



## Modernization of .NET Web Portal for National Energy Services Provider

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### Application Management

### Customer Background

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Our customer is one of the largest providers of Energy Solutions in the United States of America. They provide engineering, construction and maintenance services for the distribution and transmission power lines and sub-stations, (or) EPC for turnkey and renewable energy products. They are well known for their quick and most qualified provider for storm response power line construction services.

## Technology Environment

- .NET Framework 4.0
- ASP .NET
- HTML5
- JQuery
- C# and WCF
- SQL Server 2008
- Telerik Controls

## The Business Challenge

Their existing Application Portal for monitoring their process was built on .NET Framework using Windows Forms and C#. The application also uses third-party software, “Sync Fusion”, for building some custom controls while the Database Layer was built on SQL Server 2008.

The existing system, which helped them monitor their personnel and assets in a storm situation, was based on Legacy Technology and needed to be re-architecture to leverage the latest web technologies while taking system performance and scalability into consideration. They also needed the application to be able to handle multiple form factors including Mobile and Tablet devices.

**Some of the key challenges that they were facing with their existing system were,**

- Potential for improving the user interface
- Maintaining the existing windows application in multiple locations
- Maintaining the technicians across the multiple Storm restore points. Moving from one location to another location on the fly
  - Handling third party software is a bit expensive at times
  - Performance issues with the existing legacy technology, with lack of scalability
  - Lack of Mobile/iPad compatibility with GeoLocation API
  - Lack of SSRS Reporting/Dash boards

## The Solution

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Once the challenges were understood, our experts went deep into the customer architecture to look at possible ways of modernizing the application and ensuring that they had a reliable system in place.

The new application that resulted after the modernization and reengineering was built on .NET 4.0, replacing the legacy Windows Forms based application and in-turn made accessible for Mobile devices including iPads and Android Tablets.

**The application provided a crew-based storm entry and validation system for,**

- Dashboards
- Employee Storm Assignment entries
- Employee Hotel Accommodations (CLS)
- Fleet Mechanics Entry information
- Safety Supervision Entry information
- Reports

**The application provided a crew-based storm entry and validation system for,**

- Allow the user to transfer the unassigned or task completed Crew to other storm or Staging Areas
- Allow the user to manage Crew mobilization of crews deployed in various Staging areas
- Manage the data archive and view the archived data view
- The primary change that is required for the new application is the redesign of the database model to a more rational database that avoids data redundancy
- Allow the Admin user to reset the database to default parameters and providing option for archiving the current storm

- Application / Business Layer / Web Services Development
- Can be rewritten in latest technologies with service oriented approach for enabling application access from mobile devices (iPad). Web Services will be used to enable modular design of the application for enabling access from different devices / browsers
- Reporting