

A large, dark, curved shape frames the bottom half of the page, containing a photograph of an industrial facility at night. The facility is illuminated by warm lights, with a large plume of smoke or steam rising from a central stack against a dark sky.

**How Augmented Reality can  
empower field workers with  
right safety, compliance,  
and productivity**

# Summary

*The Oil & Gas industry helps to keep the world running, and as such requires digital tools to make sure that workers are safe and efficient when providing maintenance on all associated equipment. Oil & Gas equipment and sites are often found in remote locations making inspections, maintenance, and support challenging for lone and or new technicians who are responsible. To better support technicians, digital tools like Augmented Reality can provide real-time, hands-free information in the form of digital work instructions, virtual training, and remote collaboration.*



## What are Augmented Reality and Virtual Reality?

Augmented Reality can be seen as an extension of the user's environment, which gets enriched in real time with superimposed digital models and information, such as texts, graphics and multimedia. The aim of this technology is to "augment" and improve the physical world with contextual, significant and relevant information.

By contrast, Virtual Reality technology radically changes the users' perception of the world as it immerses them into an artificial, unreal and computer-generated environment. Elements are then separated from the actual world and replicated into a virtual one, in which users rely on their five senses to interact with objects and places.

The main differences lie in the devices used and, therefore, in the functions provided and the sector where they can be employed.

## Challenges Faced in the Oil & Gas Industry

### WORKER SAFETY

In order to smoothly run their operations, companies in the Oil & Gas industry must perform maintenance and inspection activities on huge, complex, and expensive assets daily. Field technicians performing maintenance work on this kind of infrastructure often encounter potentially hazardous situations that require immediate action and full information regarding the asset that is subject to intervention. Even ordinary maintenance activities may turn out trickier than expected if necessary information is missing or when the field worker lacks experience.

### LACK OF KNOWLEDGE

Furthermore, many field service industries including Oil & Gas are facing a retiring workforce. This shift to losing experienced people from the workforce will create a loss of collective knowledge and a new generation of workers will be challenged with quickly gaining on-the-job experience. Organizations operating in Oil & Gas need ways to document the knowledge around equipment and machinery as well as find ways to connect newer workers to expert ones for daily work and training purposes.

### DISTANCE BARRIERS

Finally, Oil & Gas are often remote in the field jobs, where the elements and distance are a challenge. Workers may be alone and need more support. To gain another person's insight there is time, money and travel needed for backup. To remedy this situation, technicians need a possibility that allows feedback in real-time remotely.



# Supporting Field Service Oil & Gas Technicians

*OverIT Next-Gen FSM Platform accelerates maintenance tasks by allowing crews to efficiently conduct the component inspection, saving time and money, while enabling faster onboarding and training of technicians.*

## DIGITAL WORK INSTRUCTIONS

Digital Work Instructions drastically reduce risk exposure. In the Oil & Gas industry, frontline workers are required to strictly follow well-defined procedures preventing hazardous and dangerous behaviors. In this regard, providing the operators with Digital Work Instructions allows them to be guided throughout the execution of the activity and strictly adhere to safety procedures. This plays a major role when it comes to low skilled or inexperienced workers.



Compliance incidents

## SAFETY IN THE FIELD

Oil & Gas companies are among industries with the highest risk of human error, and some of the most dangerous work environments. AR-Remote Support integrated with smart glasses lets field workers perform their tasks hands-free, keeping them safe from dangerous machinery and equipment. Virtual reality training further supports safety by enabling organizations to train employees in virtual 3D environments.



Field workers safety

## AUGMENTED REALITY SUPPORT

Remote Expert guidance allows technicians to solve complex and rare activities. Due to the high complexity characterizing plants in the Oil & Gas industry, even experienced workers might require additional information when dealing with complicated and unusual situations. Providing the operator with the possibility of immediately asking for the support of a remote expert considerably impacts the efficiency and effectiveness of the intervention.



First-time-fix rate

## IMPROVED TRAINING PROCESSES

Virtual Reality significantly revolutionizes the traditional training approach. In the Oil & Gas industry, VR is adopted to conduct virtual training enabling a drastic reduction of the risks associated to a traditional "training on-the-job" approach. The unique ability to provide an immersive experiential training allows trainees to simulate real case scenarios avoiding the risks associated with dangerous environments and rare events, reducing costs due to accidents.



Mean repair time

Remote control of maintenance activities on oil platforms



# Benefits of OverIT Next-Gen FSM Platform

Augmented Reality and Virtual Reality are not only digitizing and innovating companies around the world, but they are also creating safer and more efficient work environments particularly in Oil & Gas. The hands-free real-time information for digital work instructions, virtual checklists, and training tutorials are supporting the Oil & Gas workforce.



## ASSIST FROM REMOTE

Virtual support available to technicians, provided in real-time by the operations center with interactive annotative user interfaces in the real-time collaboration call



## INCREASE PRODUCTIVITY

Using OverIT Next-Gen FSM Platform technicians have a reduction of intervention times and increase their number of first-time fixes for Oil & Gas equipment on-the-job



## SHARE EXPERTISE

Remote training and minimization of staff displacements within the plant due to advanced sharing of multimedia contents supporting task execution



## WORK SAFER

100% hands-free device, compatible with PPE and suitable for noisy industrial environments ensure safety and productivity for technicians

OverIT Next-Gen FSM Platform introduces innovative practices that increase safety and provide the best support for frontline workers, as well as to boost productivity and drive success to companies operating in the Oil & Gas industry.