

# HMRC Data Centre Transformation

**Critical systems move from ageing data centre to new facility, with no disruption to UK citizens**

**Awarded a Laureate Medal  
in the Computerworld  
Honors Program 2009**

## The Situation

Some HM Revenue & Customs (HMRC) data centres were built over 20 years ago, and even services like Tax Credits and the Child Trust Fund which make payments of over £20 billion a year, were on old technology infrastructure. Protecting data and making sure running costs are kept low is a high priority and therefore HMRC needed to move their systems into more resilient state-of-the-art facilities. The Tax Credits data centre links to over 75% of HMRC systems, including National Insurance and Pay-As-You-Earn, making the planned move one of the most complex ever in the UK. This needed to be done without risk to payments for over six million families.

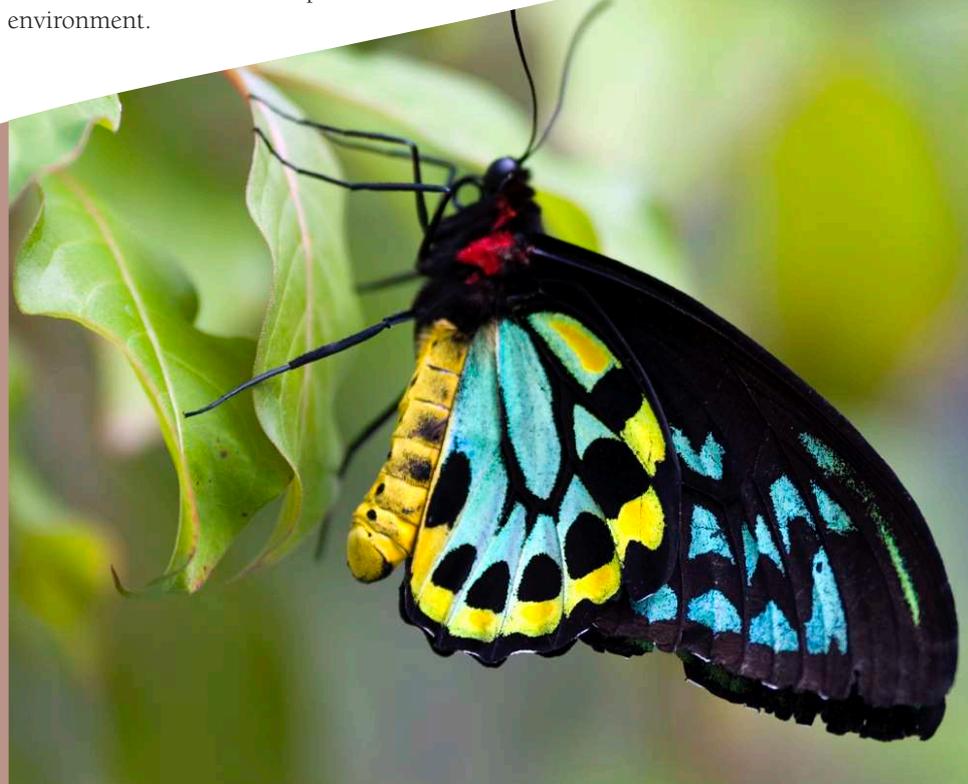
## The Solution

HMRC set up a phased programme to replace ageing facilities, starting with tax credits services, which were particularly constrained by their infrastructure and current operational environment.

The tax credits services were particularly constrained by the old data centre, so they were the first to move in HMRC's phased transformation programme. Over 5,000 staff days were required to implement the change, starting with the architecture design and hardware installation, and culminating with the secure transfer of over 20 terabytes of data to the new system. One of the most challenging aspects of the solution was reconfiguring hundreds of interfaces between HMRC services and the services with other government departments and external bodies like the Bank of England. Rehearsals were planned and practiced, processes tuned and operational procedures for secure data transfer helped reduce the implementation period from two weeks to two days.

“Each Laureate selected for this honor understands the importance of using one's resources and technical prowess to benefit one's fellow man.”

Bob Carrigan  
Chairman of the Computerworld  
Honors Program Chairmen's  
Committee and President  
IDG Communications



## The Result

Business critical tax credits services for over 6 million families now run on secure, resilient infrastructure; the move was invisible to the general public and there was no disruption to HMRC staff. As a result:

- The systems are available over 99.9% of the time, making sure tax specialists and operators have tax credits information on hand when they need it
- HMRC has reduced its carbon footprint
- 'Lights out' facility automates manual operations, reducing risk of human error
- HMRC has completed the first stage of their data centre transformation, providing a tried and tested blueprint for future migrations.

## How HMRC and Capgemini Worked Together

HMRC and Capgemini agreed what technology changes were needed. HMRC controlled the strategy and Capgemini implemented the new infrastructure and system changes while maintaining existing IT services and managing Fujitsu, their core infrastructure partner.

Joint planning and the ability to deliver the new infrastructure before HMRC's bi-annual systems updates played a big part in the programme's success. Specialists from HMRC, Capgemini and Fujitsu worked as one team focusing on the roles they needed to perform. All three organisations were represented at regular meetings, from programme steering group to daily progress meetings; with complete transparency of the plans.

Fujitsu purchased the hardware, and a joint architecture team developed a high level design that was right first time. Shared Technology teams from both organisations built the environments and performed interface analysis. Capgemini defined what tests were required, working with applications specialists who understood each element of the systems and their interfaces.

This analysis was a big manual exercise: identification and coding of the point of interface and file transfers between HMRC systems, third party systems and the old and new servers could not be automated. Fujitsu and Capgemini carried out the functional and non-functional testing. Tools and monitoring teams from both parties ensured that the new environment had the correct level of service management and reporting.

HMRC made sure the move did not affect the public or businesses. The implementation management team and business stakeholders - from HMRC's tax credits Director General to contact centre staff - worked through different scenarios and several rehearsals to reduce the move, originally programmed to take place over two weeks, to a single weekend.

The culmination of the nine month project was to transition data from the old site to a new location 400 miles away.

This move was a major logistical exercise. Tapes containing data for the 18 business systems were air-freighted to the new data centre where they were acclimatised before being loaded.

Application experts ran predefined tests to identify and resolve any issues; business users completed testing and agreed when data could be uploaded. The complexity of the interfaces with other services meant that once live processing started at the new data centre, there was no regression path. 24 hours after go-live, all the changes had rippled through and the move could be declared a complete success.

**“The fact that over a weekend we successfully moved huge amounts of data and 17 IT systems with 300 interfaces is a fantastic achievement.”**

**Mark Hall, IT Director  
HMRC**



## About Capgemini and the Collaborative Business Experience™

Capgemini, one of the world's foremost providers of consulting, technology and outsourcing services, enables its clients to transform and perform through technologies. Capgemini provides its clients with insights and capabilities that boost their freedom to achieve superior results through a unique way of working, the Collaborative Business Experience™. The Group relies on its global delivery

model called Rightshore®, which aims to get the right balance of the best talent from multiple locations, working as one team to create and deliver the optimum solution for clients. Present in more than 30 countries, Capgemini reported 2008 global revenues of EUR 8.7 billion and employs over 90,000 people worldwide.

More information is available at [www.capgemini.com](http://www.capgemini.com).

**Capgemini UK**  
Public Sector  
Transformational Outsourcing  
Infrastructure Management  
Application Management

**Approved by:**  
Mark Hall, IT Director, HMRC  
Catherine Yates, Aspire Portfolio Director,  
Capgemini

## In collaboration with



**HM Revenue  
& Customs**

HM Revenue & Customs (HMRC) collects tax and duties to make sure money is available to fund the UK's public services and makes payments to over 7 million families, providing targeted financial support.

Capgemini is HMRC's partner for IT and related services delivered through the Aspire contract. Capgemini is prime contractor for Aspire, and manages key partners and HMRC's Ecosystem of preferred suppliers.

For more information, please visit: [www.hmrc.gov.uk](http://www.hmrc.gov.uk)