



Case Study: AWS technologies

OSSO's Platform Transformation

Phase One: Preparation Phase
and Initial Development

Prepared by



Executive Summary

This case study explores the OSSO Energy Portal project, a transformative initiative aimed at modernizing the operations of OSSO, a UK-based natural gas supplier.

For better understanding, we have divided the project into **two key phases**: the preparation and initial development phase, and the subsequent enhancement and optimization phase.

This document focuses on the first phase, detailing how foundational infrastructure and essential functionalities were implemented to set the stage for a scalable, secure, and efficient platform.

Overview

OSSO, a UK-based natural gas supplier, set out to modernize its operations with the OSSO Energy Portal. This platform aimed to centralize contracts, quotes, meters, and financial processes while offering tailored portals for brokers, customers, and internal staff. The preparation and initial development phases were critical in laying the foundation for scalability, automation, and operational efficiency.

Team & Timeline

The OSSO Energy Portal project began in **mid-2022** and is an ongoing effort. A dedicated team of **five developers, one QA engineer, one product manager, and one designer** collaborate using **agile methodologies** to ensure rapid delivery and alignment with business goals

Communication with OSSO Team

We prioritized effective communication and adaptability to client needs throughout the project. Key tools and strategies included:

- **Collaboration Tools:** Used Slack and Jira for team communication, incorporating the client and their business team into Slack as external connections.
- **Launch Coordination:** Established a WhatsApp group/channel for real-time communication during the launch process, enabling rapid hotfixes or updates.
- **Design Collaboration:** Leveraged Figma for design collaboration, allowing both teams to take notes and exchange messages directly via the Figma App.
- **Client Access:** Provided the client with limited access to the Jira Project Board to track progress and align priorities.

Solution

During the preparation phase, the OSSO Energy Portal's architecture and infrastructure were meticulously planned and implemented using AWS technologies. The initial development phase focused on delivering a functional platform to meet core business needs:

01 Infrastructure Setup & Planning

- Designed a scalable, secure, and highly available infrastructure using AWS services.
 - Leveraged Terraform for Infrastructure as Code (IaC), automating the provisioning of resources.
 - Created a multi-tier architecture with segregated subnets for web, application, and database layers across multiple availability zones.
 - Integrated Cloudflare for DNS management and Amazon CloudFront as a Content Delivery Network (CDN) to enhance global performance.
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02 Environment Setup

- Established isolated environments for development, testing, staging, and production.
 - Deployed applications using Amazon ECS Fargate for managed container orchestration.
 - Implemented CI/CD pipelines using GitHub Actions for automated testing and deployment.
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03 Security Foundations

- Implemented AWS Identity Center (IAM SSO) for role-based access control.
 - Enabled logging and monitoring through AWS CloudTrail and Amazon CloudWatch.
 - Secured data at rest and in transit using AWS KMS and HTTPS protocols.
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04 Initial Development & Launch

- Developed the Staff Portal to support OSSO's internal operations.
 - Built core modules like Quotes, Contracts, Billing, and Meters.
 - Designed a role-based access framework to cater to various user groups.
 - Focused on delivering a responsive and intuitive user interface.
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Outcome

The initial phases resulted in the successful deployment of the OSSO Energy Portal's core infrastructure and functionality. Manual processes were automated, data accuracy improved, and staff efficiency increased. The scalable foundation ensured OSSO was prepared to expand its operations and add advanced features in future phases.

AWS Services Used

⁰¹ Amazon ECS Fargate

Hosting for frontend and backend services

⁰² AWS Lambda & EventBridge

Automating background tasks and scheduled operations.

⁰³ Amazon RDS Aurora Serverless v2

Providing scalable, on-demand database capabilities.

⁰⁴ Amazon CloudFront & S3

Delivering fast content distribution and secure file storage.

⁰⁵ AWS Certificate Manager (ACM)

Ensuring secure communication

⁰⁶ AWS KMS

Encrypting data at rest

Thank you!

Thank you for taking the time to read this case study. If you have any questions or would like to discuss our findings further, please don't hesitate to reach out to us.

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