



Customer success story

EDF creates a cloud-native engineering team in 14 weeks

Working on AWS, the global energy utility makes quick progress toward a unified engineering function.

Customer challenge

EDF, or Électricité de France, is on a mission to enhance and unify its engineering function. To make it happen, the French multinational electric utility sought to establish common standards for engineering excellence across the company and then seed the standards into its teams. It was a steep challenge: As one of the world's largest producers of electricity, EDF operates a portfolio of 120+ gigawatts of generation capacity that spans Europe, the Americas, Asia, the Middle East and Africa.

EDF had a twofold purpose for the common standards: It hoped the standards would foster greater collaboration among its engineers and serve as guidelines for hiring managers. Its goal was to consistently deliver high-quality software to customers and become a top destination for engineering talent. The company turned to Cognizant to establish a unifying standard for modern software engineering and cloud-native practices for use on AWS before trialing a repeatable process for implementing the practices in one of their software engineering teams.

AWS + Cognizant solution

Our teams devised a three-part plan to set out common standards, assess the maturity of a target team, and then remediate any gaps in their skill and knowledge.

Benchmarks for engineering excellence

Cognizant and EDF worked together to create a set of benchmarks across six core technical categories that form the basis for assessment and upskilling.

- Define: how work is identified, scoped, and agreed with customers
- Develop: how work is implemented and engineered
- Assure: how work is validated technically and functionally
- Deploy: how products and features move from development to production
- Operate: how issues with products and features are reported and fixed
- Collaborate: how the team communicates and shares knowledge both internally and to their customers

Maturity assessment

EDF chose a single team, the Quants, to trial the assessment. Over two weeks, Cognizant measured the Quants team against key best practices and principles by interviewing team members, reviewing existing documentation and processes, shadowing meetings and reviewing source code.

The benchmarking process uncovered several technical gaps:

- Define: Work wasn't defined or implemented against any documented Agile process.
- Develop: limited adoption of test-driven development and integration testing.

- Assure: limited adoption of Continuous Integration.
- Deploy: limited adoption of peer review.
- Operate: There were ad hoc processes for customers to report issues with deployed changes.
- Collaborate: There was limited utilization of best practices within the team's chosen software languages.

Upskilling

Cognizant devised an upskilling plan to remediate the gaps between the team's starting maturity and cloud-native best practices. After the initial two-week assessment, engineers for Cognizant and EDF partnered to transfer key skills over 12 weeks. They held team workshops on critical topics such as Agile methodologies, behavior-driven development and integration testing, and launched peer code reviews to encourage higher quality. They also updated internal documentation and facilitated the definition of methodologies and processes for a modern cloud-native team.

Architectural Attributes

Moving towards a unified engineering function

EDF now has a proven, repeatable process for teams to adopt common engineering standards—a big step towards its vision for a unified engineering function. After just 14 weeks, the Quants team had widely adopted and understood the set criteria to meet software engineering and cloud-native best practices. Team members now work against a documented Agile process and use behavior and test-driven development. In addition, they've adopted automated testing and peer review for changes to tools and products. The team automates deployments where possible. Only a single gap remained across the initial benchmarks (over 20 individual metrics). Equally important, EDF can use this team as a benchmark for hiring top tech talent for its growing engineering function. The next step is for EDF to continue to apply the template to teams, expanding the circle of engineering excellence within its organization.

Highlights

- In 14 weeks, the pilot team had adopted the standards criteria
- Team members now use Agile processes and behavior- and test-driven development
- The pilot team adopted automated testing and peer review for changes to tools and products

Why Cognizant?

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. We engineer modern businesses to improve everyday life. Our unique industry-based, consultative approach helps clients transform technology, reimagine processes and transform experiences ensuring businesses remain agile, relevant and ready to run more innovative and efficient enterprises.

With AWS as our partner, we focus on the outcomes that matter most to businesses and underpin our solutions with deep industry experience and market-leading IP. Cognizant brings more than 13,000 AWS certified professionals, dedicated AWS certified consultants in 43 countries, hundreds of customer launches and successes, and more than 70 transformational blueprints to drive innovation beyond cloud migration.

As a premier consulting partner, Cognizant hold numerous AWS competencies, including AWS Mainframe Migration, AWS SAP, AWS Migration, AWS Financial Services, AWS Healthcare, and AWS Life Sciences. Partner programs include AWS Well Architected, AWS Managed Service Provider, AWS Marketplace Seller, AWS Solution Provider Program, and AWS Public Sector Solution Provider.



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