



CTF Nordex Acciona

Expedites digital Permit to work

Need

Post implementing Contractor management software, CTF Nordex Acciona looked out for digital solutions to manage their permit lifecycles to manage their workforce – that could be tailored according to their business needs.

Challenges

- Difficult to manage high volumes of Permits across various facilities & agencies
- Critical / high risk activities' approval may be by-passed (either due to human error or other reasons)
- A number of phone calls /personal visits / Email communications needed due to a paper-based system
- Unable to accommodate all hazards/control measures in two-page permits
- Authorities need to deal with the lost permits, finding permit status, prepare summaries for morning meetings
- No knowledge base generated from past permits

An established leader in the wind turbine industry – CTF Nordex Acciona design, manufacture and sell powerful wind turbines for nearly all geographical locations across the globe. Creating their strong presence in Europe, Americas and other emerging markets for the past 30 years, their products are well-suited for complex projects, large-scale wind farms that require efficient and reliable engineering.

Subjective and Inconsistent – major issues

With the rapid growth of wind turbines as a clean source of power around the world, the wind turbine industry offers sustainable solutions to global energy challenges and contributes in creating resilient economy.

While you cannot substantiate and measure the exact hazards in a wind industry, you can comprehend from some of the instances below – A monopole wind turbine offers unique at-height dangers as compared to installing ground-level solar panels, with the work being extremely strenuous. A wind turbine service technician needs to climb up and down a ladder inside the tower, while wearing load-bearing harnesses, to reach the nacelle and blades several times a day.

They are also required to work in confined spaces to perform lockout/Tagout, electrical troubleshooting, and hydraulic repair. Offshore wind turbines introduce additional hazards, including rough waves and powerful ocean currents. Both on-land and offshore remote locations require on-call medical response capabilities in the event of a worker injury.

The whole lifecycle is laden with risks and continual interactions with the teams. Such a diverse and varied slate of working scenarios kept the Nordex professionals and EHS teams busy when it comes to keeping workers safe, keeping the company compliant, and obtaining and analyzing the performance metrics to allow the organization to report on and control the necessary risk factors.

Since 2018, Nordex professionals had trusted ASK-EHS to expand their digital capabilities – first by adopting Contractor Management Software and then, opting for Permit to work to create new efficiencies in their renewable energy sector arena.

Evolving maintenance requires permitting systems keeping in pace with the necessary permit goals

As they identified gaps in their permit system, their professional experts identified gaps in their working procedures for raising permits and believed that several improvements can be made.

The dangers of paper permitting is that it can create a “checkbox mentality.” Workers aren't paying full attention and thinking critically.

Solution

- ☞ System manages high volume and complexity
- ☞ No approval is by-passed
- ☞ Right person gets alerted at the right time
- ☞ No limitation to accommodate hazards/control measures.
- ☞ All administrative work digitized and automated (including key reports, notifications, alerts, real-time status etc.)
- ☞ Knowledge-based generation for each equipment, activity, contractor, supervisor

Instead, they often rush through a repetitive, unchanging process that may appear somewhat pointless. In many cases, the approvals/validation process remains arbitrary and subjective, not to be strictly enforced.

This, in tandem with the repetitive nature of paper permits, can create the perception that permitting is “busy work” without real consequences. This can lead to Supervisors or Lead Operators missing critical details or making errors that put maintenance technicians — and the organization — at risk.

At their site, regulations dictated that each is issued with a signed permit detailing the nature, location and safety impact of the work. Since a large number of contractors were involved, copies were distributed to the concerned parties and archived upon completion.

Upwards of 100 permits were signed off per day – their maintenance was a cumbersome process. They used a paper-based process, with lengthy permits and forms printed and completed by hand prior to approval.

Whilst this approach met regulations and captured all the required data, productivity of key members of terminal staff could be impacted by the time taken, and the process carried safety and legal implications. With no centralized portal to monitor activity on site, it was difficult to ensure the safety and security of the site.

In February 2020, the professionals approached ASK-EHS again for automating their permit processes.

Their need for an automated, web-based system for handling the permit workflows from creation and approval to issues, expiry and archiving was well-received by ASK-EHS technical staff.

An opportunity to automate their permits, underpinning the software with its application, ASK-EHS e-PTW has intuitive supporting software which allows the users to create custom forms and document processes, along with digitizing client's existing manual forms, workflows, and approval processes to meet their exact requirements. Plus, with complex multi-stage approval and workflow processes that need to be notified via emails, multiple permit approval routes with multi-stage sign-off options, the software helps to define the places where documents are sent, plus who needs to be notified via emails, and whom to approve or take actions.

After implementing the system, Nordex professionals observed an improvement in its ability to manage their permit actions. With ASK-EHS e-PTW, safety professionals in Nordex were helpful in accessing the necessary data in the times of need. Where an employee could go to one location and visualize whatever they were responsible for.

For their crucial operations, mobile-based solutions effectively helped them accomplish their login-logout tasks without much efforts. They mandated a specific process to be followed - on completion of their toolbox talks, a picture for the same to be uploaded on the app and then the permit would be generated. Such precautions by the personnel were taken to ensure that no incidents are generated on the site – their permit cycle gets completed in effective ways.

The major highlight was the time-cycle in which the whole software was rolled out – within 2 weeks from the mutual connect and interaction (a prototype discussion online), ASK-EHS completed the whole project. With UAT training delivered In February 2020, in March 2020, it went for production.

“The main challenge was lost time for guys on a shut down when all actually needed to be out on the plant instead of remaining stuck in office - the contractors, instead of stuck in an office. The mobile solution helped in identifying the risk hazards and the precautions that should be taken to avoid those, by providing information on handheld devices, and it conveyed the sensitivity of the task being performed.”

Opting for a sustainable permit-to-work solution

By connecting the maintenance and operations workflows, a digital permitting solution automates and streamlines many time-consuming and repetitive tasks, from tag printing to isolation point validation, through to generating permit requests and issuing permits directly to maintenance technicians. A digitized permitting solution can even dynamically help maintain technicians identify hazards and assess risks based on similar work executed in the past.

An intelligent, connected system offloads much of the manual, repetitive work from employees, ensuring that it is automatically completed in a timely and consistent manner, with a comprehensive historical record.