CAPGEMINI HELPS UNIFY AND MODERNIZE REFINERY OPERATIONS AT GLOBAL SPANISH MULTI-ENERGY COMPANY

ADMnext delivers seamless cloud migration and Agile development for complete organizational visibility

Driving well-oiled operations

In order to manage the evolving challenges of the highly competitive energy and utilities industry, many organizations have begun infusing technological advancements into their core operations to get a better grip on their operations and achieve cost optimization. As a best practice, software applications are aligned to business objectives and result in benefits such as improved operational efficiency, enhanced end-user experience, and an integrated view of all processes. However, the IT system can lead to sub-optimal results and even become a cost burden if left unchecked for periodical updates or assigned disorganized improvement cycles.

With over 25,000 employees and full-scale operations that include exploration, production, transformation, refining, petrochemicals, power generation, distribution, and mobility, one global multi-energy company was keenly aware of the repercussions from an obsolete technology system. The business reached out to Capgemini to help modernize its application portfolio, which is responsible for smooth operations across its five refineries, with an Operations Management System and cloud migration that would serve to eliminate technical debt and increase visibility. Capgemini had already worked with this organization for over 15 years and, together, the partners had worked on a host of different initiatives. In expanding on this already lengthy relationship, the partners embarked on a comprehensive transformation journey to fully support the launch of this global streaming platform.

Client: A global Spanish multi-energy company

Region: Spain

Sector: Energy and Utilities

Client Challenges:

A Spanish multi-energy company wanted to standardize the decentralized and heterogenous systems used across different refineries that were obscuring a broad view of the entire scope of operations and reducing opportunities for optimization

Solution:

Capgemini worked with the organization to help modernize its application portfolio that is responsible for smooth operations across its five refineries through a program of cloud migration and Agile development

Benefits:

- Complete view of operations across all refineries through a program of unified data
- More than 50% cost savings with cloud infrastructure
- Improved customer experience
- Optimization of application performance
- Better control with Business Process Integration (BPI)
- Enhanced support with improved employee productivity

Capgemini

Fueling growth together and elevating to cloud

Modernization began with the implementation of a complex production application, which facilitated vital functions such as the management of blends within the refinery, monitoring of composition in crude oil tanks and packages, management of stock information on a daily and monthly basis, and measurement of energy balance based on consumption and production. This decentralized system had maintained unique servers and databases for each refinery and could no longer meet the organization's modern expectations. Because the application could no longer be fixed through the renewal of its components, the company required a holistic revamp of both application and infrastructure systems.

During the planning phase, Capgemini worked closely with the client to lay out a strategy for migration to the cloud. This began with a thorough assessment of business processes and the existing IT landscape that determined cloud adoption readiness and key business and technical challenges in order to build an in-depth understanding of the project's requirements. Afterwards, the partners defined a governance framework to clearly articulate and assign responsibilities, add transparency and accountability, and ensure constant progress through systematic monitoring and tracking. Additionally, the multi-energy company and Capgemini validated the solution blueprint designed by the organization, established a roadmap and operating model aligned to target state architecture and technology stack, and outlined the migration sequence and schedule for the timely delivery of the solution.

In the execution phase, Capgemini leveraged Application Development and Maintenance (ADM) best practices aligned with application modernization concepts. In order to centralize operations, Capgemini worked with the client to develop a unified system that could handle operations for all five refineries. As part of the modernization exercise, equal emphasis was placed on infrastructure and application requirements. Based on the initial assessment results, the technology components were re-platformed, re-factored, or re-written with consideration for cloud development principles and modular architecture.

Results born from planning and execution

To improve speed to market and provide incremental benefit to the client, the organization and Capgemini implemented DevOps as the foundational pillar for development, testing, and deployment of the overall solution. Based on the assessment of people, process, and technology, the partners incorporated Agile methodologies and tools for a seamless transition to the cloud. Key executives were prepared for the cloud journey through insightful business and technology workshops. Capgemini also redefined delivery flows and worked with business leaders through a four-week sprint cycle to gradually re-develop and migrate the Operations Management System, while new orchestration, deployment, and collaboration tools were introduced to bring about Agile operations at scale.

With renewed technology, redesigned architecture, and modern cloud infrastructure, the company was able to ensure that the Operations Management System was consistent with standards and frameworks used for the other applications in its portfolio. The revolutionary changes in business operations applications helped the organization drive the desired business results and resulted in the partnership being expanded to cover further applications maintenance and enhancements.

Ultimately, the organization was able to realize the following benefits from this engagement:

- A complete view of operations across all refineries through a program of unified data
- More than 50% cost savings with cloud infrastructure
- Improved customer experience
- Optimization of application performance
- Better control with Business Process Integration (BPI)
- Identification of new functionalities that are better aligned with the real needs of refinery users
- Enhanced support with improved employee productivity.

Bringing the future into focus with ADMnext

After this comprehensive program of modernization, the company was able to reap the benefits of centralization and the comprehensive visibility it was seeking. In looking to the future, the organization is seeking to collaborate further with Capgemini through the implementation of an SAP QP0 system for the transportation of documents to ensure compliance with SAFT-PT regulations, along with the digitalization of notice management through the integration of SAP with a mobile application. Additionally, the company is planning to adapt current SAP chemical systems to a new chemical manufacturing planning tool and implement SAP WM at one of its chemical plants.

About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of 290,000 team members in nearly 50 countries. With its strong 50 year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2020 global revenues of €16 billion.

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