

AR/VR Assisted Remote Field Services solution

Remotely enhance smart workforce capability





Introduction

88% of utilities and O&G players are focusing on adopting next-gen technology interventions – while senior experienced personnel are retiring – resulting in a shortage of skilled workforce. Additionally, new regulations, changing employer needs, shifting demographic trends and a glaring lack of experience and technical skills are making replacements even harder to find. On the other hand, lower “first-time-right” fix rates and service quality, longer repair times are increasing asset downtimes and maintenance costs. This makes it critical to bridge the gap across available skill at hand and required capabilities on field through next-gen, economical technology interventions.

Aging workforce / Lower retention of skilled personnel adding risk to uninterrupted operations

Increasing Field Service costs. Lower fix rates, increasing repair times. Lower quality of field operations

Increasing training costs for new personnel. Travel costs for skilled workforce to site

“New Normal” – utilities organizations expected to work with reduced deployable workforce



About the solution

The AR/VR Assisted Remote Field Services solution by IoT WoRKS™ helps bridge the gap in field services in utilities and oil and gas industries through real-time, remote, step-by-step guidance made available to field technicians, and a ready-to-refer handy repository of context-specific digital content – thus rapidly upskilling and empowering field personnel without having to deploy extra manpower.

HCL’s Augmented and Virtual Reality suite of solutions will enable organizations to improve the productivity of resources and improve their utilization optimally – delivering superior service quality combined with minimal service downtimes resulting in improved margins.





Tools and Capabilities

- **UI/UX Tools:** Adobe Photoshop, Autodesk Maya, Axure
- **Imaging tools:** OpenCV, PyTorch, Keras, TensorFlow
- **Mobility tools:** Android, iOS, Windows, Vuforia, Unity
- **Data Analytics:** AWS, Azure, ThingWorx, TensorFlow
- **Devices Supported:** HoloLens, RealWear, Oculus, HTC VIVE, Epson, Vuzix, Android and iOS handheld devices
- MES, PLM, ERP integration

Solution Highlights

Optimal productivity with limited workforce

Quick implementation of solutions to address business continuity and end-to-end integrated solution for long term value realization

Complete visibility to operating levels of the equipment, reducing frequent incidents at workplace due to wrong way of interacting with the equipment

Features

Remote Mentor & Guided Ops: Real-time expert guidance to the field technician at the asset site, with annotation on asset for quick resolution and improved quality of services. Step-by-step visual guided instruction to resolve any technical issue at the asset location, limiting dependency on expert technician

Digitization of Content: Knowledge repository of training videos, digital SOPs, interactive manuals accessible during training and services

Real-time Sensor Visualization for safety of service technician and to make a better decision based on real time information

Integration with External IT Systems: Integration of AR solution with ERP/ CMMS for closing the loop of field services while maintaining the digital thread of services information, Learning management systems for Training and performance management of employees

GIS-based Information Retrieval: GPS location-based information retrieval help in visualizing the underground cables and pipelines on Mobile/AR devices



Benefits

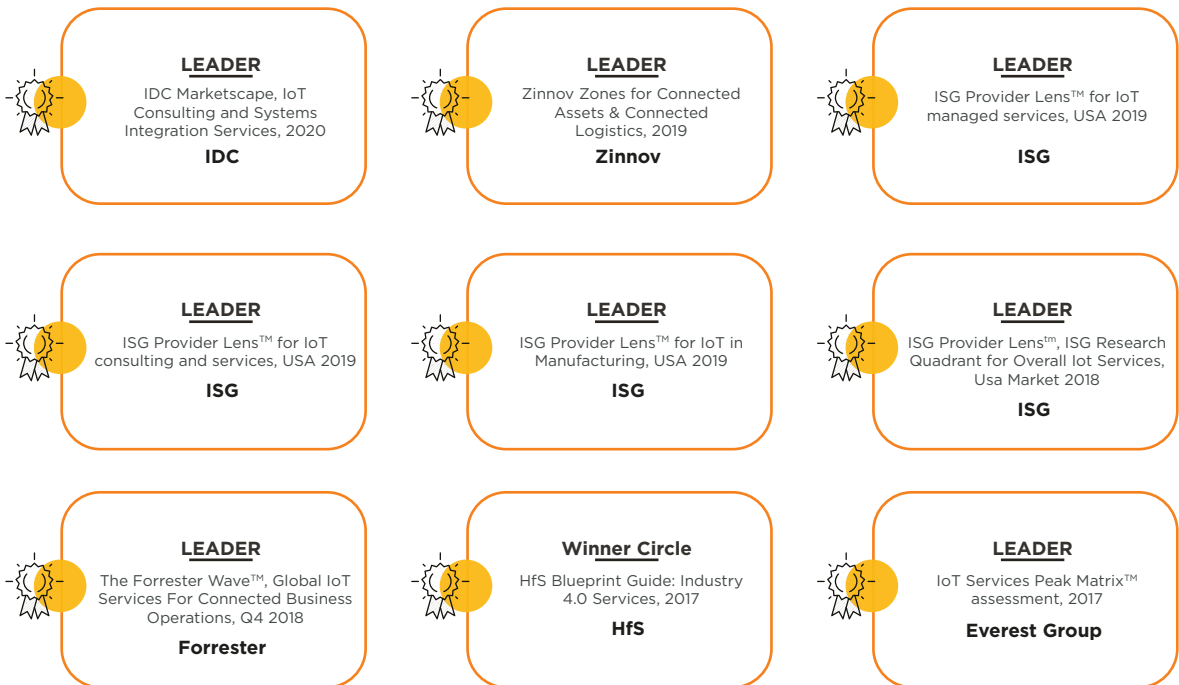
Optimize Costs: Reduction in Field services cost by up to 40%

Utilize Workforce: Lesser workforce required with improved utilization

Improve Operations: High First-time fix rate and reduced mean time to repair, improved efficiency of service operations. Improve quality of tasks, reduced downtimes

Enhance Capabilities: Reduction in training cost due to virtual hands on training, with improved retention and access to knowledge repository during field services

Recognitions, IPs + Accelerators



DDX
Accelerator for device IoT-ization

PANGEA
Data Analytics platform

IDEA GATEWAY
Reference Design for an intelligent device

PLATFORM ACCELERATION SUITE
Build next generation cloud services