

How to harness the potential of technology to bridge the digital skills gap



A case study from the Cabinet Office

Digital skills – The Cabinet Office

It is widely accepted that the UK has a digital skills challenge, and this cuts across both the public and private sectors. It has been estimated that the UK economy has only around 60% of the digital skills it needs. The pipeline for the future is also a concern, with a stark delta between the number of STEM graduates in the UK and those of many other economies. Overall, there are around 200,000 vacancies for positions requiring digital skills.

In central government, around 50% of civil servants surveyed said that an inability to hire qualified talent is a problem for digital transformation projects they are leading. Only around 4% of the civil servant workforce consider themselves to be digital and data technologists, compared to 8-10% of the private sector workforce – underlining the scale of the challenge if government is to catch up.



So what actions are being taken to address the digital skills gap and enable government functions to harness the technology era?

01 Pockets of excellence at the Cabinet Office

Top-down and bottom-up

Learning in the flow of work

A combination of solutions





Pockets of excellence at the Cabinet Office

This is something that has been explored during a series of workshops KPMG has been running with trade body techUK around creating a 'Smarter State', identifying the challenges and the best practice solutions. This has included speaking individually to a number of participants for a focused view – including Venus Bailey, Principal Enterprise Architect at the Cabinet Office. Venus leads a team of enterprise and technical architects, manages technical governance, and works closely with the CTO.

While it is not on the scale of some of the largest government departments, the Cabinet Office plays a key strategic role in the functioning of government. Around 2,000 staff (plus a further 700 people working for the Crown Commercial Service, an executive agency) work across 40 business units. Some of these units are highly digitally skilled and enabled, such as Government Digital Services (GDS) and the Central Digital and Data Office (CDDO), but others are more policy or business focused.

It's a mixed picture, as Venus reflects:



"We have pockets of digital excellence within the Cabinet Office and a broader population who are not digital specialists. We're building the structures to create learning pathways that will meet different needs."

Top-down and bottom-up

There are formal and informal mechanisms in place to achieve this. For the technology professionals that Venus' team is a part of, the Digital, Data and Technology (DDAT) professional capability framework, managed by Heads of Professions, creates a formal, structured learning pathway for learning and development, including industry certifications.

But as important as these 'top-down' frameworks are, other 'bottom-up' skills mechanisms such as community-based and informal forums also play a key role. "You need to come at digital upskilling from multiple angles," Venus says. "Different forms of learning and sharing help different needs. Formal structures suit many people and they create a clear roadmap, but there is also a thriving network of technical communities inside and outside central government which have real value. I am a big advocate. I can connect with someone in the Home Office, for example, and ask them a technical question about an aspect of their enterprise architecture and receive an immediate response.

"When people come together in one of the government chat forums or on external channels like Slack and Google Meet, instant and timely knowledge sharing takes place. People learn quickly that way – it's hands-on and also fun. There has been a lot of discussion about ChatGPT for example – including the possibility of using ChatGPT to generate AWS infrastructure code. It can be cutting-edge!"

Learning in the flow of work

Other elements in the mix include technology learning platforms that staff can access at any time – inside or outside work – to learn at their own pace and convenience. These can also help address specific in-the-moment needs when working on a live task. Platforms such as Pluralsight are popular. Learning in the flow of work seems particularly suited to Millennials and the 'YouTube' generation.

"You've got to let people learn in the way that works best for them," Venus comments. "And you need to provide them with choices over how to do it. We also have a lot of contractor support at the Cabinet Office, so communities and online learning platforms are important for them given that they don't have access to our formal learning frameworks."

Another important factor is not to focus exclusively on hard technical skills – soft skills are essential too. As Venus says: "As technologists, we need to be able to communicate effectively with the business and policy teams who will be the beneficiaries of what we're doing."

A combination of solutions

With over 400 applications in the Cabinet Office's technical portfolio, and an ongoing project to drive higher levels of business process automation for greater efficiency and speed, there is a lot going on simultaneously.

"We're on a journey," Venus observes. "We're introducing more structure and creating more formal learning pathways that will, I believe, hugely benefit our teams. But at the same time, we need to keep on supporting the dynamic community ecosystem and the self-serve platform resources that many people value. There's no single solution, rather it's about having a combination of elements that complement each other."

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Driving a digital skills transformation for a smarter - KPMG United Kingdom



3



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