

The background of the top half of the page is a close-up photograph of a person's hand holding a smartphone. The phone's screen displays a payment application interface. At the top, there is a field labeled "Amount:" followed by a series of dots. Below this, a credit card is visible with the number "XXXX XXXX XXXX XXXX". At the bottom of the screen, there is a large, dark blue button with the word "Pay" in white. A finger is shown touching the "Pay" button. The overall lighting is warm and focused on the phone's screen.

Capgemini's Container Platform provides a blueprint for fast, *compliant* application development

Capgemini's cloud-based accelerator provides a secure, compliant, hosted, and managed containerization service for HMRC, allowing the department to cut the time needed to launch new digital services by months

HM Revenue and Customs (HMRC) is the UK's tax, payments, and customs authority. Its purpose is to collect the money that pays for the UK's public services and to help families and individuals with targeted financial support.

Given the department's critical role, it needs to be able to respond to change and deliver digital services quickly while adhering to stringent quality, security, and compliance processes and controls. Historically, this meant that translating an idea or concept into a fully developed digital service could take many months to complete. HMRC wanted a fast-track solution that allowed it to maintain these essential controls while enabling innovation and realizing benefits at pace.

Client: HMRC

Region: UK

Industry: Public Sector

Client Challenge:

HMRC decided to create an approved, standardized platform and service to enable the development of new digital services at speed while maintaining control over security and compliance.

Solution:

By partnering with Capgemini, the department developed the HMRC Container Platform and integrated the solution with its Enterprise Cloud Services (ECS).

Benefits:

- Months have been eliminated from a typical project
- Developers are free to innovate within agreed parameters
- More opportunities to innovate can be pursued at speed and with confidence
- HMRC has complete control over quality, security, and compliance



Empowering service owners to focus on the needs of end users

Building on the successful use of containerization to migrate its legacy services from private data centers to a modern, cloud-neutral model, HMRC partnered with Capgemini to launch the HMRC Container Platform (HCP).

Capgemini experts worked closely with HMRC from the outset to build a roadmap and to design a solution that simplified the build, deployment, monitoring, and maintenance processes for HMRC's development teams. The result was a comprehensive platform as well as services, tools, information, and templated forms that enable HMRC service owners and developers to focus on the needs of end users in the knowledge that the security, compliance, and approvals processes have already been managed. To further reassure HMRC, the project team set up a two-week hypercare service in support of new features or service releases.

With the solution in place, the team continued to work with HMRC stakeholders to create practical user guides that help teams use the service in a self-sufficient way. To drive continual improvement of the platform's availability and utilization, the team incorporated performance metrics tooling, while auto-incident reporting and prioritized scrum-team allocation drives operational insight, and observability enables continual cost optimization in line with FinOps best practices.

HMRC and Capgemini evolved the platform so that it could work using cloud-native and managed cloud-provider services, driving sustainability through technical solutions. This has delivered additional features on top of the standard managed cloud capabilities offered by hyperscalers to align with HMRC's compliance and security frameworks. Furthermore, the HCP acts as an enabler by expediting and greatly reducing the time taken to deploy applications onto the platform. As a result, it is now the department's recommended route through which all container-based applications and other digital assets are developed and launched.

Benefits for service owners and developers

Making a new cluster operational, managed, and repeatable often takes weeks. But the HCP creates

a repeatable and consumable service in just a few hours. Project and service owners can simply fill out an automated form, eliminating many time-consuming activities and providing everything required to deploy applications and make them accessible to both internal and external end users.

Working with multiple HMRC teams, Capgemini operates the HCP using the latest DevSecOps tools and standards and drawing on its global platform engineering expertise. Infrastructure is built, scaled, and patched using infrastructure-as-code automated pipelines to provide a seamless user experience.

The platform supports multiple services and provides a fully managed service that incorporates patching, upgrades, and supports all platform tooling using site reliability engineering (SRE) principles. This allows HMRC to have complete control over quality, security, and compliance. Everything is deployed and managed using Open Source software and aligns to Cloud Native Computing Foundation principles. All this ensures industry standards are met and allows developers to focus their attention on delivering new features to meet HMRC's business needs.

By adopting this technology approach, HMRC is enabling innovative ideas and new services to be conceived and launched at speed, delivering benefits much more quickly than before. Opportunities for quick wins can be pursued with confidence, aligning with HMRC's drive to enable self-service and self-sufficiency.

Benefits of containerization

Containerization allows software developers to create and deploy apps faster and more securely. Using traditional methods, developing code in a specific computing environment can result in errors and bugs when transferred to a new location, for instance from a desktop computer to a VM or from a Windows to Linux operating system. Containerization eliminates this problem by bundling the supplication code with its related configuration files, dependencies, and libraries. That single package of software – the container – is then abstracted away from the host OS, allowing it to stand alone and become portable and able to run on any platform or cloud without issue.

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 340,000 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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