Qualex iQ-Surveillance™

Qualex Consulting Services, Inc. uses text analytics to transform HSE incident reports from a data dump to a source of early indicators and actionable findings in order to identify incident root causes and to reverse an increasing trend of safety incidents.

Qualex Involvement: two-pronged approach includes

1- Using Text Mining to discern trends from long form text data to target areas of focus for future improvement and to overhaul the approach to incident tracking and reporting. The text mining process allowed the team to discover useful information that was previously inaccessible on a company-wide scale due to the nature of lengthy text descriptions and the scattered location of the documents. And upon automating the acquisition, compilation and publishing of this information on a weekly basis the organization was able to raise awareness and assign personal responsibility in all aspects of incident management and reporting.

2- Using statistical methods to identify significant differences in HSE performance across divisions, regions, project areas, working activities, and contractors, and then published reports to assist HSE management in identifying corporate change to address these issues, within their teams and across division and functions, using statistical facts. Additionally having the automated and innovative reporting for the corporation allowed them to save many man-hours when compiling their monthly/yearly reporting to the Government and Federal Agencies.

Outcome and Results
Qualex Solutions were able to highlight additional areas of focus for the team of HSE professionals to help the company reach its HSE goals of decreased frequency and severity of incidents. Survey design improvements were also implemented to elevate the visibility of incident root causes throughout the organization and increase the accuracy and visibility of reporting.

Qualex Consulting Services, Inc uses predictive analytics to cluster well performance, which encompass grouping wells relative to performance levels, fluid types and other specific conditions across multiple dimensions and evaluate the efficiency of the wells based on operational decisions in order to make better decisions when exploring new areas and designing drill plans for new wells and assets.

Qualex Involvement:

Qualex used data mining techniques to test similar groups of wells and quantify the cost/benefit ratio of production engineers' design choices of equipment, products and workflows. Many times design choices can be difficult to quantify, and engineers are left to make decisions based on their past experiences, preferences, or general industry knowledge. And in particular, these design choices were regarded as entirely personal preference with a wide range of costs and consequences, and thereby OPEX, operations and performance debates often ended in stalemates. Qualex analyzed the impact of the different design choices on a cost and productivity basis in given regions.

Outcome and Results
Qualex was able to identify the best decisions using a large volume of data from past wells. In this particular study, the design choices turned out to have little impact on the overall productivity of the wells, that being the case capital-intensive design choices were eliminated.

Going forward, knowing the effect of design choices as defined by the Qualex Solution will save the company 10-30% on cost of materials for the targeted stage of production, while compromising 1-3% of production, for a substantial net savings.