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## An AI-enabled public sector workforce

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# An AI-enabled public sector workforce

*Reform was delighted to host this policy roundtable exploring the opportunities for government to harness AI and empower the civil service workforce. The discussion was introduced by Fiona Ryland, Government Chief People Officer for the UK Civil Service, and James Johns, Head of UK Corporate Affairs at Workday.*

Public services in the UK face a profound productivity crisis. Demand has soared while a series of global crises have pushed spending to ever higher levels. Yet despite additional funding backlogs have grown across public services and the frontline struggles to keep pace. The workforce implications of this are enormous. The civil service workforce has grown by 25 per cent since 2016, standing at a headcount of 488,000 in Autumn 2023.

AI's potential to boost the productivity of workers is well-proven in the private sector, with use cases such as the automation of repeatable processes, the augmentation of human decision-making with predictive models, the generation of personalised content and the ability to navigate complex issues in natural language.

But the role AI has to play in improving employee experience is also vital, at a time when demands are high and the public sector cannot afford to significantly increase pay and staff numbers to respond to them. Without government embracing AI, overwhelmed and burnt-out employees could leave the sector in huge numbers, compounding the current crisis and leading to declining satisfaction with public services.

There has been significant progress in defining the role AI can play in public service reform over the last two years. The Government published its AI White Paper in 2023, outlining 'A pro-innovation approach to AI innovation', and the Chancellor highlighted AI as a key driver of public sector productivity when he launched the Productivity Review. The Central Digital and Data Office also published a 'Generative AI Framework for HMG' to provide practical guidance to officials looking to innovate with these new technologies, and the National Audit Office are due to publish their study of the 'Use of artificial intelligence in government' in Spring 2024.

Whilst these initiatives are helpful, government must develop specific plans if it hopes to realise the benefits of AI in the next Parliament.

## Technological drivers

The acceleration of Generative AI since the release of ChatGPT and other next-generation models has shown the world the potential this technology has to accomplish tasks which previously needed human reasoning and creativity.

However, using GenAI at enterprise-scale within government will need close scrutiny and evaluation to make sure the risks around hallucination, bias, safety, security and explainability are well understood and appropriately mitigated.

## Policy roundtable summary

But if they can be, then it will prove a powerful tool to augment public sector workers, providing 'co-pilot' support for many of their day-to-day tasks.

Yet many of the opportunities to improve efficiency lie in more tried-and-tested technologies. Robotic process automation (RPA) using rules-based software to define and execute repeatable activities is proven in many areas of the public sector – it defines the back-end behind many GOV.UK services.

Despite this, there are many areas of public services where these more mundane processes are still performed directly by employees in casework functions. That staff time would be better deployed on making challenging judgments which rely on human creativity and experience.

Research by McKinsey in 2017 indicated that six out of ten occupations have more than 30 per cent of activities that are technically automatable. Whilst advances in GenAI since then may increase this number, it seems likely that most public service roles will be partially automatable – freeing up time to focus on those higher-value activities, improving productivity and potentially releasing cashable savings.

The latest predictive modelling techniques, for example Bayesian hierarchical models, can allow for much more precise forecasting in complex systems than previous technologies. Applied to workforce data, this could help predict the level of turnover more accurately, helping government target mass recruitment at the right parts of the workforce.

### The employee experience

At the same time as AI could unlock significant productivity benefits, government should not underestimate the potential it holds to improve the experience of public sector workers.

Bureaucracy is a defining characteristic of many public services, and has well-studied effects on employee's feelings of independence, responsibility and purpose in their work.

Automating many of the more routine tasks which take place in these organisations offers an opportunity to redeploy valuable human capital – rebuilding public sector professions with an emphasis on high-skill, high-trust and high-reward to match the higher productivity that comes from leveraging algorithms.

The Civil Service People Plan highlights the automation that has taken place to date as a key step towards improving the employee experience. AI offers unprecedented new opportunities to go further. For example, in reducing the amount of time spent on generating job descriptions or new HR policies, using Generative AI tools to create a 'first draft' can radically shorten the time taken.

### Fairness, ethics and trust

Policymakers need to be mindful of the ethical implications of introducing artificial intelligence into their work, most notably the potential impact on people with protected characteristics from any bias in the software. Careful attention to the training data used, and the role of the 'human in the loop' with any machine learning algorithms is vital so that clear accountability for decisions remains. The accessibility of software, both for employees and service users is also vital, in line with the Government Digital Service's standards.

Perhaps less obvious than diversity and accessibility is the potential for geographic disparities. Many of the caseworking functions in government are based outside of the South-East, sometimes in areas with fewer opportunities for alternative employment. As government considers the role it wants public sector jobs to play in the future rebalancing of the economy, careful consideration needs to be given to the effects automation may have on areas which have less resilient local economies.

Some use cases for AI to transform the public sector workforce will present greater challenges than others. While using natural language-based models to create new interfaces for self-service with corporate functions like an IT department, using similar models to shortlist job applicants would require careful thought and detailed assessment of the risks.

### Talent intelligence

Many of the benefits AI can bring to public sector workforces do not come from making existing processes more efficient, but from enabling entirely new ways of working.

Strategic workforce planning in large organisations has always been hampered by the challenge of understanding the skills held by the workforce currently, and the level and type of future demand. AI provides a rare opportunity to answer these questions by using machine learning to analyse legacy data held within enterprise systems.

Natural Language Processing (NLP) and more advanced GenAI models can both be effective at analysing performance appraisals and skill records in the millions, to help workforce planners understand the skill mix in their organisation and how to match that to changing demands.

AI tools will also change the kind of talent an organisation needs. In some areas, the ability of AI to quickly develop easy 'low-code' and 'no-code' solutions to tasks will reduce the need for programming skills, or 'locked in' commercial software which cannot be adapted to changing needs. Most next-generation Human Capital Management systems are easy to access via Application Programme Interfaces (API) and 'low-' or 'no-code' configuration, allowing public sector workers to quickly create new functions or reports.

### Leaning in to change

At the rate of development in the field of AI, the only constant will be change. It can radically remodel the public sector workforce, providing opportunities to enhance productivity, employee experience, talent and skills. But to harness that potential for reform, government needs to learn the lessons from digital transformations of the past – both the successes and the failures.

A key takeaway is that leaders need to lean into the opportunity which could be, as one roundtable attendee noted, "the biggest change programme government has ever seen". The new hybrid working will be public sector workers working alongside AI, as a kind of 'co-pilot' to their everyday work. That will mean profound shifts in the role expected from them, and what they can expect in return from their work.

In order to lean, government needs to encourage innovative uses of AI and scale up best practice when these innovative uses are successful. Part of this involves embracing reform programmes more enthusiastically than the public sector has historically, via getting employees bought in to the benefits AI has for them in their roles directly.



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