

insum

CIS Field Reporting System
with Oracle APEX



Insum Develops Large-Scale Solution For Large-Scale Fiber Optic Cable Installations

Contract Information Solutions (CIS)

BUSINESS NEED

Custom data acquisition, workflow and reporting application designed to standardize the management of large-scale fiber utility installations, with flexible support for evolving business needs.

THE SOLUTION

Insum worked with the client to design both desktop and mobile applications using Oracle APEX and Oracle Cloud.

THE RESULT

Operational efficiencies made possible by the solution design and workflows have resulted in movements to management visibility of field activity, reduction of payment cycle for subcontractors, and improved control of key data for the project owner.

Capturing Field Data - Driving Operational Efficiencies

A new industry with challenges.

Fiber optic cables are rapidly replacing copper wires across North America. In addition to local utilities, large players like Google are pushing forward with large-scale installations to offer improved broadband connectivity.

However, as a relatively new industry, fiber optic cable installation projects are not without challenges. There is little standardization of data collection, little visibility into field operations, and payment cycle time for subcontractors can be in excess of three months due to lack of timely field data. Fortunately, these are things that could be improved with technology.

When John Bolinder of Contract Information Solutions (CIS) heard of the challenges from one of his clients the performed installation services, he had some ideas on how the problems could be solved, and wanted to build a proof of concept. To do that, they used a third-party rapid application development tool that provided a linear workflow model that allowed for customizations. The resulting prototype helped them win a contract to provide an ongoing solution.

Almost immediately however, it was discovered that the development framework selected to build the proof of concept would not be suitable to build the production application due to the scale of the project, the ever-changing needs, and the lack of design flexibility of the tool. A new application development framework was required, and CIS started looking for options.

John and his team had a good idea of what they were looking for. They needed a development framework where applications could be easily built for use on desktops and mobile with a lot of design flexibility. The resulting system also had to be very reliable, support a large user base, and needed to handle large volumes of both structured and unstructured data.

The Solution: Oracle APEX

Cost efficiency ▶

During their review process, CIS learned that their client preferred an Oracle technology stack since they already had several applications running on Oracle. John was skeptical however. He was concerned that Oracle applications and databases were typically expensive to design, develop and maintain. He didn't have much hope of finding an Oracle based tool.

◀ Oracle Application Express

However, during their search, the CIS team came across Oracle Application Express (APEX), which looked to be quite promising. They began to inquire further with both Oracle directly and with other developers who had experience with APEX development and Oracle Cloud offerings.

Working with Insum

CIS was pleasantly surprised to discover Oracle APEX was well supported, had a knowledgeable developer base, and was used in many large-scale applications. Furthermore, the Oracle Cloud database and Oracle APEX were well integrated and highly compatible, resulting in minimal application maintenance. The actual cost to develop and deploy Oracle APEX was comparable to other rapid development frameworks, and for an Oracle product, was very affordable since it is included with the Cloud database offering.

As a result, CIS selected Oracle APEX as their new application development framework, and began the search for a development partner with deep APEX experience.

After contacting several Oracle preferred partners, CIS decided to move forward with Insum Solutions. "It was evident in our early conversations that they understand application development as a service."

"We explained the need to have a moderate development cost. [...] We also needed a partner that would provide feedback during the development process to ensure we proactively avoided problems with the long-term use of the application."

- John Bolinder, CIS

Reducing cost and providing instant value

The development project was not an easy one. Some of the more challenging design features included dynamic field labels (to enable multiple project types with different naming conventions to exist in a common database with standardized tables), carousel picture views for improved efficiencies with remote quality control tasks, and dynamic user/entity/subcontractor permissions to manage data views and field data entry.

Some of the built-in features of Oracle APEX, including reporting tools, custom report views and form architecture, accelerated development while reducing cost and providing instant value to end users.

THE PROCESS

John was pleased with how the project progressed. **“Insum was exceptional from capturing the scope of work, understanding the design-build nature of the application development, and accepting the many design challenges already encountered by the project.”** - John Bolinder, CIS

To ensure the project was completed successfully, Insum used a structured approach, which included:

- Proven project management and reporting processes to keep the project on track (agile)
- A dedicated project manager
- Timely communications on development challenges
- Access to additional resources with specialized skills when design challenges emerged
- Willingness to adjust project resources to fit the changing needs of the project
- Discipline around Development, Test and Production release management

THE RESULT

While the project experienced challenges due to changing customer scope and design, CIS trusted the time and cost estimates provided by Insum .

“Even with significant scope change they delivered the functional application within 30 days of target date. Maintenance and configuration changes have been well supported”

- John Bolinder, CIS

CIS measures its success based on the success of their customers. After nearly 18 months, the application developed by Insum for CIS is now one of the most talked about applications in the market and has high visibility. The system is used daily by key accounts with over eight large companies and subcontractors working within the application.

The efficiencies of the system design and workflows have resulted in significant improvements to management visibility of field activity, reduction of payment cycle for subcontractors (12+ weeks to <2 weeks), and improved control of key data for the project owner. In short, the application has changed the way fiber utility installation is managed and executed.

“Of paramount importance to this project were the resources provided by Insum Solutions. Their ability to think through a problem, engage the right talent then execute on a plan was outstanding. Oracle APEX and Oracle Cloud have performed exceptionally well, almost no down time and very few system bugs. We have worked with few developers who take such pride in their work and execute so well on customer objectives. When others would have given up and said ‘that’s not possible’, the team at Insum Solutions made it happen. And that’s what makes the CIS Field Reporting application so great.”

John S. Bolinder
President, Contact Information Solutions LLC

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ABOUT US

Oracle Specialists, APEX Experts. We are a highly creative solution center developing innovative applications for clients and partners in North America.