



CASE STUDY

Tatweer automated 50 processes in one year to ensure over 1,500 oil wells are drilled, optimized and managed effectively



Organization:

Tatweer Petroleum

Industry:

Utilities & Energy

Location:

Bahrain

Tatweer Petroleum embarked on a company-wide business transformation aimed at removing ambiguity, manual tasks and bottlenecks from core processes to increase operational efficiency and reduce costs. With Bizagi, Tatweer is now able to ensure that its 1,500 oil wells are drilled, managed and optimized as effectively as possible.

A rapid delivery approach enabled Tatweer to hit the ambitious target of automating 50 processes in one year, build a robust BPM system used by 700+ people and create a Center of Excellence (CoE) that guarantees continuity, improved performance and adoption across the organization.

250% increase in near miss events rectified

IoT connects devices & systems

"Tatweer BPM has become the lifeblood of our daily operations and has transformed the business into a process-oriented organization focused on continuous improvement."

Maqsood Qazi,
Head of IT

Objectives

- 🎯 Ensure that the 1,500 oil wells were drilled, managed and optimized as effectively as possible
- 🎯 Eliminate manual tasks, ambiguities and bottlenecks from core operational processes
- 🎯 Improve data capture and analysis for process improvement
- 🎯 Lower costs and increase speed of delivery
- 🎯 Achieve DPA commitment and adoption as part of a company-wide cultural change

Achievements

- ✅ Increased operational efficiency and improved health & safety levels, resulting in a smoother execution of work
- ✅ Enabled an Internet of Things (IoT) model, allowing connectivity between physical objects, systems and devices, and effective data management
- ✅ 250% increase in 'Near Miss Events' captured and rectified
- ✅ 50 automated processes delivered in one year using agile methodologies
- ✅ Creation of a Center of Excellence (CoE) to ensure continuity of the program

Overview

Tatweer Petroleum operates the 75 sq. km onshore oil field for the Kingdom of Bahrain, producing approximately 50,000 barrels of oil and over 2 billion cubic feet of natural gas per day. The company's primary goal is to increase the production of oil and the availability of gas to meet the future energy demands of the Kingdom of Bahrain.

To achieve this goal Tatweer recognized the need to embark on a company-wide business transformation program, implementing a robust process solution to ensure that the 1500+ oil wells were drilled, managed and optimized as effectively as possible. Tatweer's process initiative has been a key milestone in an effort to become a process-centric organization focused on continuous improvement.

Challenge

Over time, reliance on manual processes and spreadsheets had led to weak workflows and inefficiencies. It became clear that a process-driven approach was needed to automate, manage and control operational tasks and activities, yet existing technologies were not able to tackle the problem.

Custom coding projects took too long, were too costly and making ongoing changes proved cumbersome. The existing SharePoint system had limited workflow capabilities and was unable to support process automation goals. Adobe could not deliver the electronic forms and flexibility needed on this scale. There was also a need to enable greater workforce mobility in the field.

Solution

All the staff were new to process management and needed training; to this end Tatweer created a Center of Excellence (given the internal name of Task Force), a dedicated team whose mission was not only to learn process management concepts from scratch but to encourage wider engagement with the new technology. Task Force members had deep knowledge of all the core systems process was required to connect with (Oracle, SharePoint, SQL) plus a wealth of expertise on the business requirements around service desk and end user support. The team's performance goals were tied to process management, a highly practical and effective way to ensure learning and encourage responsibility for results.

To ensure they delivered value from day one, Tatweer took a pragmatic approach to process selection. Following a Process Selection Matrix it was ensured that each process was clearly defined, built, and deployed, contributing to the overall vision of operational excellence and touching the entire organization as opposed to departmental silos. Decision makers from 12 business departments were actively involved to identify their area's own high-impact processes, and to contribute with management uptake and commitment.

Tatweer chose the Bizagi platform to model and automate their business processes, covering the full process lifecycle, from design and documentation, through to automation and deployment. Bizagi allowed Tatweer to create processes quickly and make changes fast, touching many of the different systems within the organization from eCommerce and Geographic Information Systems (GIS) to industry-specific packages for asset/enterprise management, plant inspection management, and web-based analytics packages.

Results

Following two weeks of intensive training, a four-month period saw the delivery of the first wave of automated processes, executed in record time using agile methodologies. Wave 1 consisted of a wide range of organization-wide, low risk, relatively simple automation projects from various areas of the business (HSE, HR, Administration, Finance, etc.) to encourage user adoption and build familiarity with the system before moving to more complex processes. These included: Employee Recognition Award, Engineering Service Requests, Training Service Requests and Employee Mid-year Performance Review.

Once the Bizagi philosophy gained end user trust and adoption and started to deliver results, the CoE was encouraged to move its focus to critical and field related processes like Near Miss Reporting, Permit to Work Registration (PTW), Plant Process Override Request, Oil Spill & Clamp Reporting Process, Restricted Area Access Request, Well Tracking System, Technical Services & Support Request, among others.

The system is now used by more than 700 people across Tatweer and the results have been impressive. There are fewer ambiguities and errors due to electronic data capture, no bottlenecks, reduced turnaround times and lower operational costs. Perhaps most importantly, it has created a safer operation for its business.

The Near Miss Report shows a 250% increase in the number of identified and rectified safety observations by employees. The number of daily PTWs captured and processed have significantly increased, ensuring a smoother execution and cost-effective allocation of work.

Diverse, rapidly changing and high volume data sets are now effectively managed with the creation of an IoT system that enables the connectivity and communication between physical objects, subsystems and devices. Automated alarms from 500,000 sensors distributed across oil wells allow informed decision making and quick response to performance improvements.