AI and the Welsh economy

Submission to Senedd Economy, Trade, and Rural Affairs Committee

About Ada

The Ada Lovelace Institute ('Ada') is an independent research institute with a mission to make data and AI work for people and society. We work primarily in the UK and EU, supporting officials and institutions in both jurisdictions with evidence on the impacts of AI and its effective governance.

This document contains Ada's response to the Senedd's Economy, Trade, and Rural Affairs Committee inquiry on 'AI and the Welsh economy'. While Ada has not conducted detailed empirical research on Wales specifically, many of our research findings are of relevance to the Welsh context. Our submission summarises some of these findings, and offers suggestions for how the devolved institutions in Cardiff could enable responsible uptake of AI across the public and private sectors in Wales.

For more information on any of the information contained in this briefing, please contact Ada's Economic and Social Policy Lead (mdavies@adalovelaceinstitute.org).

A note on terminology

There is no commonly accepted scientific definition of 'AI' and it is used to refer to a wide range of computational techniques like machine learning, natural language processing, and deep learning that are considered capable of performing tasks that might traditionally require human intelligence to complete.[1] This includes 'narrow' AI systems such as analytics systems used to make predictions and judgements about individuals, as well as so-called 'general purpose' AI systems or foundation models.[2] Some of these technologies are already in widespread use across the economy, while others are less widely deployed, or are being considered for future use. In the remainder of this briefing, we will indicate the type of technology we are referring to. References to 'AI' without any other modifier should be understood as references to the wide variety of these systems.

[1] See for instance the UK Government Central Data and Digital Office's definition of AI as "the use of digital technology to create systems capable of performing tasks commonly thought to require intelligence."

[2] For more information on foundation models, see our explainer.

Introduction

The UK's AI ambitions are at a formative stage. We enjoy several major advantages on AI relative to our peers: a high number of AI startups, several world-leading academic centres of expertise in computing and data science, and a consistently high number of academic citations contributed to advanced AI research. AI is already widely deployed in all parts of the public and private sectors, in domains ranging from health, education and criminal justice to retail and customer services.

However, AI development is highly capital- and skills-intensive, rewarding agglomeration effects. As such, within the UK, it has been clustered in London and the south east of England, where access to talent and capital is more abundant. The UK's other nations and regions, including Wales, are however well-placed to seek competitive advantages in AI *adoption*. This submission discusses two levers for achieving this: pioneering higher standards for responsible deployment, and improving transparency and governance of AI used in the Welsh public sector.

Standards for the responsible deployment of AI

The vast majority of AI systems used today in critical sectors like healthcare, finance, education, criminal justice, and public service delivery are not evaluated or assessed for their safety or efficacy. Currently, there are no requirements on AI systems used in our schools, our local authorities, or our hospitals – let alone in the private sector – to ensure they are effective, reliable, and safe. Too often, as a consequence, both public and private sector organisations lack the appropriate assurance that the AI products and services sold to them are safe and effective. This limits adoption, and risks compromising public trust.

Determinations of safety and efficacy are needed to provide appropriate assurance to businesses and consumers that AI products and services they're being sold will work safely and effectively. In other sectors like pharmaceuticals or car safety, pre-market assessment by empowered regulators helps to provide these determinations and reduce informational asymmetries. The history of these other high-tech, socially-important industries suggests that creating the right standards, incentives and accountability mechanisms can shape industry practice for the better and benefit innovation in the long-run.

The new UK Government at Westminster made a manifesto commitment – subsequently reiterated in the King's Speech – to 'ensure the safe development and use of AI models by introducing binding regulation on the handful of companies developing the most powerful AI models'. This is a significant move, but it is only the first step towards delivering the comprehensive regulatory framework that will be necessary to maximise the benefits of AI for all of the UK's constituent nations and regions.

Achieving this will mean introducing new powers, resources and statutory underpinning for regulators and their supporting institutional architecture (such as the AI Safety Institute and the central risk assessment function). It will also require the preservation of existing 'horizontal' regulation such as the UK GDPR and the Equality Act 2010, which provide important protections to people affected by AI.

Much of this will require legislative intervention at the Westminster level, given that the areas of regulation that apply most directly to AI are reserved matters (including for instance data protection law, intellectual property law, competition law and – with some exceptions – equality law).

However, non-regulatory tools such as voluntary self-assessment schemes, third party assessment and internal oversight boards will play an important role in complementing the work of regulators, and there is an opportunity for devolved administrations to support the development of these tools in the public

and private sectors. An important lever for this will be driving up standards in public sector organisations over which devolved Government has direct control, a topic which the next section attends to.

Improving transparency and governance of public sector AI

The public sector is an important context for AI adoption in its own right, and can also serve to model best practice, supporting uptake in the private sector. Between June and July 2023, as part of our research on foundation models in the public sector, we identified a list of potential use cases for AI (and specifically foundation models) in government: [3]

- Government communication and public enquiries, e.g. powering chatbots and virtual assistants, addressing basic questions and issues from the public round-the-clock
- Document and text analysis, e.g. identifying key information in complex documents such as legal contracts, to reduce review times
- Data analysis e.g. real-time data analysis about service provision, changes in take-up, impact assessments and fraud monitoring
- Decision support e.g. triaging casework by summarising and suggesting categorisation of cases to assign them to appropriate specialists
- Coding assistance e.g. assisting in interpreting legacy code in government systems
- Human resources e.g. screening CVs and matching candidates for recruitment
- Knowledge management, search and retrieval e.g. semantic search as an interface to a Corporate Memory Bank, looking for similar previous work to prevent duplication
- Policy explanation and drafting, e.g. an adversarial drafting tool highlighting possible flaws, omissions and counterarguments for policy paper drafts

These use cases could potentially benefit public services by improving service *efficiency* or *productivity*, or by improving the *quality* of a service. However, most estimates of the potential cost savings from AI use should be treated with caution. Some studies are compromised by flawed methodological approaches, and all are limited by our poor understanding of the impacts of existing AI use in the public sector.

To enable the widespread use of AI across Government and public services, we need to tackle this 'information gap'. At present, there exists no common obligation to monitor where and how AI tools are being used across the public sector, even within central government. We lack the basic information and evaluation of 'what works' in public sector AI use that we would expect of any other major public service intervention.

We have argued that an urgent priority for the new UK Government should therefore be to develop a more detailed understanding of where and how AI is being used in public services, and what is currently working to improve outcomes and services for the public. As part of this, we have argued that the Algorithmic Transparency Recording Standard (ATRS) should be rolled out across the public sector. Since it was launched more than three years ago it has hardly been used: at time of writing the Government's own repository of published algorithmic transparency records only included 8 entries.

Mandatory adoption was belatedly promised by the former UK Government in February 2024, but the delay in requiring wider adoption has sharply limited our understanding of how AI tools are used across the public sector. Until this is achieved at a UK-wide level, devolved administrations have an opportunity to seize the initiative on this issue by working to ensure that mandatory adoption is translated into reality

[3] See Appendix 1: Examples of potential public sector applications of foundation models, https://www.adalovelaceinstitute.org/evidence-review/foundation-models-public-sector/#appendix-1-examples-of-potential-public-sector-applications-of-foundation-models-59

within devolved public services: ensuring that teams complete the recording standard, that records are promptly uploaded to the repository once a tool enters piloting or production, and those records are kept up-to-date as the tool is updated, refined, or decommissioned. Successfully achieving this should benefit public services in Wales, while also creating opportunities for private sector organisations to learn and to innovate.