



Full Stack Development of Dynamic Form Builder in the Utilities Domain

Digital
Services

Success Story

Status quo

The client is a pioneer in providing technology related services and consulting to the power and utility industry. Functioning in diverse fields like transmission, distribution, line construction inspection, material inspection and so on, they required an in-house web portal that builds dynamic forms for line construction inspection. The client was using a third-party application for this portal, which incurred high license costs and customizability limitations.

Project overview

Leveraged full stack technology to develop a dynamic and multi-sided form builder portal, which incorporated interactive and easy to use forms for users to fill and an automated workflow in the background, augmented with intuitive dashboards. The developed portal features an automated form generation facilitated with drag and drop, customization, and export mechanism.

Business requirement

The limitations of the existing portal for the form builder necessitated building a custom new dynamic portal, fulfilling the following requirements:

- Build a dynamic form builder portal that meets the client's requirements.
- Incorporate some built-in feature like:
 - Monitoring the day-to-day task
 - Feeding transmission line details
 - Generation of automated workflow etc.
- Minimize the time consumption for generating a form.
- Build a highly responsive and automated web portal that could maintain large volumes of data.

Solutions

Indium devised a solution to develop the custom portal, by leveraging the following:

- An interactive multi-sided web portal developed using open source technologies.

- Sisense JavaScript dashboards that are embedded in Universal Windows Platform, using iFrame.
- Single sign-on (authentication using Auth0) to minimize password fatigue and which allows only relevant records to be viewed by each logged-in user.
- The UI allows the Admin user to create responsive form with drag and drop options and archival functionalities.
- Java Spring Boot framework for the backend and Angular 8 for the frontend UI provided the application with high flexibility and efficiency.
- Capability for Admin users to view APIs and audit logs.
- Options to create email templates with tokens for each form and effectively enable the creation and trigger of workflows (assign, email notifications etc.) dynamically for each form.
- Upload of any type of media files to S3 bucket, via the application.

Business

Product Development

Domain

Utilities

Tools

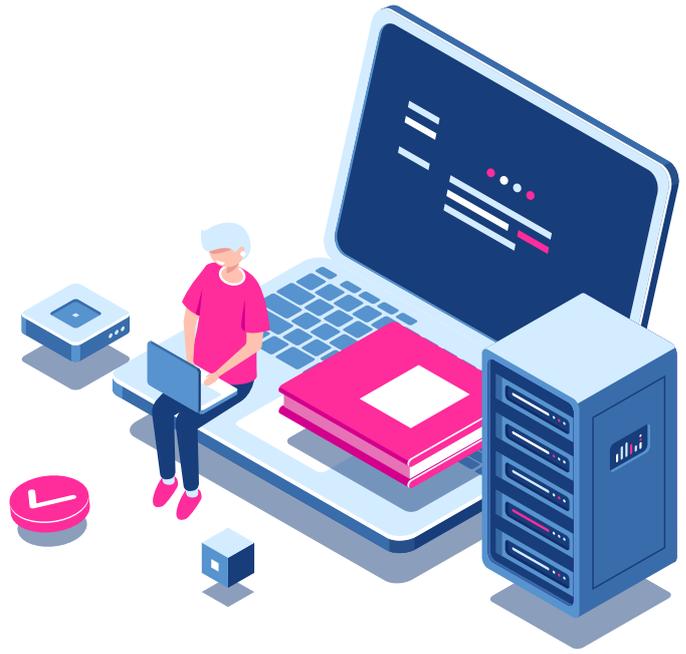
Angular 8, Java, Spring Boot, REST API, MongoDB, Auth0

Key Highlights

- 70% reduction in form creation time
- System automation of 85% covering multiple functionalities
- Security enhanced by 80%, along with SSO authentication

Business Impact

- Time consumption for form creation reduced by 70%.
- The system is 85% automated covering functionalities like data retrieval, QA report generation, data processing etc.
- By leveraging Auth0 the security was enhanced by 80%, along with SSO authentication.
- The real-time dashboard in a unified web portal elevated the customer satisfaction and improved the user experience.
- The availability of custom forms for various requirements substantially increased the flexibility of the system.





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