

Written evidence submitted by Dr Asieh Tabaghdehi & Professor Ashley Braganza (Centre for Artificial Intelligence: Social and Digital Innovation; Brunel University of London) (DCG0026)

Digital Centre of Government

Short bio

Our response is a collective effort, compiled by two academics based in Brunel University London: **Asieh Tabaghdehi**, Economist and Senior Lecturer in Strategy and Business Economy. Her current research expertise lies in digital transformation, smart data governance, future of work, and the ethical integration of artificial intelligence (AI) in sustainable business practices. She leads the Future of Work Group at Brunel Centre for AI: Social and Digital Innovation.

Ashley Braganza, Professor in Business Transformation. His research interests encompass artificial intelligence, big data, change management, strategy implementation, process and knowledge management, and transformation enabled information systems. He is co-director of the Brunel Centre for AI: Social and Digital Innovation.

Executive summary:

- The Digital Centre of Government (DCG) should prioritize collaborative and inclusive digital service delivery, ensuring services are co-created with citizens, businesses, and public sector organizations to meet diverse stakeholder needs.
- By leveraging AI-driven tools and real-time data analytics, the government can enhance personalization, efficiency, and transparency in public services, ensuring that systems are adaptive and responsive.
- A focus on smart data governance and ethical AI will establish transparency, fairness, and accountability, building trust in the system while safeguarding privacy and security.
- Continuous upskilling of public sector employees is necessary to keep pace with rapid technological advancements, ensuring adaptability to AI, automation, and data-driven decision-making processes.
- Supporting small businesses through AI-driven services, access to open government data, and regulatory sandboxes will foster growth and innovation, empowering SMEs to thrive in a digital economy.
- The needs of digitally excluded and marginalized communities should be addressed to create a more equitable digital ecosystem, ensuring that no one is left behind in the digital transformation.
- The National Data Library (NDL) should be developed as a key national financial asset, managed by a UK sovereign fund to ensure that commercial applications derived from citizen data generate financial returns for public benefit. It must adopt a flexible, modular infrastructure to adapt to evolving data needs while maintaining strong governance and accessibility. A gradual, iterative implementation will enable testing, refinement, and scalability, ensuring the NDL supports the UK's digital transformation while protecting national interests and maximizing economic and societal benefits.

Question 2. What should be the priorities for the digital centre of government? Are there any areas of the public sector that are particularly suited to or in need of digital transformation? Has DSIT identified the right areas of public services with its initial five 'kickstarter' tests and products How should DSIT measure and evaluate the success of the digital centre?

- i. *Establishing the 'Digital Centre of Government (DCG) perspective'*: Artificial Intelligence is a highly contested space. There are many stakeholders with different, overlapping and, often, conflicting, opposing and contradictory interests. The DSG must be clear about how these stakeholders will be managed and expectations prioritised where trade-offs must be made. On the one hand, tech companies may want to have free reign over citizen data or publish harmful content under the banner of innovation; yet the DCG may need to set clear boundaries to maintain civic order. The riots following the misinformation about the Stockport murders is an instance where future trade-offs between freedom of speech desired by tech companies and protecting citizens may need to be determined. The DCG's perspective should always prioritise the needs and wellbeing of UK society and its citizens.
- ii. *Collaborative and Inclusive Stakeholder ecosystems thinking*: The Digital Centre of Government (DCG) should focus on co-creating services with citizens, businesses, and public sector organizations to ensure the services reflect diverse stakeholder needs. This approach guarantees that services are accessible, inclusive, and seamless, offering user-friendly experiences¹. By continuously engaging users for feedback and leveraging AI-driven chatbots, automation, and predictive analytics, the government can enhance efficiency and personalization, ensuring that services remain adaptive and responsive. Additionally, the centre should focus on a range of salient stakeholders including those who are already digitally excluded, marginalised communities and those who are digitally illiterate. The centre must create ecosystems that provide for all citizens rather than focusing on the only those who are digitally capable.
- iii. *Smart Data Governance and Ethical AI*: Establishing clear frameworks for responsible AI use, especially in decision-making processes, is critical for ensuring transparency, fairness, and accountability². Developing interoperable data-sharing mechanisms while safeguarding privacy and security, particularly for sensitive public sector data, will enhance trust. Additionally, offering incentives to all involved stakeholders and leveraging AI for real-time data analytics can improve policymaking and resource allocation, ensuring that digital government systems work in an integrated and ethical manner.
- iv. *Digital Skills and Workforce Transformation*: Given the rapid pace of change in AI and related technologies, an agile and continuous upskilling approach is necessary for public sector employees. This approach should focus on the frequent review of implementation processes to ensure that employees can effectively adapt to AI, automation, and data-driven decision-making. The Centre should emphasize the importance of multidisciplinary collaboration to bridge the digital skills gap and ensure ethical AI-governance. Additionally, there should be a focus on reskilling public sector employees to deploy machine learning models that can identify inefficiencies and predict future public service demands.
- v. *Support for Small Businesses & Economic Growth*: The DCG should support the growth of small businesses through the provision of AI-driven business support services across the country. This includes training SMEs on essential AI ecosystem skills, such as automated ethical auditing, financial guidance, digital tax solutions, and streamlined licensing processes to reduce administrative burdens³. Enhanced access to open government data can empower

¹ Rana, A. (2023). The significance of ethical business practices in the creation of digital user experience (UX) design. *International Journal of Research and Reviews*, 4, 1612-1616.

² Akinrinola, O., Okoye, C. C., Ofodile, O. C., & Ugochukwu, C. E. (2024). Navigating and reviewing ethical dilemmas in AI development: Strategies for transparency, fairness, and accountability. *GSC Advanced Research and Reviews*, 18(3), 050-058.

SMEs to make informed business decisions, foster innovation, and expand. Moreover, assisting businesses in adopting AI-powered regulatory sandboxes will allow startups and SMEs to test new business models without facing immediate regulatory hurdles, thereby fostering innovation and contributing to economic growth.

Some sectors are particularly suited to or in urgent need of digital transformation such as:

- i. *Healthcare*: On www.jobs.nhs.uk, there are currently 14,744 jobs available. This highlights the severity of the need within the sector. AI-driven diagnostics, predictive analytics for patient care, and the integration of digital health records can help ease the burden.
- ii. *Small and Medium Business Support*: According to the House of Commons Library, “there were 5.5 million small or medium-sized businesses (SMEs) in the UK in 2024, representing over 99% of the business population. SMEs are businesses with fewer than 250 employees, including sole traders. SMEs accounted for 60% of UK employment and 48% of business turnover.” AI-powered grant applications, digital tax compliance, and blockchain-driven transparency in government contracts can enhance SME participation.

DSIT's five initial tests should be assessed based on:

- i. *Impact on Efficiency & Cost Reduction*: Measuring time and resource savings in service delivery.
- ii. *User Satisfaction & Accessibility*: Citizen engagement, ease of use, and inclusivity in digital platforms.
- iii. *Data Security & Ethical AI Compliance*: Adherence to GDPR, Transparency, Explainability and AI ethical guidelines.
- iv. *Workforce Adaptation*: Degree of AI adoption and digital skill development in public sector employees.
- v. *Scalability & Interoperability*: The ability to scale solutions across different government departments.
- vi. *Business Growth & Innovation*: Measuring the impact of digital initiatives on SME success, job creation, and access to public sector contracts.

Question 3. What lessons are there for DSIT as it establishes the digital centre? Are there any case studies that the committee should consider as part of its inquiry? What lessons do previous and contemporary digital transformation initiatives offer for the digital centre? What can the UK learn from other countries' efforts?

- i. *Avoiding Costly Centralized IT Projects*: Large, centralized IT projects often fail due to bureaucratic inefficiencies, lack of adaptability, and resistance to change. UK Universal Credit IT Overhaul Failure is one of the clear examples of this phenomena. The UK's Universal Credit system overhaul suffered from delays, budget overruns, and poor user experience due to a rigid, centralized IT approach. Therefore, the DCG should prioritize

modular, decentralized, and scalable digital services that evolve over time rather than relying on high-risk, monolithic IT projects.

- ii. *The Post Office Horizon Scandal as a Warning on Unchecked Digital Systems:* The failure to ensure accountability, transparency, and proper testing in government-backed digital systems can lead to severe human consequences. The Post Office Horizon IT Scandal serves as a critical example of the challenges. The Horizon accounting system, introduced by the UK Post Office, wrongly flagged hundreds of sub-postmasters as committing financial fraud⁴. This led to wrongful prosecutions, financial ruin, and severe personal distress. Therefore, the DCG must ensure digital systems are robustly tested, independently audited, and not solely relied upon for decision-making. A failsafe mechanism should be in place for human review when digital systems flag irregularities. Also, Transparency and explainability of AI-driven decisions must be mandatory in government IT systems.
- iii. *Adaptive AI Regulation & Trustworthy AI Frameworks:* AI adoption in government faces trust issues, particularly regarding bias, transparency, and explainability. As a used case study, the EU's AI Act⁵ and Canada's Algorithmic Impact Assessment (AIA)⁶ can serve as strong examples. The EU AI Act is pioneering risk-based AI regulation, ensuring high-risk AI systems (e.g., public services, healthcare) meet transparency, fairness, and accountability standards. Furthermore, the Canada's Algorithmic Impact Assessment (AIA) requires government AI systems to undergo ethical review before deployment. Therefore, the DCG should introduce a UK-specific AI impact assessment framework, ensuring trust, ethical transparency, and risk-mitigation in public sector AI applications.
- iv. *Proactive Cybersecurity & Resilience in Digital Government:* As digital services grow, cybersecurity threats increase, requiring proactive risk management. As a case study, Australia's Cyber Security Strategy⁷ can serve as a valuable example. Australia launched a federal cybersecurity strategy that integrates threat intelligence sharing across government agencies, businesses, and international partners. Therefore, the DCG should implement a real-time cyber threat intelligence system, ensuring AI-driven anomaly detection, proactive defence, and robust cyber resilience.
- v. *Learning from Failures in Public Sector Digital Transformation:* Many governments struggle with scaling digital initiatives beyond pilot programs. Denmark's success in public sector digitalization⁸ can be a useful case study. Denmark has fully digitized tax filing, healthcare records, and social services, achieving over 90% citizen adoption rates. Their Success was due to gradual, iterative implementation, cross-government collaboration, citizen trust through transparent governance. Therefore, the UK must prioritize cross-departmental collaboration and incremental digital rollouts, rather than launching overly ambitious, large-scale digital initiatives that fail to scale.

⁴ <https://www.bbc.co.uk/news/business-56718036>

⁵ <https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence>

⁶ <https://open.canada.ca/data/en/dataset/5423054a-093c-4239-85be-fa0b36ae0b2e>

⁷ <https://architecture.digital.gov.au/2023-2030-australian-cyber-security-strategy>

⁸ <https://denmark.dk/innovation-and-design/denmarks-digital-success>

Additional Inquiry: How should the National Data Library proposed by the government be taken forward?

- i. The National Data Library (NDL) has the potential to be groundbreaking as a major national financial asset. The NDL should be owned and managed by a UK sovereign fund created to benefit financially from commercial applications that are created from the use of UK citizen data curated and managed by the NDL. The UK Sovereign Fund should be allowed to invest in companies and earn returns that can be reinvested in social and other projects that benefit citizens in the longer term. Citizen data must not be given away for free. Nor should commercial organisations be the sole beneficiaries of UK data- especially where these commercial companies are under foreign ownership, taking dividends and creating employment in other countries.
- ii. The development of the National Data Library should prioritize creating a flexible, scalable infrastructure that allows for adaptability as new data needs emerge. Rather than a rigid, centralized system, the library should be modular to ensure that it can evolve with future technological advancements and shifting public sector requirements.
- iii. The implementation of the National Data Library should take a gradual, iterative approach. This would allow for testing and feedback at each stage, enabling the identification of potential issues and providing room for adjustments before scaling. By focusing on flexibility, data governance, accessibility, and iterative development, the National Data Library can become an essential tool for the UK's digital transformation, benefiting both public services and the broader economy.

03 March 2025