



Services and Technology

ASP.NET
Model-View-Controller (MVC)
Single Page Application (SPA)
Knockout
Journey Framework

“ *Implementing an electronic logging system meant that our daily operations became searchable and reportable without having to comb through scanned hand-written pages.* ”

Utility's Product Owner

CASE STUDY

Challenge

Power companies are required to track all of their activities that relate to the generation and transmission of electricity in a logbook that can be referred to and audited at any time. Activities recorded include daily checks on generators, issues and changes in transmission of power, and details of the maintenance of generators and transmission lines. The logbook is where coordinated checks and safety measures are meticulously tracked. However, these books are tedious to work with, impossible to search through quickly and require additional time to scan them into a computer to be held for future audits.

A public owned electric utility in the Western/Northwestern U.S wanted to do away with their outdated paper logbook and set out to create an online web application that could log and track their activities concerning their generation and transmission of power. They desired a paper-free log that would ensure compliance in all daily checklists, shift transfers, and maintenance tracking. The log would need to withstand any future audits, would allow the ability to search for specific events quickly, and remind users to record input when required.

The need for this robust application was brought to IntelliTect because of a trust relationship that had developed between the two organizations during past projects. IntelliTect team members had proven that they provided value in this particular vertical and would strive for excellence.



Solution

IntelliTect built a complete Single Page Application (SPA) with contextual navigation to manage pertinent information with minimal page navigation required. The application loaded information as it was needed to streamline user experience. This SPA was made possible by IntelliTect's open-source Journey framework (<https://github.com/IntelliTect/journey>) that allows a programmer to write simple and familiar Model-View-Controller pages and automatically use them in a SPA framework without having the overhead of the typical AJAX calls. To put it simply, when an item is clicked, a pane with the desired information opens next to it, and the user can fill the needed sections without changing pages.

To alleviate record user input, IntelliTect integrated the application into the utility's Plant Integration (PI) system so that when an error was noted in the PI system, an alert requiring a notation was triggered in the online logbook. After six months of work, all manual recordkeeping on the logbook had officially become digital.

IntelliTect

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Results

IntelliTect finished the initial version of the software and it was placed into production. "We were able to integrate the logging system with other systems and workflow processes to automate event generation and planned event request processing," said the power company's product owner. The simplicity of the application was so well received that employees wanted more functionality placed into it. The foundation of the software was such that the utility's developers were able to continue to enhance the application with minimal training and assistance from IntelliTect. Death and injury can occur when a simple error is made at a power company. Paper record keeping allows for a higher likelihood of mistakes. The utility's new application greatly reduced these issues. "We were able to implement alerts to operators that met compliance requirements for communicating certain reliability-impacting events between entities," said the power company's product owner.

"Certain compliance reporting tasks moved into a database format, allowing the reports to be approved and generated at the click of a button, rather than requiring editing, copy, and pasting between numerous spreadsheets."

Utility's Product Owner