How Augmented Reality is Changing the Way Energy and Utility Work is Done

Summary

Regular maintenance of Energy and Utilities equipment is critical to keep communities running and functioning. Field Service for electric and water Utilities is often found in remote locations making inspections, maintenance, and support challenging for lone or new technicians who are responsible. For the technician to receive information promptly while still being safe and conducting tasks efficiently, virtual collaboration tools combined with Augmented Reality prove to be extremely helpful.

What are Augmented Reality and Assisted 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" or, in other words, to improve the physical world with contextual, significant and relevant information.

By contrast, VR technology radically changes the users' perception of the world as it immerses them into an artificial, unreal, and computer-gene rated 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.

MR can be positioned in the middle, as it integrates digital models into the physical world, enabling users to interact with them while still being aware of the real environment around them.
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 Energy and Utility Industries

Energy and Utilities sites are becoming much more complex, and the mix of new machinery and legacy equipment can make it challenging to know how to conduct maintenance on everything. Repairs have high pressure to be completed quickly, as many citizens are relying on Utilities for daily life. Technicians are expected to hold a vast amount knowledge on many different processes, and any lapse in memory can create safety concerns and larger issues.

Furthermore, one in five Utilities workers are retirement age. 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. The Energy and Utilities industry needs 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.

Finally, this industry is 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. This interruption can affect the community as the any risks or repairs can affect, water, electricity, and heat. To remedy this situation, technicians need a possibility that allows feedback in real-time remotely.

Enhancing Field Service Maintenance in Energy and Utilities

OverIT Next-Gen FSM Platform can support Energy and Utilities technicians with hands-free real-time information, ML-powered automatic debriefing, and virtual training environments.

AUTOMATIC DEBRIEFING

With OverIT Next-Gen FSM Platform, a worker can pull up to a job site, wear a pair of smart glasses, and have at their fingertips every piece of information necessary to perform their task through step-by-step digital work instructions, as well as a virtual repository of information. Continuous training of ML models enables recognition of images and automatic data extraction for a complete work order debriefing. No longer needing paper manuals, technicians can pull up work flows for specific repairs or maintenance processes for a very particular part by accessing a shared repository.

SAFETY IN THE FIELD

Safety can be improved by enhancing training before workers go out in the field with OverIT Next-Gen FSM Platform. The ability to train and simulate experiences in a controlled environment before going out in the field will reduce user errors and accidents. The combination of on and off field Augmented Reality use for workers helps to create a safer work environment, increasing employee satisfaction, and reducing costs due to accidents or injuries.

AUGMENTED REALITY SUPPORT

With OverIT Next-Gen FSM Platform, field technicians can connect live to a remote technical service agent to help walk them through difficult processes, or tasks through interactive interfaces. If a technician needs to confer with someone who is an expert, they can share what they are seeing while working on field, thus to receive verbal directions or even visual cues overlaid on the equipment they are viewing. This interactive teamwork approach creates more efficiency and prevent accidents, saving companies money.

IMPROVED TRAINING PROCESSES

The combination of digital work instructions, an ML-powered repository, and remote support provided by OverIT Next-Gen FSM Platform, make it easier for new Energy and Utilities workers to learn on the job without the need to have a second person in the field accompanying them. The time to upskill new trainees is reduced, and errors made on the job while learning is also decreased. Overall money and time are saved during the training process, while empowering the technicians to feel confident on their own.

Watch a success story

Benefits of Augmented Collaboration

OverIT Next-Gen FSM Platform is not only digitizing and innovating companies around the world, but it is also creating safer and more efficient work environments in the Energy & Utilities industry. The hands-free real-time information for digital work instructions, virtual checklists, and training tutorials are supporting the Energy and Utilities workforce. Additionally, the use of virtual remote collaboration is saving time and money while supplying a simpler knowledge transfer system.

Utilities technicians can carry out their tasks more efficiently, due to hands-free vocal instructions and real-time remote support

Specialized skills and ability are transferred to the entire organization for shared and proactive use in the field

Training of inexperienced staff is quicker and simpler to carry out due to ML-powered digital collaborative learning on devices

Productivity, safety, and quality of repairs reach the highest standards when using AR tools in their field of view

By combining Augmented Reality and Artificial Intelligence,
OverIT Next-Gen FSM Platform reshapes the way technicians in the Energy and Utilities industry perform their tasks,
providing them real time information and vocal commands for hands-free operativity,