

# Baker Hughes Optimizes Field Service Utilization With ServiceMax



“Necessity is the driver for innovation. As Baker Hughes Subsea Systems continues its journey to execution excellence, innovation is required to provide value and differentiate in a competitive market. Combining operating platforms, enabling the retention of valuable information automatically synced to authorized users reduces administrative processes, errors, and improves the quality of execution. We are starting to realize a reduction in costs and non-productive time by integrating improved processes with ServiceMax, which is an integral component of our journey to execution excellence.”

**Leigh Martin**, Executive, Service Director, Baker Hughes

Baker Hughes Subsea Systems' Field Service personnel work in some of the harshest and most remote environments across the globe—operating everywhere from offshore in the North Sea to the hurricane prone waters of the Gulf of Mexico and newly discovered fields off the coast of Africa. Over the last 20 years, Baker Hughes has emerged as a leading service provider for subsea and offshore operations. Through individual engagements and ongoing



Contractual Service Agreements (CSAs), its 45,000 employees deliver equipment, spare parts, repairs, engineering support, monitoring, diagnostics, technical services, and, in some cases, asset-performance guarantees.

In 2014, Baker Hughes management wanted to improve the revenue capacity of its field service operation, which they were confident could be accomplished by streamlining operations and increasing the billable utilization of their 575+ field service engineers (FSEs). But there was a problem. "To optimize field efficiency, Baker Hughes needed more real-time visibility into its field service operation," says Baker Hughes Executive Service Director Leigh Martin. "We needed better data on the work activities of our field service engineers. And for that, we needed a field service platform."

## Communicating the why

Baker Hughes knew it could create visibility with ServiceMax. It was already using the platform to improve efficiency in several other profit and loss centers (P&Ls), including GE Aviation, Energy Management, Healthcare, and Power & Water.

But Baker Hughes was a special case culture-wise. Like much of the oil and gas industry, it was heavily reliant on the deep knowledge of its FSEs. Most engagements were handled using paper forms and whichever process was customary within a particular geographical region. To ensure a smooth migration to field service automation, Baker Hughes would have to persuade the FSEs to forsake a familiar way of working and embrace something new. Something digital.

"People are creatures of habit," says Baker Hughes Europe Field Service Leader Roar Sletta. "We had to communicate the 'why' for this culture change, or our people would not internalize it."



**Improved field service reporting is giving us better visibility. It is allowing us to create detailed history for each customer and use analytics to look at best practices. We no longer use email to communicate customer details. Instead, everything is available in ServiceMax and accessible using a computer or smartphone."**

**Roar Sletta**, Europe Field Service Leader, Baker Hughes

### >> Customer Quick Facts

**INDUSTRY:**

Energy

**SIZE:**

58,000 employees, 575+ FSEs

**HEADQUARTERS:**

Houston, Texas

**WEBSITE:**

[www.bakerhughes.com](http://www.bakerhughes.com)



## Keeping the process familiar

Even in 2015, it was apparent that record low oil prices were putting incredible financial pressure on offshore and subsea producers. These pressures were rippling through the industry and affecting service providers such as Baker Hughes. To compete in this environment, it needed to become more data driven, efficient, and productive.

"No one likes to change," says Baker Hughes Information Management Subsea Services Project Manager Lydie Victoire. "But to increase profitability, we needed our people to adopt this new way of doing field service."

Baker Hughes executives thought the transition would be more readily accepted if the new automated process looked a lot like the old paper-based process. Victoire and ServiceMax Professional Services responded by customizing a set of field service functions for the initial project rollout. These functions ultimately replaced a legacy reporting system and more than 20 Microsoft Excel spreadsheets. The customization also provided an opportunity to address specific customer and legal requirements that were unique to servicing subsea operations.

## Relying on expert trainers

With the custom software ready to deploy, Baker Hughes asked ServiceMax Education to take the lead on training. The Education team used guided interactive exercises and instructor-led sessions to build user proficiency in key skills such as reporting, forecasting, and billing.

"In hindsight, we should have engaged ServiceMax Education even sooner," says Sletta. "They knew the product extremely well, and their knowledge created immediate credibility with our people."

SIGNIFICANT  
COST-SAVINGS  
FROM REDUCING  
FORECAST TIME BY  
**74 HOURS  
PER WEEK**

USING MOBILE  
ACCESS ADDED  
**MILLIONS  
OF DOLLARS**  
MORE IN CASH FLOW  
YEAR-TO-YEAR



Education has so far trained more than 600 employees, including FSEs, dispatchers, and frontline managers. This effort also accelerated ServiceMax adoption while standardizing field service processes across all five of its operational regions. All regions now follow a consistent global standard throughout each customer engagement from forecasting requirements to end-of-well reporting.

### Improving reporting and forecasting reduces overhead

Baker Hughes Subsea Systems' employees are able to monitor field service in real-time and compare performance by region and FSE. Customer history provides accurate information on installed products and ensures that FSEs arrive in the field with everything they need to complete engagements.

Dashboards are also helping executives better understand their installed base, levels of service contract participation, work-order allocation, and failure patterns. Simple drag-and-drop reports are similarly allowing analysis of first-time fix rates, mean-time between failures, performance by region, service contract end-dates, preventive maintenance, and other critical data points.

Baker Hughes is also doing a better job of predicting field service requirements while reducing forecasting time from 143 hours per week to just 69 hours per week.

**Improving efficiency in this one area is generating significant annual savings for Baker Hughes.**



**Mobile access is reducing invoicing. Cash flow is improving by millions year-to-year."**

**Lydie Victoire**, Information Management Subsea Services Project Manager, Baker Hughes

### Reducing invoice time boosts cash flow

FSEs are using ServiceMax on laptops and smartphones to become more productive. Mobile access allows them to complete work order information and capture customer signatures even when offline. They can store this data until a reliable Internet connection becomes available. At that point, they can upload and synchronize the data with Baker Hughes Subsea Systems' central database.

Before ServiceMax, it might have taken weeks or months for FSE's to return signed paperwork for processing. Automating field service has greatly compressed this billing cycle and even prompted the finance department to look for ways to streamline its own workflow.

### Improving utilization is an ongoing process

With ServiceMax, Baker Hughes is continuing to improve forecasting and reporting. These insights are contributing to the larger goal of optimizing FSE utilization.

"We are going to see more benefits moving forward," says Sletta. "ServiceMax started as a pure offshore reporting tool, but we have expanded its scope. Today, we have more or less one system for handling service from start to finish."

"Future ServiceMax projects will involve little or no customization," says Victoire. "Now that employees are becoming more comfortable with automating field service, Baker Hughes has decided to change its process to fit ServiceMax instead of customizing the software to follow an old-fashioned workflow."

Baker Hughes also plans to integrate more metrics into ServiceMax (internally renamed as GRID) and optimizing tools based on user feedback. It is continuing to put the software on smart phones for increased mobility.

The initial steps it has taken have clearly demonstrated how technology and data can contribute to process improvement. Baker Hughes customers have noticed the changes and are even pushing for more visibility into their service engagements. "Increasing visibility into our business is the key to better managing our workforce and, ultimately, our business," says Sletta. "With ServiceMax, we are changing our service culture."

## The future of service for customers

Today, Baker Hughes Subsea Systems provide its customers with historical service data by pulling valuable information and applying lessons learned from previous jobs on specific subsea vessels. Looking to the future, Baker Hughes is planning a series of new programs and tools to enhance customer experience and execution of its Subsea products. One goal is to integrate ServiceMax with its virtual training simulator, which allows FSEs to experience equipment virtually before visiting the customer site. Additional tools will enable customers to track the cost savings associated with Baker Hughes Subsea Systems' field service performance.

"In the future, we will be able to deliver data on the precise annual savings we've helped each customer realize by showing the annual financial impact of service performance and machine uptime," says Martin. "An offshore rig can have a day rate for platform and labor costs of \$500,000 or more, so reducing downtime on an individual site visit can generate huge savings for our customers."