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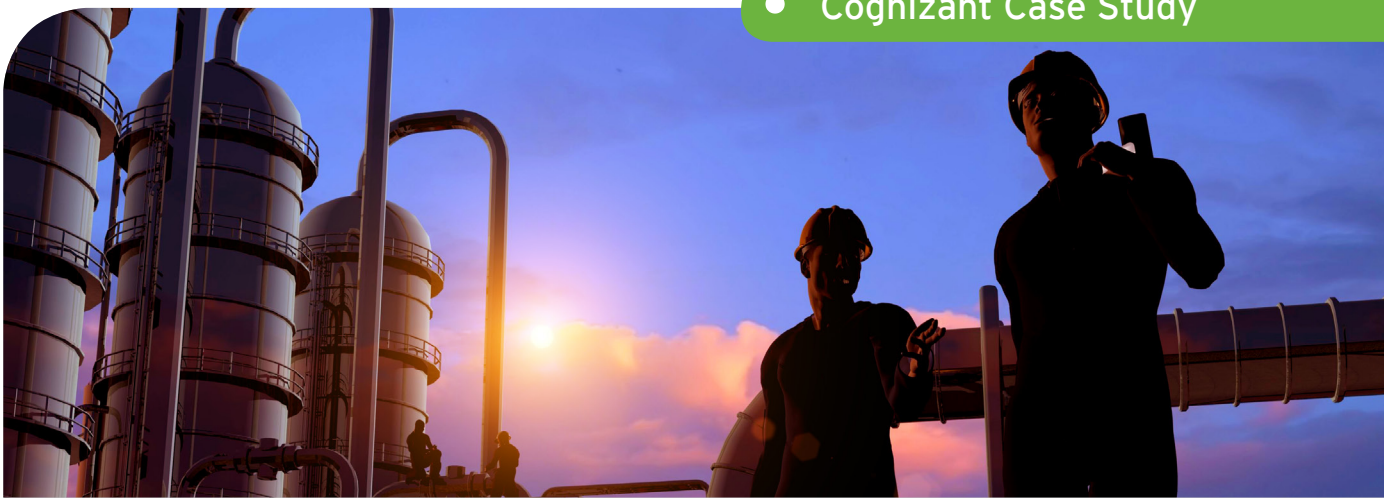
Cognizant Case Study



Improving Plant Reliability by Mobilizing Routine Operator Duties

Business Scenario

Oil and gas companies are quickly shifting from a reactive approach to maintenance, to a preventive one, in the face of a volatile economic landscape, mounting costs of unplanned maintenance and the risk of environmental damage caused by operations in increasingly hostile environments. Organizations are becoming increasingly aware of improving safety and reliability to not only ensure minimal damage to the environment but also eliminate concerns of investors and customers, hence safeguarding the bottom line.

Client Situation

Our client, a large global energy organization, has significant business units in one of the world's deepest oil fields. The company was facing plant reliability issues, which resulted in production losses of several hundred million dollars in 2008.

As part of their routine duties, operators had been manually collecting data associated with monitoring the safety and reliability of the plant equipment.

Our client recognized the need to automate this process to ensure collected data could be trended and that triggers could be sent automatically to relevant specialists when equipment readings exceeded defined thresholds, thus impacting the performance of the assets and reducing productivity.

Our program management arm, PIPC, had previously worked with the client to salvage a stagnant project, and based on that success, the client turned to us again for further help.

Challenges

The company had made significant progress in instrumentation of the plant but faced some critical challenges in maintaining and monitoring reliability, including:

- **Manual development and execution of inspection and surveillance routines,** making these processes susceptible to human error, as well as safety and reliability risks.
- **Inability to assess equipment efficiency and reliability,** due to the manual process of collecting data.
- **Patchy route compliance,** with inaccurate measurement.
- **Inability to trend many data points** due to lack of electronic storage, such as for tank levels and chemical inventories performed by operators and process engineers.
- **Working with a global virtual team based in different geographies,** utilizing each team's expertise.

When our team became the implementation partner for our client, it worked through the following complexities to deliver the solution:

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- **Adhering to the client's global standards in relation to deploying technologies,** as well as ensuring "fit for purpose" at a local level to accommodate resource and legal constraints.
- **Ensuring the solution was resilient** against the harsh temperatures of the oil field, in particular the handheld devices.
- **Managing the rotational aspect of working practices,** specifically when engaging with stakeholders on selecting and deploying the solution and transferring knowledge to enable the in-country project team to lead on future deployments.
- **Implementing a multi-lingual solution** with teams located in different geographies.

Solution

From the beginning, our team was primarily involved with reviewing project scoping activities and assuring the project board that the business case, scope and execution plan were sound and would address the business challenge.

PIPC was then involved with implementing the solution and accelerating it through the early scoping and design phases, including leading the initial two deployments, with a view of transitioning knowledge to the in-country team so it could lead future deployments.

The scope of the project included deployment at four sites in the oil field, 150 handheld devices to conduct operator routine duties and 500-plus users with a budget of $2.5 million within a two-year time frame. The overall aim of the project was to improve the reliability and efficiency of equipment at the oil field, using historical patterns and current information to predict behavior and prioritize interventions.

PIPC was involved in the following key areas:

- Scoping and designing the solution.
- Defining the overall deployment approach, based on the organizational, physical and technical structures within the plant.
- Defining and maintaining the project plan to deliver on the aggressive timeline.
- Providing monthly status reports to senior management.
- Transferring the knowledge to the project team in TCO to ensure successful deployment across all sites, as well as sustainability of the solution.
- Leading and delivering on the following three workstreams:
  - Solution design:
    - Optimizing routine duties to ensure the data collected was relevant and that it met legal requirements and reflected the current practices in the plant.
  - Technical:
    - Selecting a solution that accommodated the operating environment and incorporated the needs of the end-user communities.
    - Establishing a business support model to ensure business and technical sustainability of the solution.
  - Deployment:
    - Producing the deployment approach and plan.
    - Developing training and associated support materials.
    - Engaging with vendors to produce CBTs.
    - Engaging and consulting with stakeholders and the end-user community to obtain buy-in and ensure a smooth transition from deployment to "business as usual."
    - Identifying business value metrics to ensure realization of business benefits.
    - Deploying the solution in the first operating zone.
    - Capturing feedback and lessons learned and implementing improvements for future deployments.

Benefits

- **Delivered on the aggressive timeline,** on budget and to expected outcomes.
- **High level of stakeholder engagement,** resulting in operators requesting additional activities to be transferred to the handheld devices that were not included in the initial deployment.
- **Successful knowledge transfer** to the in-country project team, which resulted in the team leading activities on future deployments.
- **Completion of approximately 95%** of routines within a month of the first deployment.
- **Business benefits** being realized within four weeks of the first deployment.

About Cognizant

Cognizant (NASDAQ: CTSH) is a leading provider of information technology, consulting, and business process outsourcing services, dedicated to helping the world's leading companies build stronger businesses. Headquartered in Teaneck, New Jersey (U.S.), Cognizant combines a passion for client satisfaction, technology innovation, deep industry and business process expertise, and a global, collaborative workforce that embodies the future of work. With over 50 delivery centers worldwide and approximately 137,700 employees as of December 31, 2011, Cognizant is a member of the NASDAQ-100, the S&P 500, the Forbes Global 2000, and the Fortune 500 and is ranked among the top performing and fastest growing companies in the world. Visit us online at www.cognizant.com or follow us on Twitter: Cognizant.

Cognizant

World Headquarters
500 Frank W. Burr Blvd.
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277
Email: inquiry@cognizant.com

European Headquarters
1 Kingdom Street
Paddington Central
London W2 6BD
Phone: +44 (0) 20 7297 7600
Fax: +44 (0) 20 7121 0102
Email: infouk@cognizant.com

India Operations Headquarters
#5/535, Old Mahabalipuram Road
Okkiyam Pettai, Thoraipakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060
Email: inquiryindia@cognizant.com