



Wind Technicians work faster hands free at 200ft

Global wind energy capacity hit 539GW in 2017, which is expected to grow to 840GW by 2022. As wind farms continue to pop-up globally both onshore and offshore, industry focus has begun to shift to productivity and safety. That's why some industry leaders have turned to augmented reality and smart glasses to innovate.

The Wind Industry

A maturing industry means new problems for companies up and down the supply chain. With reduced wind energy subsidies, wind companies face stiffer competition from alternative green energy sources. With cheaper energy, increased labor costs, and an aging infrastructure, there is a pressing need to step into the next generation of wind. Finding the right tools is the first step into the future of operational excellence.

To be competitive, wind leaders seek innovative ways to drive key performance indicators such as 1st time fix rate, uptime, safety, and traceability. Wind farms maintain expensive and complex technology with remotely located operations and no room for error.

Remote Experts

Over 200 feet in the air is a technician with six-months of training and time on the job under their belt – this time they find themselves unable to successfully troubleshoot an issue. In the past, this would mean descending the wind turbine tower, reporting the issue, and waiting for an expert technician to arrive on site.

Today, the best technician for the job is brought there instantly as a remote expert. With an interactive two-way video feed powered by SmarTECHS, the remote expert can walk the technician through the issue, interact with what the technician sees, and upload documents directly to their field of view. Both 1st time fix rate and uptime have seen improvements through hands free support.



Industry

Wind Energy

AR Solution

- SmarTECHS
- Smart Glasses (HMT-1)

Business Cases

- Remote Experts
- Productivity & Uptime
- Safety & Compliance

Results

- 40% increase 1st fix rate
- 1.5% increase Uptime
- Hands free solution
- JIT & OTJ Training
- Increased safety compliance

Productivity

From routine maintenance to bi-annual audits, productivity is key for Wind. SmarTECHS has been pivotal in maintaining pre-work checklists, delivering step-by-step work instruction, and creating standardized automated reports in real time with high levels of granularity and traceability.

Our clients build their procedures, whether a job process or audit, with the desired level of technician inputs in the foreground while SmarTECHS collects information in the background.

A key use has been in improving bi-annual audits. These complex audits have over 250 inspection points located at every level in and around the wind turbine. Completing and documenting these audits has been overhauled by SmarTECHS with a single procedure. With just their voice, technicians go step-by-step through the audit and input voice to text dictation, photo, and video evidence. A technician can even submit service orders on the spot, instantly reporting issues to the appropriate team.

A comprehensive audit report is automatically generated with the technician's input at each step as well as the time, latitude, longitude, and altitude to back up their claims. When the audit is complete, the report is automatically distributed to designated wind farm owners and operators.

Safety & Compliance

Wind turbines can present potentially dangerous situations for technicians. From climbing the tower to conducting maintenance, following safety procedures and protocols is a must.

Safety procedures have been built independently as well as incorporated into work procedures. These give technicians a constant reminder, check, and acknowledge that they are following proper safety procedures.

LOTO procedures help guarantee technician safety on the job. When completing a Rotor Lock LOTO, technicians are walked step by step from which PPE to use, appropriate weather conditions, notifying others on site, and submitting visual documentation of the physical LOTO.

Outside of taking preventative measures, technicians need to be able to respond to safety incidents quickly. That's why instant incident reports can be documented and submitted by the technician. After submission, the technician can jump back into ongoing procedures where they left off.

Benefits

- Technicians remain hands free and eyes up, so they can complete the job ahead
- Internal remote experts mean the best tech is on the job instantly
- Technicians skillsets and retention are strengthened by Just-in-Time and On-The-Job training
- Paperless documentation is standardized, granular, and leave a detailed digital trail
- Increased compliance with safety procedures and reduced safety incidents

