



CASE STUDY

Upgrading Data Processing Capabilities, using MuleSoft
for UK's Largest Railway Infrastructure Manager.

Coforge



About the customer

The customer is a public body within the UK's Department for Transport, who owns, operates, and develops most of Great Britain's railway network and infrastructure. In a nutshell, they maintain 20,000+ miles of railway tracks, 30,000+ bridges, tunnels, viaducts and 1000s of signals, level crossings. The customer also manages the operations of 20 of the UK's largest railway stations.

Project background

As part of their Digital Transformation process, the customer has decided to upgrade their data management and data processing capabilities. They wanted to adopt the new International Industry Standard data formats and move away from their legacy data file formats. With this upgrade to new systems, the older format of their Train Path requests named 'PEX' (similar to the .CSV format), must be converted to the International Standard TAFTAP format (XML format). This new XML format data must be stored and made available in the Data Warehouse DB.

Challenge

The old format data was unstructured. It was difficult to understand, and reuse. Getting the detailed train movement data, and mappings was becoming a challenge for the customer. A few external consultants tried to understand the older structures and solve the problem for the customer, but their efforts were not helpful.

The solution delivered

The first challenge we solved was to understand the older data processing methods, and then clearly draft the project requirements and business cases. Subsequently the solution was developed using the MuleSoft Anypoint Platform in its center for System Integration; Azure Cosmos DB for the data lookups, audit and logging; Azure Synapse for persisting both XML & JSON data and for Analytics. The solution was successfully deployed, and the customer is now able to easily understand and reuse the newly formatted data. This data is now being used to generate all the required operational reports and analytics around the movement of the trains.

Technologies used

The integrated toolset that enabled this

- Business Processing Implementation - MuleSoft AnyPoint Platform
- Visual representation of mappings - Microsoft Visio
- Master/Reference Data - Azure Cosmos DB
- Data Warehouse DB - Azure Synapse
- File Storage - Azure Storage Account
- CI/CD - Azure Repository"

Benefits earned

Key benefits achieved by the customer:

- Automation of the data processing, i.e. the conversion of conventional Train Path Request files format from PEX, to industry standard XML formats. Hence delivering efficiency and saving a lot of time.
- The data is classified/segregated and stored appropriately, so that it is easy for users to consume the data easily as and when required.
- The customer is now able to easily read and repurpose the data at a large scale, hence opening up multiple benefits like insights and analytics.

About Coforge

Coforge is a global digital services and solutions provider, that enables its clients to transform at the intersect of domain expertise and emerging technologies to achieve real-world business impact. A focus on very select industries, a detailed understanding of the underlying processes of those industries and partnerships with leading platforms provides us a distinct perspective. Coforge leads with its product engineering approach and leverages Cloud, Data, Integration and Automation technologies to transform client businesses into intelligent, high growth enterprises. Coforge's proprietary platforms power critical business processes across its core verticals. The firm has a presence in 21 countries with 25 delivery centers across nine countries.

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