

AIGC Solutions – Virtual Reality (VR) & Augmented Reality (AR)

Case Study: The Use of Smart Helmet in a Chemical Plant

The Opportunity



Site workers and technicians in a chemical plant are often subjected to various types of hazards, whether associated to the site surroundings or to the equipment they are working on and the product itself. So often, injuries and accidents happen due to lack of awareness and alertness of the surroundings or sometimes due to lack of deep understanding of the equipment they operate or perform maintenance on. These have caused companies to increase number of workers needed at the sites to ensure enough supports are provided. However, this also causes increase in costs overall as manning allocation are less efficient and productivity is reduced.

The Approach

A chemical plant managed to reduce the numbers of workers required to be at certain hazardous sites with an introduction of smart helmet into their site maintenance activities. Smart helmet allows for effective remote guidance for the technician performing the task, while keeping him or her safe and alerted of any potential danger through the smart sensing technologies. The whereabouts and vital signs of the technician is also being constantly monitored remotely.

The Benefits

- Number of technicians exposed to hazards are greatly reduced
- Time to perform a certain repair task is reduced through various supporting methods from the smart helmet (voice guidance, drawings reference on the display)
- Better workforce and resource allocation and distribution
- Increased overall productivity for the plant