

## ABSTRACT

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*In the current digital era, metaverse technology has evolved as a platform offering new dimensions in digital interaction and reality simulation. This project examines the role of 3D objects in the metaverse to enhance process safety in the Process Safety Fundamental (PSF) project by Shevia Indonesia and HSSE Corporate Pertamina. The inclusion of 3D objects in the simulation of 13 PSF elements allows for deeper visualization and simulation of potentially hazardous scenarios, ultimately improving the effectiveness of safety protocols. This project utilizes Blender for 3D modeling and Adobe Substance Painter for texturing. Through the role of 3D, it is expected to improve safety standards, operational efficiency, and reduce the risk of accidents and environmental incidents.*

*Keywords: 3D Objects, Metaverse, Process Safety Fundamental, Shevia Indonesia, Pertamina*