oil and gas industry, this means better-prepared workers and lower training costs

Planing:



Gas Masks

The ability to identify and correctly use different types of gas masks is crucial for ensuring worker safety in the oil and gas industry. Each type of mask is designed for specific conditions and hazards, making it vital for workers to understand their functions and applications.

H2S detectors

The ability to identify and correctly use H₂S detectors is crucial for ensuring worker safety in the oil and gas industry. These detectors monitor hydrogen sulfide levels, alerting workers to the presence of this toxic gas. Proper usage ensures timely detection and response, allowing workers to take protective measures before exposure reaches dangerous levels. Understanding the functions and applications of different types of H₂S detectors is vital for maintaining a safe working environment.

Personal Protective Equipment (PPE)

Essential PPE includes hard hats to protect against head injuries, reflective vests for enhanced visibility. Proper use and understanding of PPE are crucial for maintaining a safe and secure working environment.

Project aims



Enhanced Safety



Cost-Effective



Improved Learning Retention



Accessibility and Flexibility



Improve Response Skills

Realistic Scenarios

Realistic scenarios in VR training provide significant benefits to the oil and gas industry by allowing for hands on experience without real world risks. This immersive approach engages trainees and improves their retention of safety protocols. Workers can practise responding to emergencies such as gas leaks in a safe environment, preparing them for real-world incidents. Moving in the opposite direction of the wind to avoid inhaling gas and prioritising self-rescue over assisting others are two important training elements. VR training enables repeated practice without the risk of injury or equipment damage, and it provides real-time feedback for immediate learning correction. Additionally, it reduces the need for physical resources and downtime, making it a cost-effective solution. This ensures that workers are well prepared, resulting in increased safety and operational efficiency.

