

OFFSHORE OIL RIGS AND ONSHORE SOFTWARE ENGINEERING

SUMMARY

Saturn Systems worked with Veris Global (Veris) to develop innovative software that solves some of the industry's most challenging problems in managing business process execution and compliance with strict federal safety regulations. Together, the Saturn Systems and Veris teams developed applications with the potential to manage growth while streamlining internal approval processes and regulatory safety compliance on offshore oil rigs.

THE CHALLENGE

After years spent working in some of the world's leading oil and gas companies, members of the Veris leadership team recognized several key inefficiencies that could be simplified with the right technology. The challenge? That technology either didn't exist or was outdated and inefficient.

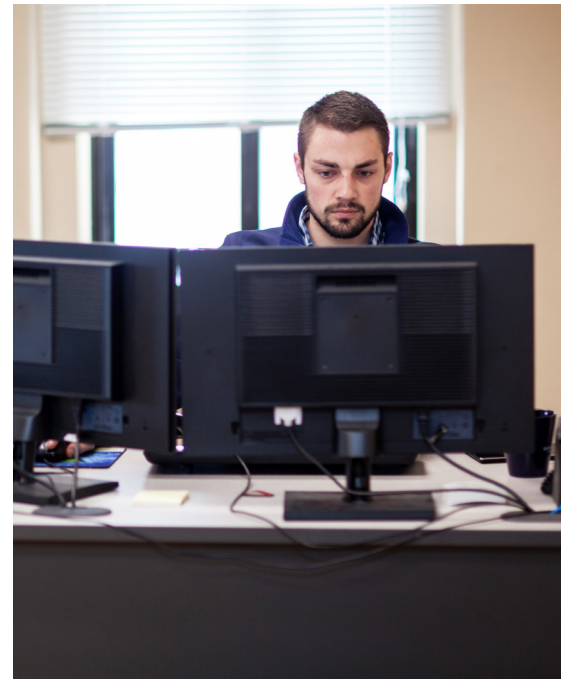
Due to population growth, increased demand for domestic oil and natural gas resources, and growth of the shale oil fields, the industry is growing and changing at an ever-increasing rate. Companies operate from several locations on land and offshore, which adds complexity to already complicated human resources and management processes. While Management of Change (MOC) applications exist in the market today, Veris envisioned a more efficient, flexible system with low client cost of ownership. The new application would leverage cloud-based web architecture and modern UI design to create more efficient, flexible software applications. The now completed MOC application is highly configurable and has the flexibility to be used in any industry.

The oil and gas industry is also one of the nation's most heavily regulated industries, with strict requirements for the safety of both humans and the natural environment. Companies must undergo comprehensive testing every day to ensure all personnel and equipment operate within safety regulations at all times. Veris envisioned a cloud-based safety compliance software solution that made it easier to manage and prove compliance by sharing documentation with regulatory agencies on-demand.

Veris employed talented software engineers who were also experts on MOC modules. This internal expertise was vital to developing a smart, intuitive framework and assisted in the scaling for mass Software as a Service (SaaS) use. The brilliant, dedicated development team was able to implement, manage professionally and efficiently interface with the engineering teams internally. All while producing a modern, scalable technology on an aggressive timeline.

ABOUT THE CLIENT

Veris is a highly-specialized consulting firm in the oil and gas industry. The Veris leadership team blends deep industry experience from major oil production and operating companies, with expertise in marine safety, inspections, and security, drawn from experience with U.S regulatory agencies.



THE SOLUTION

This project was well-suited for Saturn Systems as the project technical requirements meshed well with the expertise of our available software engineers. Saturn Systems assembled a development team with the ability to develop a cutting-edge, Azure cloud-based SaaS solution using Microsoft's C#/.NET technologies and Angular JavaScript framework.

The Saturn Systems team began developing the MOC application in December 2018. MOC is a software application that allows organizations to model their business processes by including internal and external personnel, along with necessary documentation, revisions and approval checkpoints. The application enables highly-complex approval processes, including sequential and parallel approval paths with the ability to use proxy signatures. It also facilitates accountability throughout an organization with active tracking.

As work on the MOC application neared completion, Saturn Systems shifted developers to a second application in the suite, a Safety Compliance Management System (CMS) that allows users to document the configuration and testing of safety devices on offshore rigs. Each rig utilizes hundreds of pressure relief valves, control valves, and other safety devices that must be tested on a periodic basis to ensure proper function and compliance. This decreases the likelihood of crew injuries caused by unexpected releases of high-pressure gases and liquids.

As safety devices are tested, findings are documented in the CMS, eliminating the current paper-based documentation (and volumes upon volumes of binders). The CMS creates an electronic paper trail for compliance and documents any failed safety devices that should be replaced immediately or scheduled for replacement. Companies are required to keep compliance records on each rig and must be able to produce records on demand for regulatory agencies. The CMS simplifies the process and enables operators to access schematics for all safety devices on the rig for systematic testing.

THE RESULTS

Though the development schedule was aggressive, the Saturn Systems team delivered. A demonstration version of Veris' MOC and CMS software was developed, tested and delivered within four months of the project kickoff. Veris began demonstrating and selling the applications to potential customers who saw the value immediately while Saturn Systems continued adding features; some of which resulted from customer demonstrations.

THE SATURN SYSTEMS ADVANTAGE

Saturn Systems has been in the software development business for nearly thirty years and employs a deep bench of talented software engineers with expertise in a wide range of development frameworks. Each client project is assigned a hand-picked development team, creating opportunities for Saturn Systems employees to grow their skills while exceeding client expectations.

While Saturn Systems is accustomed to delivering excellent products on tight deadlines, quality is never sacrificed. At every step of the process, Saturn Systems software engineers implement the highest coding standards and perform in-depth functional testing to ensure all software works as designed and meets stringent industry best practice coding standards.

With Saturn Systems, clients get more than a software developer. They get a strategic team that is committed to delivering high-quality, custom software solutions.

To learn more about Saturn Systems, visit SaturnSys.com or call (888) 638-4335.