Capgemini support EDF in spearheading the construction of a new generation of nuclear power stations in the United Kingdom

The company worked with Capgemini, its long-term partner, to move from a document-centric to data-centric approach by establishing an Integration Center of Excellence (ICoE) underpinned by MuleSoft

Unifying disparate digital programs

As part of its broader e ort to provide clean energy across the country, the UK government approved the construction of a nuclear power station at Hinkley Point C (HPC), to be delivered by EDF Energy—the rst in 25 years in the UK. Since construction began in 2017, work has progressed steadily from initial earthworks and civil works to out tting, and now to the current commissioning and pre-operations phase. To support modern ways of working, a transition from document-based to digital processes was necessary. An integration platform was required to eliminate siloed ways of working. EDF chose a scalable enterprise solution in MuleSoft, which would enhance their ability to construct and commission Hinkley Point C initially, while also accelerating the development of Sizewell C and enabling future operations to be digital.

As part of this e ort, EDF initiated ve distinct digital programs that would address critical business challenges. However, if each of these initiatives were run in silo, they would not deliver the desired outcome until all the ve

Client: EDF

Region: UK

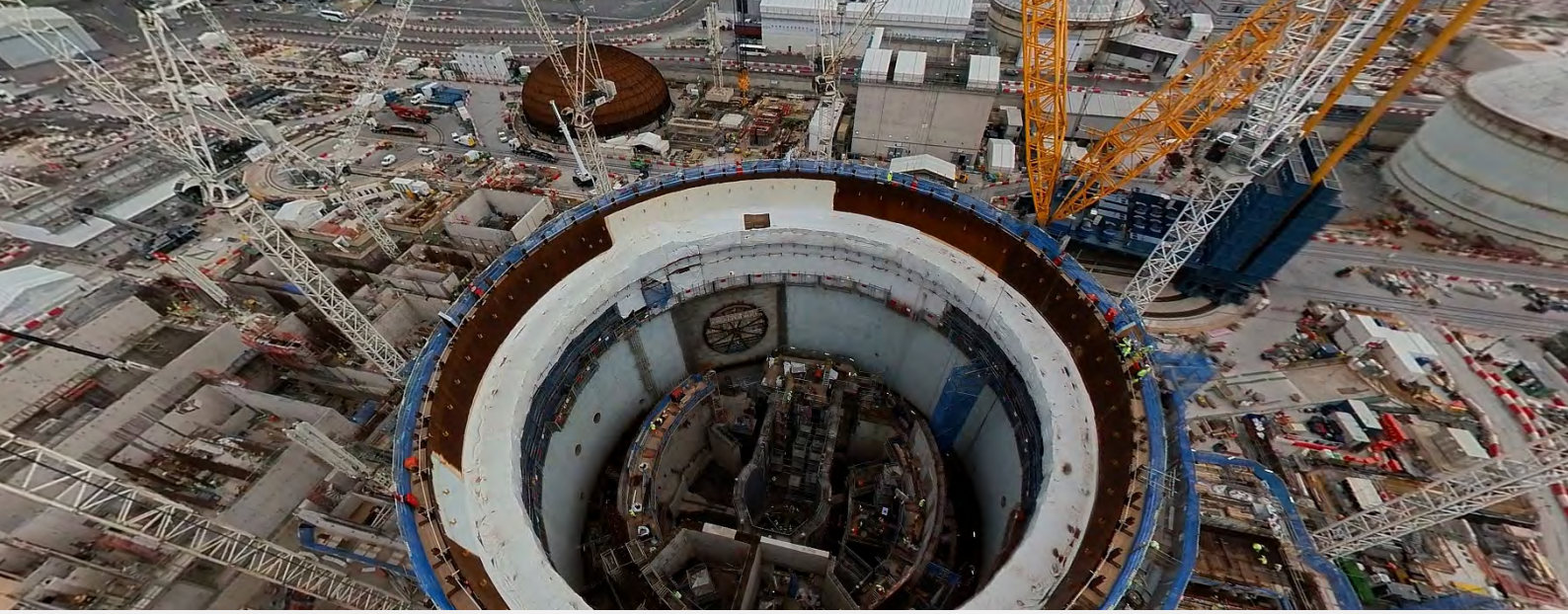
Industry: Energy transition and utilities

Client challenge: To support this ambitious endeavor, EDF aims to transition from a document-centric to a data-centric approach. This shift will create a fully integrated Enterprise Architecture, seamlessly connecting applications, data, and devices across the new digital landscape.

Solution: Engaged as the company's implementation partner, Capgemini set up an Integration Center of Excellence that introduced MuleSoft. This transformation not only expedited the critical construction and commissioning phases but will also ensure long-term safe operations, delivering business value throughout the project's life cycle.

Benefits:

- 40% reduction in potential delays during construction phase
- 30% faster time to market
- Improved e ciency and streamlined maintenance



systems and associated data were connected and automated through an enterprise integration solution. In addition, without a fully integrated digital system, EDF ran the risk of excessive costs due to manual workflows, infrastructure management inefficiency, and challenges related to meeting construction timelines.

Acknowledging the importance of taking action, the company decided to identify a partner that could provide end-to-end managed services for enterprise application integration. After a competitive RFP process, EDF selected Capgemini, which had been involved with the HPC site since the beginning of construction. In addition, Capgemini offered proven integration capabilities as well as the proven technical leadership and solutions needed to develop a connected IT ecosystem that would enable the company to fulfill its vision for the HPC site.

An agile approach built around a Center of Excellence

After reviewing EDF's existing systems and circumstances, Capgemini leveraged its experience with nuclear construction and supporting EDF at the HPC site to propose establishing an Integration Center of Excellence (ICoE). As part of this structure, the project team would implement integration architecture governance and multi-pod teams while providing an extended team for platform and application support.

Based on the proposed governance model and EDF's needs, EDF and Capgemini then selected MuleSoft technology as the basis for the enterprise integration platform, which would rely on a modular architecture to bring together different applications and workflows onto a single system. Through this project, the project team would fully integrate the five key digital programs while streamlining end-to-end business processes, managing crucial infrastructure, and supporting HPC's ongoing construction and future operations.

Following the agreed-upon approach, the team adopted an agile delivery model that leveraged Capgemini assets to set up a continuous integration and continuous delivery (CI/CD) as well as test automation. This was managed using a balanced mixture of onshore and offshore support, wherein a core (CoE) team offered architecture, build and support services while a scalable and flexible support team provided additional assistance as needed.

Throughout this effort, the project team regularly coordinated with EDF stakeholders, ensuring that their combined expertise tailored the solution to the organization's key objectives. Capgemini's Rightshore methodology enabled the partners to follow an efficient delivery approach while regular feedback and change management refined the solution and prepared EDF users to adopt new technology and processes.

Preparing the path forward with a fully integrated digital system

The result was a solution that leveraged MuleSoft 's API-led connectivity as part of a unified, scalable data ecosystem that allowed seamless communication between diverse applications and brought together the five digital platforms under one umbrella. This streamlined infrastructure management, enabling faster data-driven decision-making. In addition, the new architecture has expanded EDF's long-term adaptability so that the company can scale its operations as needed.

The Integration CoE has provided the company with a greater ability to automate workflows and integrate key applications, which has contributed to greater operational efficiency. By digitizing records and centralizing data, the CoE team improved maintenance response times and reduced delays related to manual processes by 40%. In addition, the reduction of paper-based processes has streamlined maintenance and expanded the company's access to critical real-time data, enabling it to make critical decisions confidently.

All of this has introduced standard practices and composable architecture, enabling a 30% acceleration to the solutions time to market. This success has led to a continuation of the partnership between EDF and Capgemini, who have since worked together to replicate the MuleSoft solution at the organization's Sizewell C project. The energy company is now better prepared than ever to pursue its future ambitions and provide clean energy to people and businesses throughout the UK.

About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 350,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, generative AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2024 global revenues of €22.1 billion.

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