



# Capgemini helps HMRC modernise **student loans** service and make it cloud-ready

When Her Majesty's Revenue and Customs (HMRC) needed to update legacy technology, Capgemini delivered a modernised business service through its REGENERATE offering, which uses a suite of solutions to update services written in CA Gen to open standard software. To minimise the risk related to the change, Capgemini automated the conversion of the existing business logic. The solution was deployed in a private cloud using modern delivery techniques and tooling. It provides a loosely coupled platform with a modern user interface that enables interactions driven by real-time events.

HMRC's Student Loans Business Service (SLBS) administers and facilitates the collection of student loan payments on behalf of Department for Education (DfE). The service was built in the late 1990s with CA Gen, a leading Computer Aided Software Engineering (CASE) application development environment at that time. Since its introduction, significant changes in technology have had a revolutionary effect on how customers wish to interact with public services. As a result, the

## Overview

**Client:** Her Majesty's Revenue and Customs (HMRC)

**Sector:** Government

**Region:** UK

### Client Challenges:

HMRC needed a modern and flexible service as well as a safe, reliable, and cost-effective solution delivery. HMRC therefore wanted to transform its Student Loans Business Service (SLBS) platform, upon which the Department for Education (DfE) and Student Loan Company (SLC) rely

### Solution:

Migration of the existing application to structured Java through the REGENERATE migration toolset and methodology, followed by deployment onto a modern private cloud environment using CI/CD

### Results:

- Removal of dependency on legacy software
- Legacy service decommissioned
- Private cloud, public cloud ready
- Open technology standards
- API enabled
- DevOps managed service
- Retained embedded business knowledge



existing SLBS no longer provided a suitable foundation for HMRC's ambitious IT and business transformation objectives and an alternative solution was required.

## The client

As the UK's tax, payments, and customs authority, HMRC collects the money that pays for the UK's public services and helps families and individuals with targeted financial support. Its 63,000 employees oversee the collection of more than £600 billion in taxes and duties from 50 million customers. On behalf of the DfE, HMRC administers Student Loan repayments from individuals based on their income through both Pay As You Earn and Self-Assessment, with IT support managed through HMRC's SLBS.

## The situation

Transformation of the service was needed to support HMRC's strategic business ambitions for Student Loans, including policy and legislative changes for Post Graduate Loans (PGL).

HMRC required a transformed IT service to support its business ambitions within tight timescales. The legacy platform for SLBS needed to be modernised to support policy and legislation demands, and HMRC were considering a complete rewrite of the service.

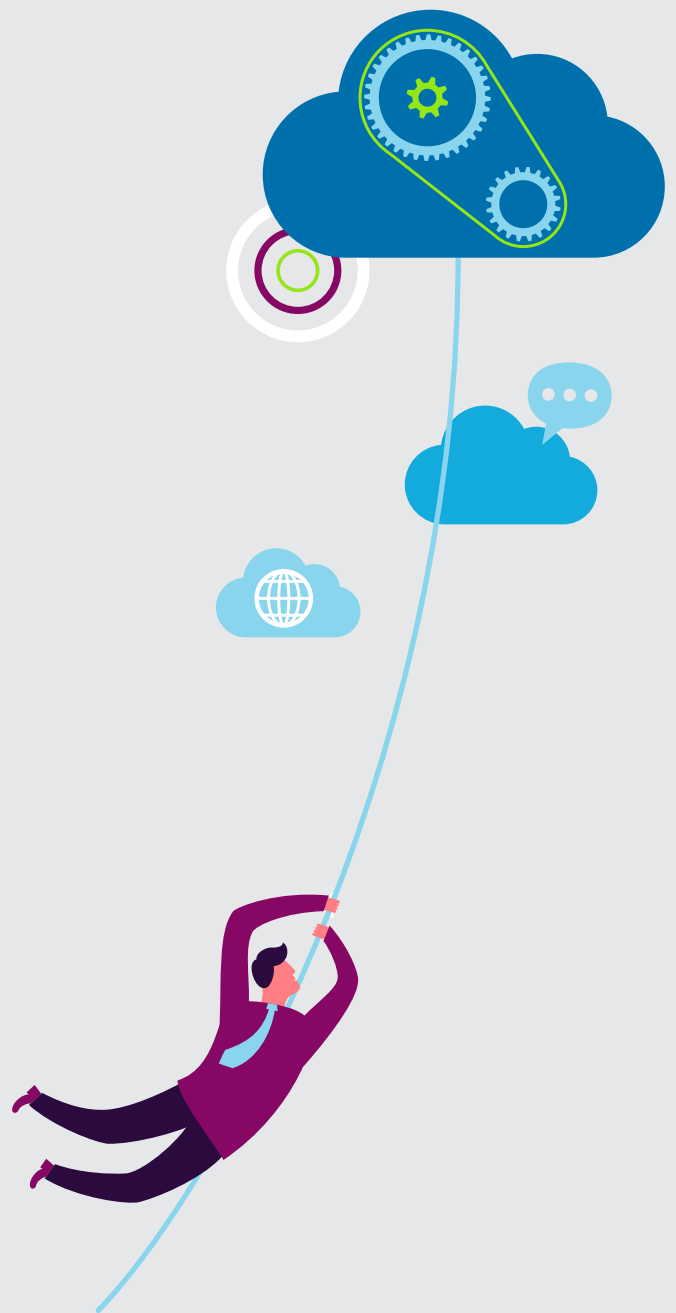
## The solution

The source models for SLBS were automatically migrated to stand-alone structured Java code using Capgemini's REGENERATE toolset and methodology, preserving the business logic of the original application without manual intervention or data transformation. The SLBS system encompassed approximately 20 external APIs, 150,000 objects, over 100 procedure steps, and the equivalent of 40,000 lines of code.

Working closely with HMRC architects, Capgemini leveraged the REGENERATE API-enabled solution to design a loosely coupled business service that integrates with digital channels and now provides a platform to move towards real-time events. This created a baseline Student Loans application that can be updated with future enhancements in alignment with evolving DfE policy. REGENERATE supports automated testing and integration with CI/CD tools and methods that enable collaborative, agile ways of working. The new application has been deployed with, hosted on, operated by, and monitored with open source tooling while running in a virtualised private cloud.

## The result

HMRC has realised its ambitions for a modernised IT service, removing enterprise barriers associated with a migration of this size and complexity, with outstanding results. The new DevOps delivery model, which uses agile methods via the introduction of CI/CD, improves the ability to respond to change and supports the digital transformation agenda and future service enhancements.



The Department has removed its dependency on legacy hardware and software for the Student Loans service, decommissioned the legacy SLBS, and secured a structured Java service with industry standard tooling. REGENERATE has given HMRC a proven, cost-effective approach that can be utilised for similar system transformations in the future.



## REGENERATE: Modernise or Migrate?

While ageing services continue to create value, many organisations need to modernise their offerings in the face of challenges such as:

- Difficulty in intercepting and integrating with emerging digital technologies
- Inability to respond quickly to customer and market changes
- Skills shortages in legacy technology expertise
- Significant support charges and risks as software is often out of mainstream vendor support.

As a result, today's organisations must choose between a complete rewrite of their service, optimising or updating their current services, or migrating to a new modern platform designed for evolving business needs.

As an example of their industrialised, large-scale modernisation approach, Capgemini has developed REGENERATE, an automated toolset and associated methodology designed to help organisations optimise, modernise, or migrate their CA Gen environment(s). REGENERATE brings together the following three areas:

- Support: get the best out of your current investment, focus on optimisation rather than replacement using proven experience
- Update: move to a supported version of CA Gen, upgrade and modernise rapidly and accurately using specialised automation tools
- Migrate: migrate to a more modern and easily accessible environment.

## About Capgemini

A global leader in consulting, technology services and digital transformation, Capgemini is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realise their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of over 200,000 team members in more than 40 countries. The Group reported 2018 global revenues of EUR 13.2 billion.

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## About HMRC

HM Revenue and Customs (HMRC), the UK tax authority, is responsible for making sure that money is available to fund the UK's public services and for helping families and individuals with targeted financial support.