

MARCH 2026
ICARO REBOLLEDO
THOMAS SMITH



Better Statistics, Better Government: Building a Future- Ready Evidence Base in the UK

Contents

- 3 Executive Summary
- 6 Why the UK Statistical Ecosystem Needs Reform
- 9 Strengthening the Foundations of Statistics to Enable Better Policymaking
- 16 Adapting Statistics for a Rapidly Changing World
- 22 Making Statistics Accessible in the Age of AI
- 26 Setting Strategic Priorities for the Statistical System
- 28 Conclusion

Executive Summary

Good statistics are the foundation of good government – and of a well-functioning economy. Policymakers rely on them to make decisions and allocate scarce public resources while businesses and investors rely on them to plan, price risk and allocate capital. When official statistics are slow or unreliable, the consequences cascade: policy is miscalibrated, investment is distorted, and the country loses a trusted baseline for judging what is working and what is not.

That has become a more serious problem in the United Kingdom in recent years. Disruptions to high-profile statistics – including on the labour market, prices and migration – have weakened confidence in some of the country’s most important indicators. The costs are not merely technocratic. When early releases are significantly revised, or when key series lose credibility, it can distort perceptions of economic momentum and weigh on business and consumer sentiment. And when trust in official statistics erodes, it becomes easier for partial, misleading or politically loaded numbers to fill the gap – especially in a digital information environment in which data travel fast and official sources must compete with others for attention.

Under its new leadership, the Office for National Statistics (ONS) is rightly focused on restoring reliability and rebuilding trust in the UK’s core statistics. But there is a risk that a reform agenda defined primarily by fixing yesterday’s failures leaves the system unprepared for tomorrow’s governing challenge. The pace of change is accelerating – and artificial intelligence will accelerate it further – reshaping work, prices, public services and the structure of the economy, while also transforming how information is created, discovered and interpreted.

The state will need to be reimagined for the AI era. It will need a more adaptive operating model that can detect change early, respond quickly and learn continuously. That is only possible if the evidence base evolves too: moving beyond a system designed to publish periodic snapshots towards one that can harness richer data sources, track structural change as it

happens and remain the common reference point for decision-making in an AI-mediated world. To begin that journey of future-proofing the UK's statistical system, the government and the ONS should pursue three foundational reforms:

- **Modernise the data foundations of the state to enable faster, higher-quality decision-making.** The government's plan to introduce a digital ID offers a practical route to upgrade the UK's core demographic evidence base – it should be used to underpin the census, starting in 2031, and to bolster migration and poverty statistics. Separately, the ONS should accelerate its integration of commercial data into core economic statistics, in line with best-in-class international peers.
- **Build a standing capability to track rapid economic change – early enough for policy to respond.** The economy is being reshaped by multiple forces – especially technological disruption. The Chancellor of the Exchequer's recent announcement of plans to create an AI Economics Institute is welcome, but for it to be effective it will need to be underpinned by robust data and analytical infrastructure. In line with this, the ONS should establish a permanent AI Transformation Tracker to monitor adoption, diffusion and impact across firms, workers and public services, so ministers can understand the scale and distribution of change while there is still time to act. Alongside this, it should introduce a Real-Time Industry Classification – a dynamic, frequently updated picture of the economy's sector structure – which would allow industrial strategy, skills policy and regional growth interventions to be guided by what is genuinely scaling in the economy.
- **Modernise how official statistics are accessed and used in the age of AI.** The public and decision-makers will increasingly encounter official statistics through AI-generated summaries and conversational interfaces, where what becomes salient is shaped by algorithmic prioritisation rather than statistical authority. The ONS should therefore modernise how its statistics are published and made discoverable – ensuring key indicators are machine-readable – and deploy AI-enabled tools that help users find data more quickly. At the same time, the government should unlock greater value from the UK's administrative data by reforming the Digital Economy Act framework and enabling the National Data Library to

operate as a single gateway for secure, cross-domain research access. This would allow accredited users to link data securely across policy domains to enable more sophisticated system-level insight to inform policy design, evaluation and long-term reform.

Delivering these reforms will take clearer leadership and accountability than the current system provides. The ONS must remain fully in control of its methods and publication, but the government needs a transparent mechanism to set strategic priorities for where new statistical capability should be built, and Parliament needs a clear line of sight on delivery – for example through an annual remit letter setting out the capabilities the system is expected to develop.

If government gets this right, the prize is substantial: a statistical system fit for governing in a fast-changing world that provides earlier visibility of emerging pressures, firmer baselines for decision-making, and a trusted evidence base that stays visible and usable in a digital information environment increasingly shaped by AI. Peer countries have already demonstrated that a more sophisticated model is possible: from register-based systems in the Nordics to commercial-data integration in the Netherlands and Canada, reducing census costs by 90 per cent and eliminating the need for in-person price-data collection. While official statistics have long been treated as a back-office function, they will be core national infrastructure in an AI-enabled state. It is now imperative that the government and the ONS provide the investment, legislative support and delivery mandate needed to make them timely, resilient and trusted.

01

Why the UK Statistical Ecosystem Needs Reform

There is no single explanation for why UK official statistics have struggled to keep pace with the demands of policymaking in recent years. Some pressures are structural and shared across advanced economies, including sustained declines in survey-response rates since the Covid-19 pandemic and the growing difficulty of measuring a more digital, services-led economy. But the UK's difficulties have also reflected avoidable institutional weaknesses. Despite increased funding immediately after the 2016 Bean Review on improving economic statistics, Office for National Statistics (ONS) funding has been broadly flat in real terms since 2020, even as demand for timely, policy-relevant statistics rose sharply during and after the pandemic. Recent independent assessments – the Devereux review and work by the Office for Statistics Regulation and the National Audit Office – have also highlighted persistent problems with delivery and governance: weak prioritisation, legacy processes, and management and cultural shortcomings that undermined quality, timeliness and user confidence.

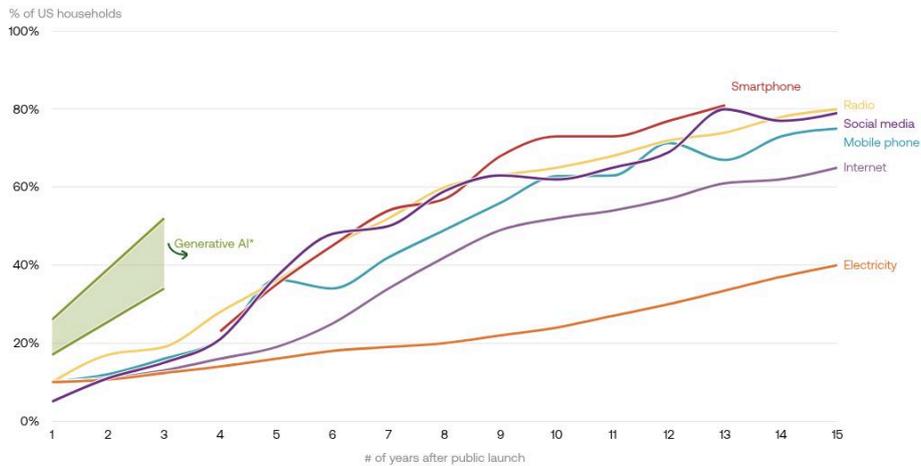
These immediate failures matter, but they are happening alongside a bigger shift: the UK is trying to govern a faster-changing economy and society with an evidence system built for a slower one. The problem is not simply that some surveys have weakened; it is that the underlying measurement model is misaligned with how the modern state needs to operate. As set out in the Tony Blair Institute for Global Change paper [*Public-Service Reform in the Age of AI*](#), governments are increasingly expected to detect change early, respond quickly and learn continuously. Yet the statistical system still struggles to produce data quickly, consistently and at the level of detail needed to answer basic policy questions about what is changing, where and for whom.

Three changes, in combination, are driving that mismatch. First, the available evidence base has expanded: administrative systems and digital transactions now generate far richer information about the population, their work and income, and how they consume and use services, but many of

these sources are still not systematically integrated into the UK's core statistical infrastructure. Second, the economy is being reshaped by overlapping structural transitions that require earlier warning and sharper classification than legacy frameworks can provide: geopolitical disruption, the green transition, demographic change and – most dramatically – the rapid diffusion of frontier technologies, especially generative artificial intelligence (Figure 1). Third, the information environment has shifted in ways that raise the political and operational stakes for official data. Trust in institutions and statistics is fragile; data travel quickly; and more people encounter official statistics through social-media platforms and AI tools rather than through official releases – while the legal and governance frameworks for secure data access and linkage remain anchored in a pre-AI era.

FIGURE 1

The pace of generative-AI adoption is unprecedented compared to previous technologies



Source: Our World in Data for all technologies except generative AI. Generative AI range from St Louis Fed (upper limit) and Pew Research Centre (lower limit based on ChatGPT adoption only). Generative AI being free at the point of use means lower barriers to adoption compared to most other past technologies.

*per cent of US adults using generative AI.

This report builds on the findings of earlier reviews to answer the question of how the UK's statistical system can evolve so it remains reliable and authoritative while also becoming fast, adaptive and usable enough to support decision-making in an age of rapid change.

The chapters that follow set out an agenda to modernise the data foundations of UK statistics, build standing capability to track structural change as it emerges, and ensure official statistics remain accessible, interpretable and trusted in a digital, platform-mediated environment.

02

Strengthening the Foundations of Statistics to Enable Better Policymaking

Over the past decade, public and private data have generated new capabilities in scale and frequency that have transformed how leading countries produce the statistical evidence that underpins policy. Yet the ONS still predominantly relies on weakening survey infrastructure, with consequences for how resources are distributed between regions, how benefits are targeted and how policymakers assess whether interventions are working.

To modernise its data foundations, the UK must both systematically embed administrative data – including through the planned introduction of digital ID – and integrate high-quality commercial data sets into core economic statistics, where the UK lags leading international peers.

Use Digital ID to Better Measure Population, Migration and Income Dynamics

Demographic pressures and rising strain on public services have made population change one of the most politically significant issues facing the UK. Yet the statistical system still struggles to provide timely, joined-up answers to basic questions about how many people live in the country, where they are and how their circumstances change over time. Covid provided a stark illustration of the consequences. During the vaccine rollout, the NHS could accurately track how many people had received a vaccination. But estimating how many people remained unvaccinated required reliable data on the size of the total population – and the government did not have it. Instead, it had two population estimates – one from the ONS and one from the NHS – that diverged sharply. The resulting uncertainty was substantial: NHS figures implied around 10 million

unvaccinated people in England in late 2021, compared with roughly 5 million based on ONS estimates.¹ That gap directly affected how policymakers understood the scale of the remaining task and the resources required.

Migration – the most dynamic component of population change – is another example of the difficulty of measuring who is in the country and impact of failing to do so. Recent analysis from the Oxford Migration Observatory highlights gaps and inconsistencies in administrative data that hamper migration policy and cloud public debate.² Without timely and reliable data on inflows, outflows and settlement patterns, central and local government are left planning school places, housing provision, NHS capacity and transport infrastructure on uncertain foundations.

Similar weaknesses affect the population census and poverty statistics. Census delays and coverage challenges reduce confidence in small-area population estimates that underpin funding formulas and local service allocation. Meanwhile, poverty figures are built primarily on the Family Resources Survey – a relatively small survey whose response rate has fallen from 50 per cent to 30 per cent since the pandemic.³ The survey has also increasingly under-recorded benefit income since the 2010s, which can distort the measurement of poverty trends; the Resolution Foundation estimates this effect may overstate child and pensioner poverty by around 25 per cent and 40 per cent respectively.⁴

The planned introduction of a UK digital ID in 2029 creates a practical step towards moving away from a costly, infrequent census model. UK population estimates still depend heavily on a questionnaire-based census conducted every ten years. The last census was completed in 2021 with a digital-first approach,⁵ but still cost the ONS £539 million⁶ and required 25,570 field staff.⁷ While many households could submit their returns online, the census still relied heavily on self-reported information and extensive follow-up. That meant large field operations were still needed to chase non-response, verify returns, and resolve gaps and inconsistencies at scale. By contrast, countries that rely more heavily on linked administrative data and population registers can produce high-quality population statistics at far lower cost and with far greater frequency: Norway's 2011 register-based census was reportedly delivered by a central team of just three people and treated

largely as a data project,⁸ the cost of Denmark's census has been estimated at around \$0.07 per person⁹ compared to around \$10 for England and Wales in 2021¹⁰; and Estonia now runs an annual census-style population count that supports rapid responses to shocks, including migration caused by geopolitical factors.¹¹ In a world where population changes are a central pressure for policymakers, a continuous population-register-based census supported by digital ID could cut census costs by more than 90 per cent (worth around £500 million based on the cost of the UK's 2021 approach) and equip policymakers with timely data to address population and migration challenges.

Recommendation: *The ONS should use digital ID to underpin the 2031 census, reducing costs and eventually enabling more frequent population updates to inform better resource planning.*

Using the administrative modernisation that comes with digital ID to link key government records more systematically (for example NHS and HM Revenue & Customs (HMRC)), a much larger share of census fields can be pre-filled accurately and verified quickly. Digital ID can also replace the access-code system used for the digital-first census in 2021, which entailed posting a unique access code to households, which respondents had to locate and enter to access the form. Streamlining access to the census form and pre-filling details would reduce the burden on citizens – providing a practical incentive for uptake – and cut the cost and operational risk of census delivery by reducing follow-up, fieldwork and manual processing.

A digital ID should not be required to complete the census – a census form can still be pre-filled using linked administrative records for people who do not actively use a digital-ID app or portal – but it is key to keeping administrative data accurate over time. The model in the first instance should be digital-first but not digital-only, following proven international practice: Singapore,¹² Norway¹³ and Germany¹⁴ have piloted register-based census approaches that show how verified pre-fill can coexist with inclusive non-digital routes while sharply reducing the operational footprint and cost of census collection.

Beyond 2031, the objective should be to shift towards a register-based, annual census – as in other European countries, replacing the current ten-year cycle with a far more dynamic and accurate alternative at lower cost. The government should then use this modern setup to refresh the population inputs that sit behind funding formulas far more frequently, and improve forecasting of school places, general-practitioner capacity and housing demand, particularly in fast-growing or declining areas.

Recommendation: *The ONS should work with the Home Office and other departments to use digital ID to measure migration flows and outcomes to improve the quality and timeliness of migration policy.*

As digital identity, improved border systems and administrative modernisation expand the volume and quality of underlying data, the priority for the ONS should be to turn these inputs into a coherent, trusted statistical framework for migration, building on the existing eVisa system. In this environment, the central challenge is reconciling multiple administrative sources to define who is resident, where and with what outcomes over time. Digital ID can help consistently combine migration-relevant administrative data for statistical purposes, particularly where it provides a stable unique identifier across systems. This would allow the government and service providers to see, in a timely manner, what roles migrants play in the economy and how pressures are shifting locally or nationally. The outcome would be more responsive, targeted and evidence-based policy, as is the case in countries such as Denmark and Sweden.¹⁵ Over time, longitudinal data would also enable analysis to track cohorts across years and compare outcomes by route of entry, visa type and region, following in the steps of Canada (with the Longitudinal Immigration Database) and Australia (with the Continuous Survey of Australia's Migrants).

Recommendation: *Building on work already underway in the Department for Work and Pensions, the ONS should use digital ID to improve the accuracy of poverty statistics and strengthen the targeting and evaluation of income support.*

Embedding digital ID in poverty measurement would improve the accuracy and credibility of headline child-poverty statistics, while enabling more precise targeting of support. With better data on household-income dynamics and material circumstances, the government could distinguish between temporary income shocks and sustained deprivation, assess whether policies are reaching intended groups, and allocate limited resources more effectively. Building on work already underway in the Department for Work and Pensions, the ONS should embed a systematic linkage between survey data and administrative records in the measurement of poverty and living standards, enabling secure, routine linkage to HMRC earnings data, benefit payments and housing information through a verified digital identity. Enabling more reliable linkages across administrative data sets allows survey-based measures to be validated, corrected and scaled using a variety of timely complementary sources. Doing so would reduce reliance on self-reported income, improve small-area poverty estimates and allow more consistent tracking of family circumstances over time. International experience demonstrates what this can enable: in Sweden, person-level administrative data underpin the National Register of Social Assistance,¹⁶ strengthening both official statistics and the design of social support.

Expand the Use of Commercial Data to Improve the Accuracy and Timeliness of Core Economic Statistics

Inflation and GDP shape public trust, market expectations and fiscal decisions – yet the UK is falling behind peers in using commercial data to measure them. For example, the Netherlands stopped using in-person data collection for all prices that feed into inflation statistics in 2019, whereas the ONS is only introducing supermarket scanner data for a subset of groceries prices from March 2026. Even after this change, only around 17 per cent of the UK consumer price index (CPI) basket¹⁷ will be based on “alternative” data that isn’t collected in-person, compared to more than 40 per cent in Canada and the Netherlands.¹⁸

Beyond prices, commercial data can improve the accuracy and timeliness of GDP estimates, particularly in parts of the economy that are fast-growing and hard to measure given the limitations of existing methods. For example, digital-platform-mediated services (such as rideshare and food-delivery services) are only partially captured under current survey-based methodologies (especially earlier releases),¹⁹ even though they produce underlying data in real time. This matters because early GDP estimates have often been revised up materially in recent years. Since 2007, the first official quarterly estimate of UK GDP – the one that most strongly influences public perceptions and confidence – has implied an average annual growth rate of 0.76 per cent, compared with 1.34 per cent reported in revised figures based on more data for the same period.²⁰ Improving the timeliness and coverage of the data that underpins GDP is essential to correcting this bias and could help strengthen confidence in the economy.

Even small biases in headline statistics can carry large fiscal and political consequences. Recent ONS analysis shows that annual inflation would have been at least 0.03 percentage points lower between 2019 and 2025 if supermarket-scanner data had been incorporated.²¹ Because large areas of government spending increase every year automatically to adjust for inflation – including £136.6 billion in state pensions, £6 billion in Pension Credit, £50 billion in Universal Credit, and around £70 billion in disability and health-related benefits – even that 0.03 percentage-point overestimate in inflation statistics implies additional direct annual costs of at least £78 million.²²

Recommendation: *The ONS should establish a single, accountable Commercial Data Partnerships and Procurement Unit to secure long-term access to high-value data sets critical for inflation and GDP measurement.*

While the ONS has legal powers to request data, in practice it relies largely on purchased data and ad-hoc agreements. Drawing on models used in countries such as the Netherlands, the Commercial Data Partnerships and Procurement Unit would negotiate strategic agreements, manage data rights and delivery standards, and ensure resilience through clear audit trails and contingency arrangements. It should also develop the capability to use statutory powers proportionately where voluntary access proves insufficient.

Recommendation: *The ONS should use commercial data to replace manual price collection for the goods and services where data are currently least reliable and modernise inflation measurement.*

The ONS should prioritise commercial data in high-weight CPI categories and concentrated markets where scanner, web-scraped or application-programming-interface-based methods are already proven. In retail, this means accelerating the replacement of in-person price collection with comprehensive commercial and administrative sources. In parallel, the ONS should expand measurement in digitally mediated services – including travel, insurance and platform-based consumption – where traditional collection methods are increasingly misaligned with how transactions occur. International peers such as the Netherlands and Canada demonstrate that large-scale transition away from manual collection is both feasible and beneficial.

Recommendation: *The ONS should use high-frequency-payment and consumption data to strengthen early GDP signals.*

As commercial data become central to CPI measurement, the ONS should ensure these same sources are used systematically to strengthen short-term GDP indicators (with the appropriate privacy safeguards) – particularly household consumption and services output. Improvements in price and spending measurement should be fully reflected in the signals that feed into early GDP estimates, reducing the risk of large subsequent revisions. Beyond retail goods, the ONS should develop a structured programme to use anonymised, aggregated payments data – including credit- and debit-card transactions – to improve early measurement of services activity. Central-bank and academic research shows such high-frequency data are especially valuable at economic turning points, when surveys lag and revisions are most likely.²³ The goal should be a more timely and balanced integration of production, income and expenditure measures.

03

Adapting Statistics for a Rapidly Changing World

The UK economy is entering a period of faster and more unpredictable structural change. An ageing population is reshaping labour supply and intensifying pressure on public spending. Geopolitical disruption is reordering trade patterns, supply chains and energy security. The green transition is driving large shifts in investment, industrial structure and the cost base of the economy. And technological change – particularly the rapid diffusion of AI – has the potential to reconfigure how firms produce, how jobs are organised and how public services are delivered.

In this environment, the core purpose of official statistics is not simply to be accurate in retrospect, but to provide a stronger foundation for decision-making in a context of increasing uncertainty. Policymaking increasingly depends on early signals about the direction, speed and distribution of change. Yet many of the frameworks used to monitor the economy – surveys, classifications and publication conventions – still update infrequently, and often struggle to incorporate new sources of evidence at pace. In some arenas the UK has even gone backwards: the discontinuation of the ONS E-Commerce Survey removed a source of granular insight into online economic activity at a time when digital channels were becoming central to output and consumption.²⁴ The result is a growing mismatch between how quickly the economy can change and how quickly government can respond.

Technology is the sharpest edge of that problem. Other structural forces unfold over years; digital technologies can diffuse across firms and sectors within months, especially when adoption is driven by off-the-shelf software. AI sits at the centre of this challenge: capabilities are improving rapidly and adoption could accelerate quickly, particularly in a services-heavy economy like the UK. Even before AI shows up cleanly in macro aggregates, the early effects may appear through changes in how work is organised and how time is used inside firms. For example, a mix of private and behavioural data suggests some employees have already quietly compressed their working

patterns – with Fridays increasingly treated as low-intensity or non-working time in some roles – even where contracts have not changed.²⁵ If that is happening at scale, it creates a measurement risk: reported average hours may overstate true hours worked, leaving productivity underestimated and skewing how government reads underlying economic momentum.

There is a deeper lesson here related to how long it takes official measurement frameworks to catch up with new economic realities. UK research has long identified gaps in GDP and productivity measurement – particularly around intangibles (for instance, data and other digital assets) that can make a significant difference.²⁶ The Bank of England estimates that improving the measurement of intangibles could raise measured GDP levels by 1 to 2 per cent.²⁷ Yet the international process that governs what counts in the national accounts moves slowly. It has taken roughly 15 years from the 2008 System of National Accounts to the 2025 update to begin reflecting newer forms of economic activity, including elements of the digital economy and the improved treatment of data and digital goods. In a world where business models and production technologies can shift within months, a measurement system that takes more than a decade to incorporate new activity risks leaving government systematically behind the curve.

The ONS has shown that it can innovate when conditions demand it – including during the pandemic, when it developed faster indicators and new experimental outputs to support urgent decision-making. But this kind of adaptation remains uneven and often ad hoc. In an age of rapid structural change, the capability to track disruptive transitions cannot depend solely on what individual ONS teams choose to prototype; it needs to be treated as a core function, with clear priorities, sustained investment and an explicit mandate to build standing measurement capacity ahead of the curve.

Two weaknesses are particularly significant at present. First, government lacks a systematic, longitudinal view of how frontier technologies – especially AI – are diffusing through firms, occupations and public services, and what that diffusion implies for productivity, wages, labour-market adjustment and inequality. The recently announced AI Economics Institute will play a key part in addressing this gap, but it will need robust data and statistical infrastructure to be effective. Second, industrial classifications –

which underpin industrial, trade and regional strategy – often fail to capture how modern firms generate value, leaving emerging activities dispersed across legacy categories and forcing policymakers to rely on fragmented private estimates. Together, these weaknesses limit the government’s ability to detect structural change early, target interventions effectively and evaluate policy while there is still time to adjust. The remainder of this chapter focuses on addressing these two weaknesses.

Establish an AI Transformation Tracker to Spot Disruption Early and Respond Rapidly

While the effects of AI are not yet clear in macroeconomic statistics, the direction of travel is evident: capabilities are improving quickly, adoption is rising and disruption could accelerate fast – particularly in a services-heavy economy like the UK. That creates a preparedness problem for government. As the transition gathers pace, policymakers will need timely and consistent answers to basic questions about where AI is being adopted, which tasks and occupations are most exposed, whether productivity gains are materialising, and how benefits are distributed.

These uncertainties matter directly for decisions that must be made ahead of full disruption such as how to target skills funding, whether and how to design incentives to support diffusion, how to prepare labour-market infrastructure for rapid task change, and where public-service reform can credibly deliver early gains. In a period of potentially rapid diffusion, policy that reacts only after an impact is unambiguously clear in macro data risks reacting too late.

Existing approaches to measuring AI adoption are poorly matched to how the technology is likely to reshape the economy. Official surveys ask whether firms use AI, but they struggle to capture task-level change inside organisations, shifts in work organisation and the intensity with which tools are utilised. Private surveys and AI-provider studies can offer useful signals, but are often skewed towards larger firms, rely heavily on self-reporting, and

cannot be linked cleanly to core labour-market and productivity statistics.²⁸ Without reform, the gap between what is changing and what is measurable is likely to widen.

Recommendation: *The ONS should build an economy-wide AI Transformation Tracker to monitor the adoption, diffusion and impact of AI across the economy and position the government to create proactive policy targeting optimal outcomes.*

The government has already announced a pilot of an AI-enabled job-matching tool,²⁹ but an AI Transformation Tracker would allow skills policy, incentives and public-service reform to be adjusted while there is still time to act. By linking measures of AI adoption – such as firm-level uptake rates and changes in skill requirements observed in vacancy data – to Pay As You Earn (PAYE) and vacancy data as well as other outcomes (productivity, wages, service performance), it could help identify roles where AI adoption is accelerating but retraining is lagging – and where intervention will have the highest return. Recent proposals in the Netherlands and the United States³⁰ also highlight the importance of this capability for effective policymaking as AI disruption increases.

In its initial phase, the Tracker should combine existing ONS and departmental data with carefully governed private inputs – including, where feasible, new data from generative-AI suppliers³¹ – to produce a small set of regular, publishable indicators. For example, the ONS could mirror the Dutch approach by covering five basic areas:

1. **Economy:** Is AI adoption translating into measurable productivity gains in UK firms?
2. **Society:** Which groups are benefiting most from AI-enabled services and how are these benefits manifesting (time savings, additional income, consumer surplus, etc)?
3. **Employment and skills:** Which occupations are experiencing the fastest growth in AI exposure, and is the skills system adapting quickly enough?
4. **Government and public services:** Where is AI adoption in public services delivering tangible improvements in efficiency or service quality?

5. **Sustainability:** Is the growing use of AI increasing overall energy demand, or are efficiency gains and smarter systems offsetting its environmental impact?

TBI has produced a prototype [AI Transformation Tracker](#) using publicly available and commercial data to illustrate what is possible today. The government should build a more advanced version for policymaking, backed by a dedicated programme of more extensive and systematic data collection on AI's adoption and impact across the economy.

Build a Real-Time View of Emerging Sectors to Guide Economic Strategy

Industrial, trade and regional strategies depend on being able to see clearly where economic activity is scaling, where competitive strengths are emerging and how growth is distributed across places. Yet the UK's Standard Industrial Classification (SIC) system remains anchored in a manufacturing-era taxonomy. While services now account for more than 80 per cent of UK economic output, fewer than half of four-digit SIC codes are service-specific. This means many fast-growing and data-intensive activities are dispersed across residual SIC categories and policymakers lack the evidence to implement policies that help these emerging sectors flourish.

In practice, policymakers already rely on workarounds. For example, there are no official data to identify the UK's AI sector, but the data-as-a-service company The Data City, which specialises in analysing emerging economic sectors, estimates the UK's AI ecosystem employs more than 400,000 people across development, deployment and servicing of AI technologies – generating more than £270 billion in turnover.³²

The ONS must continue to produce internationally comparable statistics using agreed classifications. But it should not stop there. It should provide an authoritative, innovative layer on top – a Real-Time Industry Classification that reflects how firms actually generate value today. Without this, ministers will continue to infer the health of strategically important sectors from fragmented private estimates or indirect proxies, weakening transparency

and limiting the effectiveness of industrial policy. Even in countries like the Netherlands and Canada – where statistical systems integrate rich administrative data to provide a more detailed picture of firm activity – classification frameworks remain largely tied to legacy industrial taxonomies, limiting policymakers’ ability to see emerging, data-intensive sectors as they scale.

Recommendation: *The government should introduce a Real-Time Industry Classification to guide the UK’s industrial and regional strategy.*

Working alongside internationally agreed SIC codes, such a classification would provide an authoritative, frequently updated view of emerging sectors that are scaling. By drawing on richer firm-level data and modern classification techniques,³³ it would allow ministers to design sector-specific incentives and target export and cluster support while reliably evaluating whether growth funding is reaching industries that are genuinely scaling rather than legacy categories. This makes the government’s growth strategy more effective and aligned with the UK’s real economic opportunities.

To deliver this efficiently, the ONS should collaborate with external innovators that already map emerging activities while retaining statistical assurance. Initial implementation should be deliberately narrow, focusing on the largest policy blind spots before scaling over time.

04

Making Statistics Accessible in the Age of AI

Accurate statistics matter only if they can be used effectively by government and the public. Increasingly, policymakers, researchers and citizens do not encounter official statistics directly through releases and spreadsheets, but through intermediaries – search engines, media reporting, and now AI-mediated systems that summarise and repackage information. This shift places greater weight on how official statistics are published, framed and reused at a time when trust in information is already fragile: across the UK, only around 35 per cent of people report trusting most news and statistics, down from more than 50 per cent a decade ago.³⁴ More than half of UK adults now report using AI search tools in their personal lives,³⁵ and some estimate they could overtake traditional search engines as the main way users discover information online before 2030.³⁶

This creates three practical challenges for the statistical system. First, to remain the shared factual basis for public debate and policy, official statistics must function reliably when accessed through AI systems and other digital intermediaries – not only when read in full. The International Monetary Fund (IMF) highlights that generative-AI tools frequently deliver incorrect figures when it comes to quoting official statistics.³⁷

Second, AI-mediated access exposes a longstanding usability problem that predates AI. The ONS has a wealth of high-quality data, but users often struggle to navigate from a policy question to the relevant data set, definition and caveats. When discovery and interpretation are difficult, evidence has less practical influence – and unofficial numbers, partial indicators or misinterpretations can fill the gap. International experience – including the rapid development of AI-enabled assistants to navigate government interfaces in Ukraine³⁸ – illustrates that improving navigation and interpretation becomes critical when demand for clear, authoritative information is high.

Third, the government needs to extract the full value of the UK's administrative data for policy design and evaluation. The UK holds some of the world's richest public-sector data sets, spanning health, population, education, taxation and public services. But the legal and governance framework governing access and linkage – anchored in the Digital Economy Act 2017 – was designed for a pre-AI world of time-limited research projects, static data sets and a clear separation between research and operations. As highlighted in TBI's work on the [National Data Library](#), the current framework makes cross-government data linkage slow, fragmented and legally uncertain. This matters because modern policymaking increasingly depends on secure cross-domain analysis – for example linking health, education and labour-market data to understand long-term outcomes or combining tax and benefits data to assess distributional impacts in near real-time.

The new ONS leadership has recognised parts of this agenda, improving openness and engagement, including publishing data-access plans and expanding communication channels beyond traditional media.³⁹ Moreover, the government is building the National Data Library to improve cross-domain data access and linkage – but legal constraints threaten its effectiveness. As AI-mediated access and analysis become central to how evidence is consumed and used, maintaining the public value of official statistics will require coordinated changes to how statistics are published for reuse, supported for interpretation and governed for secure cross-domain use.

Recommendation: *The ONS should ensure official statistics are accessible, usable and legible in an AI-mediated environment by publishing key indicators in machine-readable formats with consistent metadata.*

To ensure ministers, media and the public are not debating policy on distorted or misattributed figures, it is paramount that official statistics remain the authoritative reference point when accessed through AI systems and other digital intermediaries. The ONS should focus on publishing information in ways that make it possible for automated systems to retrieve and reproduce the correct series and context. The IMF's StatGPT offers a roadmap for how to do this effectively.⁴⁰ This includes providing consistent

metadata: clear definitions, provenance, uncertainty and caveats. This should include structured partnerships with major AI platforms to ensure that authoritative, up-to-date ONS statistics are prominently surfaced within general-purpose AI systems – with appropriate caveats – ahead of unverified or lower-quality sources.

The ONS should also work with the UK Information Commissioner’s Office to engage major AI platforms to monitor how official statistics are being quoted and summarised across those systems. This would allow the ONS to identify systematic misquotation or misinterpretation at scale and intervene quickly – for example by improving labelling, publishing clearer reference series or correcting recurring errors through direct platform engagement.

Recommendation: *The ONS should develop an AI assistant to help users find the right data and interpret them correctly.*

This conversational, AI-guided interface should unify existing help channels, metadata, definitions and FAQs into a single point of access, modelled on initiatives such as Ukraine’s Diia.AI assistant. The interface would support website navigation and data-set discovery; surface definitions, caveats and uncertainty alongside numbers; and guide expert and non-specialist users from question to statistics to interpretation. This would not replace existing publications, but sit above them, reducing complexity and making official statistics easier to see correctly.

There is also scope to extend this capability beyond the ONS’s own website. As the BBC Charter Review considers how AI could support audiences in accessing reliable and informative news, leaders at the ONS should engage with their BBC counterparts to seek a structured data-sharing partnership that allows AI-enabled news interfaces (for example, a proposed “ChatBBC”) to signpost the latest official statistics, with clear provenance and links to underlying data. This would embed trusted statistics within widely used public platforms, strengthening the visibility and authority of official data in an AI-mediated information environment.

Recommendation: *Backed by targeted reform of the Digital Economy Act and working with the ONS as steward of core statistical and administrative systems, the government should enable the National Data Library to operate as the single operational gateway for accredited research access to sensitive public-sector data through secure, controlled environments to strengthen policy design, evaluation and long-term decision-making.*

Making secure linkage across domains routine would unlock the kind of policy-relevant analysis that is currently too slow or too difficult to do at scale – for example tracing how early-life health or education interventions shape later employment and earnings, or assessing the distributional effects of tax and benefit changes more quickly and accurately. This should consolidate and standardise existing access routes by harmonising accreditation, contracts and governance, and enabling secure linkage where there is clear public benefit. To deliver this, targeted reform of the Digital Economy Act is essential: clarifying its interaction with data-protection law, introducing passported researcher credentials and providing a clear statutory basis for secure data linkage across domains. With these reforms, the National Data Library can operate as a federated but interoperable system that supports high-value, cross-government research and evaluation while preserving strong safeguards and specialist environments.

05

Setting Strategic Priorities for the Statistical System

Delivering the reforms in this report will require clearer leadership and accountability for the direction of the statistical system. The ONS must remain fully independent over statistical methods and publication. But strategic choices about what capabilities to build – and where to invest scarce capacity – should not sit solely with statisticians. These choices shape major policy decisions, public spending and public trust, and so need to be set transparently, with structured engagement between ministers, Parliament and users.

At present, that division of responsibility is not well defined. The UK Statistics Authority oversees both the ONS and houses the Office for Statistics Regulation, which safeguards quality and trustworthiness across government. This institutional setup is effective at protecting professional standards and publication independence, but it can blur accountability for strategic choices – what gets prioritised, how quickly modernisation happens and whether the system is keeping pace with emerging policy needs. The result is a risk of drift and inertia at precisely the moment when demand for timely, policy-relevant data is accelerating.

A more explicit priority-setting mechanism would help. Ministers should be able to set out the strategic outcomes they need from the statistical system – for example through an annual remit letter, laid before Parliament – while leaving the ONS fully independent in how those priorities are delivered. The remit should not dictate methodologies or specific outputs. Instead, it should set expectations around capability and delivery – for example strengthening migration statistics, building an AI Transformation Tracker, improving real-time economic measurement, or accelerating the integration of administrative and commercial data into core series.

In parallel, scrutiny should be strengthened so Parliament – and users – can see whether progress is being made. The Office for Statistics Regulation should continue to safeguard the Code of Practice, but it should also report

more explicitly to Parliament on whether the statistical system is delivering against the strategic priorities that have been set – highlighting delivery risks, slippage and capability gaps where they arise. Done well, this would preserve operational independence while creating clearer democratic accountability for the strategic direction of the system, and stronger incentives to deliver reform at pace.

06

Conclusion

The UK's statistical system stands at a fork in the road. Recent disruptions have exposed real weaknesses, but they have also revealed a deeper truth: a system built for a slower economy can no longer meet the demands of an AI-era state. Stabilising today's outputs is necessary, but it is not sufficient.

The reforms set out in this report are therefore not about technological novelty, but about restoring state capability. They would allow government to see emerging pressures earlier, design policy on firmer evidence, and maintain a shared factual basis for public debate in a more contested information environment. Done well, they would reposition the ONS not just as a producer of statistics, but as core national infrastructure for an adaptive, confident and effective state. The choice is clear: incremental repair of legacy systems, or a strategic upgrade fit for governing in the age of AI.

Endnotes

- 1 <https://covidactuaries.org/2021/10/27/vaccine-effectiveness-and-population-estimates/>
- 2 <https://migrationobservatory.ox.ac.uk/resources/briefings/top-ten-problems-in-the-evidence-base-for-public-debate-and-policy-making-on-immigration-in-the-uk-in-2025/>
- 3 <https://www.gov.uk/government/publications/family-resources-survey-quality-assessment-report/family-resources-survey-quality-assessment-report>
- 4 <https://www.resolutionfoundation.org/app/uploads/2021/01/Improving-our-understanding-of-UK-poverty-will-require-better-data.pdf>
- 5 The ONS pursued a strategy of encouraging people to respond online and set a target of having 75 per cent of respondents reply digitally. This target was exceeded, with (more than 85 per cent) responding digitally <https://www.ons.gov.uk/census/aboutcensus/census2021generalreport/census2021generalreportfullversion>
- 6 Mainly spent on operational costs and excluding additional modernisation costs <https://www.ons.gov.uk/census/censustransformationprogramme/executivesummaryandoverviewofcensus2021generalreportforenglandandwales>
- 7 <https://www.ons.gov.uk/aboutus/transparencyandgovernance/freedomofinformationfoi/2021censusfieldstaffingnumbers>
- 8 <https://2011.isiproceedings.org/papers/450094.pdf>
- 9 <https://isi-web.org/sites/default/files/import/proceedings/STS086-assessing-the-quality-of-register-based-population-censuses-processes-and-outputs.pdf>
- 10 <https://www.gov.uk/government/publications/census-2021-general-report-for-england-and-wales>
- 11 <https://journals.sagepub.com/doi/10.3233/SJI-190585>
- 12 <https://www.singstat.gov.sg/-/media/files/find%5Fdata/concepts%5Fmethods%5Fand%5Fapplications/ssn121-pg6-12.ashx>
- 13 <https://unstats.un.org/bigdata/events/2023/unsc-innovation/Keynote%5FNorway.pdf>
- 14 <https://www.destatis.de/EN/Themes/Society-Environment/Register-census/%5Fnode.html>
- 15 <https://link.springer.com/article/10.1186/s40878-018-0076-4>

- 16 <https://www.socialstyrelsen.se/en/statistics-and-data/registers/national-register-of-social-assistance/>
- 17 Figure refers to CPI. On a CPI including Owner-Occupier's Housing costs (CPIH) basis the share rises to ~31 per cent, because CPIH includes owner-occupiers' housing costs (17 per cent of CPIH basket) measured using administrative rental microdata.
- 18 <https://unece.org/sites/default/files/2023-05/7.2%20Canada.pdf>
- 19 <https://www.bea.gov/sites/default/files/papers/BEA-WP2023-8.pdf>
- 20 Initial releases suggested average 0.8 per cent growth compared to actual average growth of 1.3 per cent <https://www.ft.com/content/5aff79e-0af7-4f96-b69f-c603cd083a50>
- 21 <https://www.ons.gov.uk/economy/inflationandpriceindices/articles/impactanalysisontransformationofukconsumerpricestatisticsrailfaresandsecondhandcars/january2026>
- 22 Calculation based on (136 billion + £6 billion + £50 billion + £70 billion)*0.03 per cent. There are additional costs to the government and the private sector, for example through the impact on inflation-linked debt or on increases in the minimum wage. Some other linkages mean higher inflation could have a positive effect on government finances, such as income-tax-threshold increases based on the inflation rate.
- 23 <https://www.bis.org/ifc/publ/ifcb64%5F00%5Frh.pdf>
- 24 <https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/digitaleconomysurvey/2021>
- 25 <https://www.ft.com/content/a9f405d6-7d9c-4d64-8c6c-6e9d4e592882>
- 26 <https://www.nber.org/books-and-chapters/technology-productivity-and-economic-growth/data-intangible-capital-and-productivity>
- 27 <https://www.bankofengland.co.uk/speech/2024/november/andrew-bailey-speech-at-the-annual-financial-and-professional-services-dinner>
- 28 <https://www.brookings.edu/articles/counting-ai-a-blueprint-to-integrate-ai-investment-and-use-data-into-us-national-statistics/>
- 29 <https://opentools.ai/news/anthropic-joins-forces-with-uk-government-to-launch-ai-powered-job-seeker-assistant>
- 30 For example, <https://www.seedai.org/research/intensity-index>; <https://www.brookings.edu/articles/counting-ai-a-blueprint-to-integrate-ai-investment-and-use-data-into-us-national-statistics/>;

- 31 For example, surveys such as the Labour Force Survey and Business Insides and Conditions Survey; HMRC PAYE and self-assessment data; Department for Work and Pensions benefit records; and Ofcom administrative data on telecoms and connectivity.
- 32 <https://thedatacity.com/rtics/artificial-intelligence-ecosystem-rtic0095/>
- 33 Such as Value Added Tax, PAYE, the Inter-Departmental Business Register and business registers – with additional firm-level signals that do not require redesigning surveys, such as business descriptions from Companies House, structured information derived from company websites and public digital traces.
- 34 <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2025/united-kingdom>
- 35 <https://www.ofcom.org.uk/media-use-and-attitudes/online-habits/from-apps-to-ai-search-how-the-uk-goes-online-in-2025>
- 36 <https://www.semrush.com/blog/ai-search-seo-traffic-study/>
- 37 <https://www.imf.org/-/media/files/publications/dp/2026/english/saiosea.pdf>
- 38 <https://digitalstate.gov.ua/news/govtech/diiaai-pershyy-u-sviti-derzavnyy-ai-ahent-iakyy-ne-prosto-konsultuye-a-nadaye-posluhy-iak-pratsiuye-shtuchnyy-intelekt-na-portali>
- 39 The ONS has increasingly recognised the gap between headline statistics and lived experience, responding through distributional analysis, alternative inflation measures, faster experimental indicators and clearer communication of uncertainty.
- 40 <https://www.imf.org/-/media/files/publications/dp/2026/english/saiosea.pdf>

Follow us

facebook.com/instituteglobal

x.com/instituteGC

instagram.com/institutegc

General enquiries

info@institute.global

Copyright © March 2026 by the Tony Blair Institute for Global Change

All rights reserved. Citation, reproduction and or translation of this publication, in whole or in part, for educational or other non-commercial purposes is authorised provided the source is fully acknowledged Tony Blair Institute, trading as Tony Blair Institute for Global Change, is a company limited by guarantee registered in England and Wales (registered company number: 10505963) whose registered office is One Bartholomew Close, London, EC1A 7BL.