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THE THOUGHT BEHIND THE SOLUTION

Case Study: Application Development

How A Government Organization Streamlined Data Processing Using A Custom App

Organization
A government organization that oversees the design, construction, maintenance, and management of public infrastructures

Challenge
Modernize a decade-old data processing application with many bugs and data duplication issues due to its unsupported legacy technology

Solution
Designed a custom application that adapts to changing business needs and enables "data entry at the source" to eliminate data duplication

Benefits
Real-time data availability, better user interface, more streamlined operation and user experience, and scalability

The client is a government organization that oversees the design, construction, maintenance, and management of public ways, transit stations, streetlights, traffic signals, signs, pavement markings, and streetscapes for sustainable infrastructure design and development. They work to ensure that these infrastructures function safely and efficiently and all projects are on track.

Challenges

The organization was using a decade-old application, Project Data Systems (PDS), for handling construction data. Because the application was developed 10 years ago using Visual Basic—a Microsoft de-supported product line—fixing application bugs had become tedious without patches provided by the vendor. Likewise, the source code for the application had not been documented and was therefore inaccessible.

The application functionalities did not meet the current business requirements. For example, projects with funding sources other than those specified in the Menu could not be accommodated in the system. Also, the application's reliance on duplicate data entry and multiple data handling points made it cumbersome to process the data and ensure data availability for daily operations.

Solution

Senryo Technologies redeveloped the Project Data Systems (PDS) as a web application using Oracle APEX as the RAPID Application Development Technology using Oracle database. The approach is to design a solution that can easily adapt to changing business needs and eliminate the duplication of data entry and multiple data handling points by enabling "data entry at the source."

Benefits

Enabled centralized, web-based access, giving remote users access through their browsers

Provided a single integrated system for the entire business process

Eliminated data entry overhead with better data quality and reliability

Enabled real-time data availability

Enabled users to handle the process faster using robust, user-friendly interfaces

Removed clutter and redundancies, thus promoting a more streamlined operation and a better user experience

Made the solution scalable and integrable with GIS application

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