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Enabling world-class service

Delivering cloud and IT transformation at the DWP

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In its mission to address the causes of poverty, improve children's life chances and help people achieve financial independence, the Department for Work and Pensions (DWP) provides support and guidance for over 20 million people throughout the UK.

For many of these citizens, the DWP's services are vital to help them overcome financial difficulties and get their lives back on track. As a result, it's critically important that the DWP's systems and processes are robust enough to ensure that pensions and benefits are paid correctly and on time to each claimant.

To ensure that its critical national infrastructure remains fit for purpose now and in the future, the DWP must be able to evolve its systems and processes to align with government policy and the needs of society.

The department wanted to increase agility by adopting new methods of architecting, provisioning and managing applications in flexible public and private cloud infrastructures.

This modern approach to IT management would empower the DWP to develop and deliver truly world-class digital services to support citizens and strengthen the UK economy.

User-hours saved by
reducing major incidents
per month by 73%

1 million

Critical applications
migrated to a new
private cloud

60+

Servers migrated to a
new private cloud

1,500+

The DWP has adopted practices that are helping it improve IT service management, increase independence and accelerate transformation— delivering in months what might have taken years without this new approach.

Moving critical infrastructure

The DWP realized that its transformation needed to happen in two stages. First, it needed to regain control of its IT estate from the third-party providers that had been supporting its systems for several years. Second, it needed to re-engineer its IT management processes and train its internal team to drive change—an initiative known internally as "World Class Service."

As a first step, the DWP team decided to engage IBM Services® to establish a new hybrid cloud architecture that would enable the DWP to host its most critical systems and sensitive data in a security-rich private cloud environment, while also taking advantage of public cloud services where appropriate to increase agility and cost-efficiency.

Making use of facilities provided by Crown Hosting Services, the DWP and IBM team built and provisioned two new, state-of-the-art data centers, linked to the DWP's existing data centers and fully tested to ensure high availability and resilience. The new infrastructure is fully virtualized and configured as a private cloud, providing much greater flexibility than the previous

model, which mainly ran applications on separate physical servers.

With the infrastructure in place, the team began migrating the DWP's critical applications over to the new data centers, using IBM's tested and demonstrable data center migration method. Larger and more complex sets of applications were migrated in a series of waves, while smaller, less critical or lower risk applications were moved one by one using a conveyor approach.

The team took the unique needs of each system into account against the challenging timescales, virtualizing, redeploying, remediating or replacing applications as appropriate to improve performance and stability while reducing infrastructure costs.

The team delivered the migration plan at a rapid pace over ten months, moving a total of more than 60 applications onto 1,500 virtual servers. With a highly scalable private cloud architecture supported by four petabytes of storage, the new data centers now have the capacity to support the DWP's workloads for years to come.

Driving change

Moving to the new data centers meant that the DWP now had the modern infrastructure it needed to take greater control of its IT strategy—but in order to see the full benefits, the organization also needed to re-engineer its IT service management practices. Stage two of the DWP's engagement with IBM therefore focused on analyzing processes, identifying issues, training the DWP's internal IT team and putting a framework in place to drive continuous improvement.

For example, one key objective was to reduce the number of user hours lost— that is, the number of staff impacted by a system outage multiplied by the duration of the outage. The team looked into the major causes of disruption, identified the key hotspots and introduced new management practices— for example, performing technical and risk assessments for all changes, creating a more accurate model for classifying the severity of incidents and using proactive monitoring tools to help identify potential problems before they caused real disruption.

It was important that the DWP team should quickly gain the skills to implement these changes themselves and become self-sufficient in managing the environment going forward. The IBM team therefore focused on enabling the DWP to plan and execute the transformation: providing methodology and best practice examples, defining work products, creating a backlog and empowering the DWP teams to deliver change independently. All communications emphasized the fact that the DWP was driving and controlling the entire program of work, and that both responsibility for the initiative and credit for its success would go to the DWP teams involved.

The DWP sees World Class Service as an ongoing initiative of continuous improvement, not a one-off program. In its work with IBM, the department has adopted practices that are helping it to improve IT service management, increase independence and accelerate transformation—delivering in months what might have taken years without this new approach.

Fit for the future

Today, the DWP has both an IT infrastructure and a set of IT management practices that are fully fit for the future. The successful delivery of both phases of the transformation initiative has had an immediate and profound impact on the stability of the DWP's systems, which in turn has enabled significant gains in productivity.

For example, the DWP estimates that since the start of the initiative, it has reduced the number of major incidents across its IT estate by 73%. This has reduced user hours lost from 2% to just 0.03%, an improvement of nearly two orders of magnitude that has already saved more than one million user hours for the department.

Furthermore, during May 2019, the DWP achieved its goal of a full month with zero production outages, an unprecedented achievement that would have been almost unthinkable with the previous infrastructure and support processes. This is not only an important metric for the IT team—it also demonstrates a real improvement in service quality for the DWP staff and the citizens they support.

By taking control of its own IT estate, the DWP has also freed itself from the commercial and technical constraints that had prevented it from driving change. As a result, it has seen a 600% increase in the delivery of significant changes, and the success rate for changes has increased to more than 99.5%.

Most importantly, the transformation initiative's citizen- and user-centric approach means that not only is the DWP making much more effective use of public money, it is also able to focus on delivering more efficient, innovative and user-friendly service to the people who need it most. As a result, the initiative was recognized at the MCA Awards 2020 (external link), earning a high commendation in the "Performance Improvement in the Public Sector" category.

Through collaboration and teamwork with IBM, the DWP has been able to take control of its own IT destiny and put its critical national infrastructure on a sound footing for the future. The department now has the freedom to transform its services to implement government policy and meet citizens' needs in the years to come.

About the Department for Work and Pensions

The Department for Work and Pensions (external link) is the UK government department responsible for welfare, pensions and child maintenance policy. It manages and delivers a range of working age, disability and ill health benefits to approximately 20 million people.

Solution component

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