Use of Artificial Intelligence

Yvonne Gallagher, Digital Director

Public Sector AI adoption since 2018

Apr 2018

Publication of the *AI Sector Deal* aimed at stimulating uptake of AI, including within the public sector.

Apr 2019

The government concluded its review on cross-government AI adoption to identify the most significant opportunities for AI.

Mar 2024

AI initiatives and funding announced in the Spring Budget as part of the government's Public Sector Productivity Programme.

Jun 2019

Publication of guidance on building and using AI in the public sector.

Sep 2021

Publication of the *National AI Strategy* including an ambition for the government to set an example in the safe and ethical deployment of AI.

Nov 2023

Creation of the Incubator for Artificial Intelligence (i.AI) to help departments harness the potential of AI to improve productivity and the delivery of public services.

2018	2019	2020	2021	2022	2023	2024

Oct 2018

In the 2018 budget the government pledged to review its use of AI, automation and data to drive public sector productivity and wider economic benefits.

Mar 2023

Publication of the *UK Science and Technology Framework* identifying AI and an innovative public sector as important for the UK's science and technology strategy.

Jan 2024

Publication of the *Generative AI Framework for HM Government*, providing practical considerations for anyone planning or developing a generative AI solution.

Source: National Audit Office review of publicly available sources

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Examples of AI deployed in government

HMRC: AI-powered Digital Assistant

Automatically helps customers complete tasks or find the information they are looking for and links customers to an adviser through webchat if it is unable to help

(Not generative AI)

HM Land Registry: AI Document Comparison

Tool to support case workers by automatically identifying differences between application forms and other registration documents
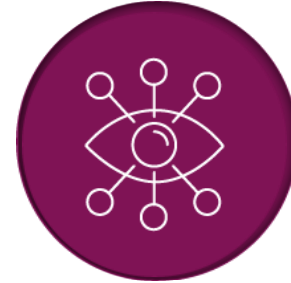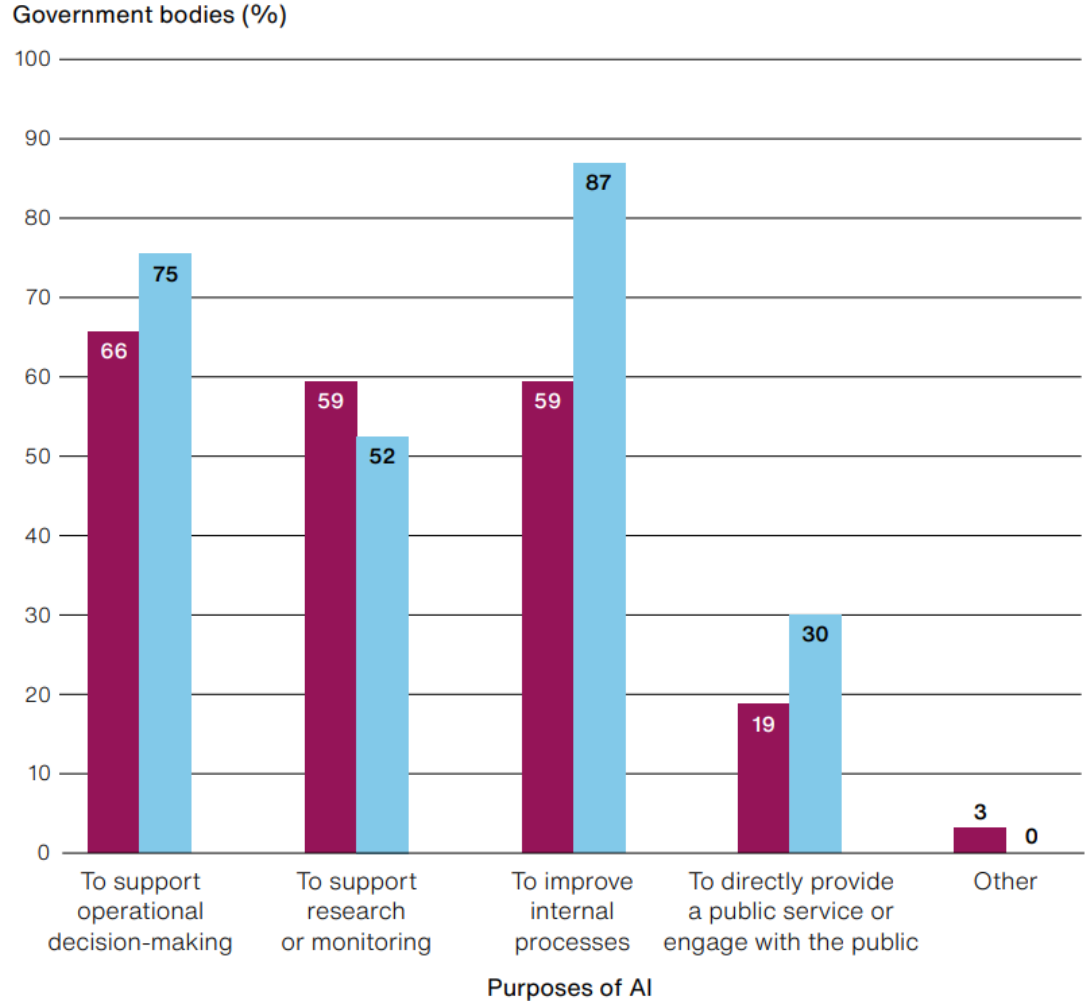
Natural England: 'Living England' Project

Uses machine learning and satellite images, field data records and other geospatial data to predict habitats aligned to a UK habitat classification system, without the need to survey the whole country

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Purpose of AI in government

■ Deployed AI

■ Piloted or planned AI

Government bodies (%)

Purposes of AI

Purpose	Deployed AI	Piloted or planned AI
To support operational decision-making	66	75
To support research or monitoring	59	52
To improve internal processes	59	87
To directly provide a public service or engage with the public	19	30
Other	3	0

Range of AI being piloted and planned

Information retrieval

Image classification

Coding assistance

Fraud & error

Virtual Assistant
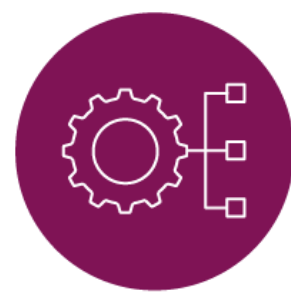
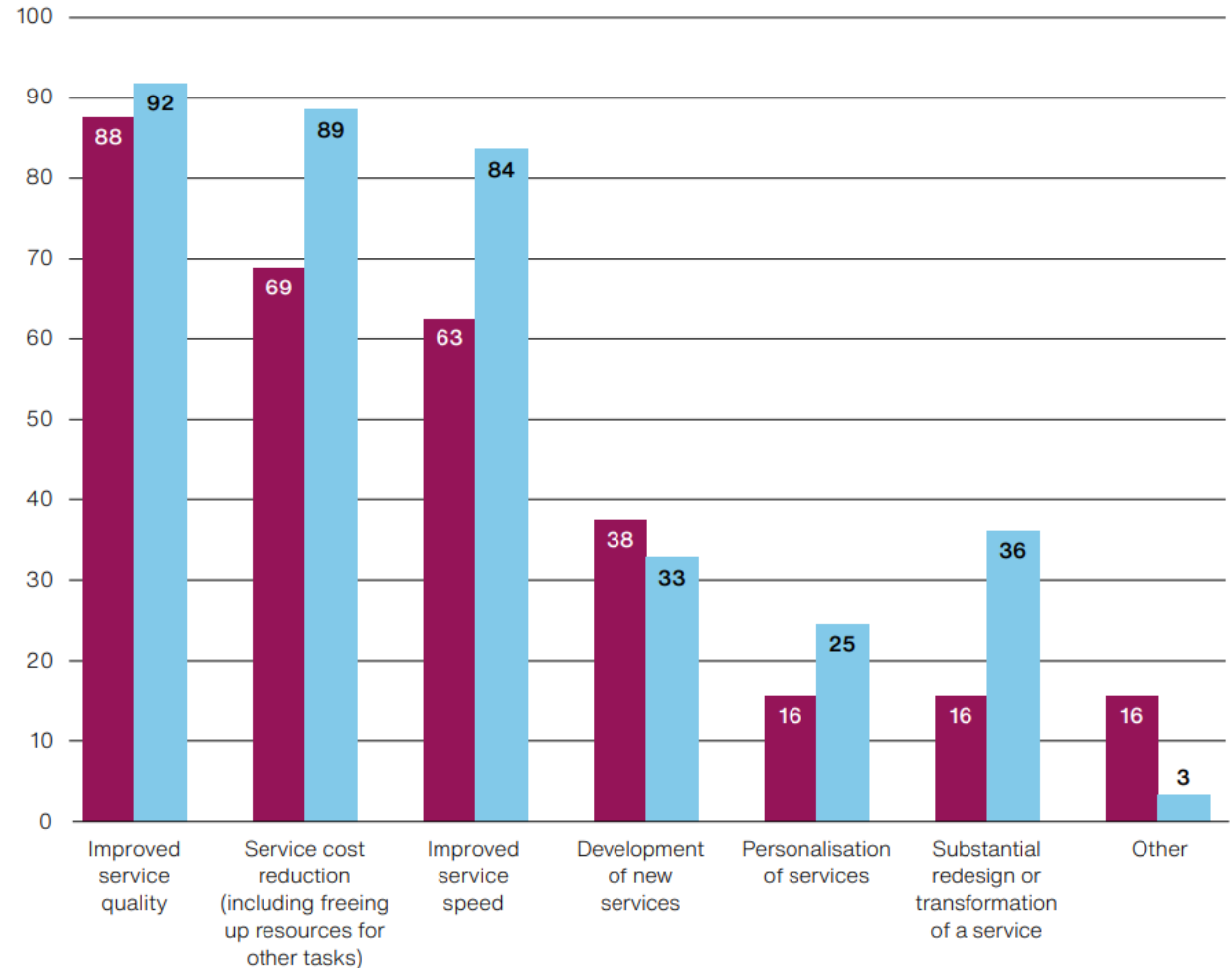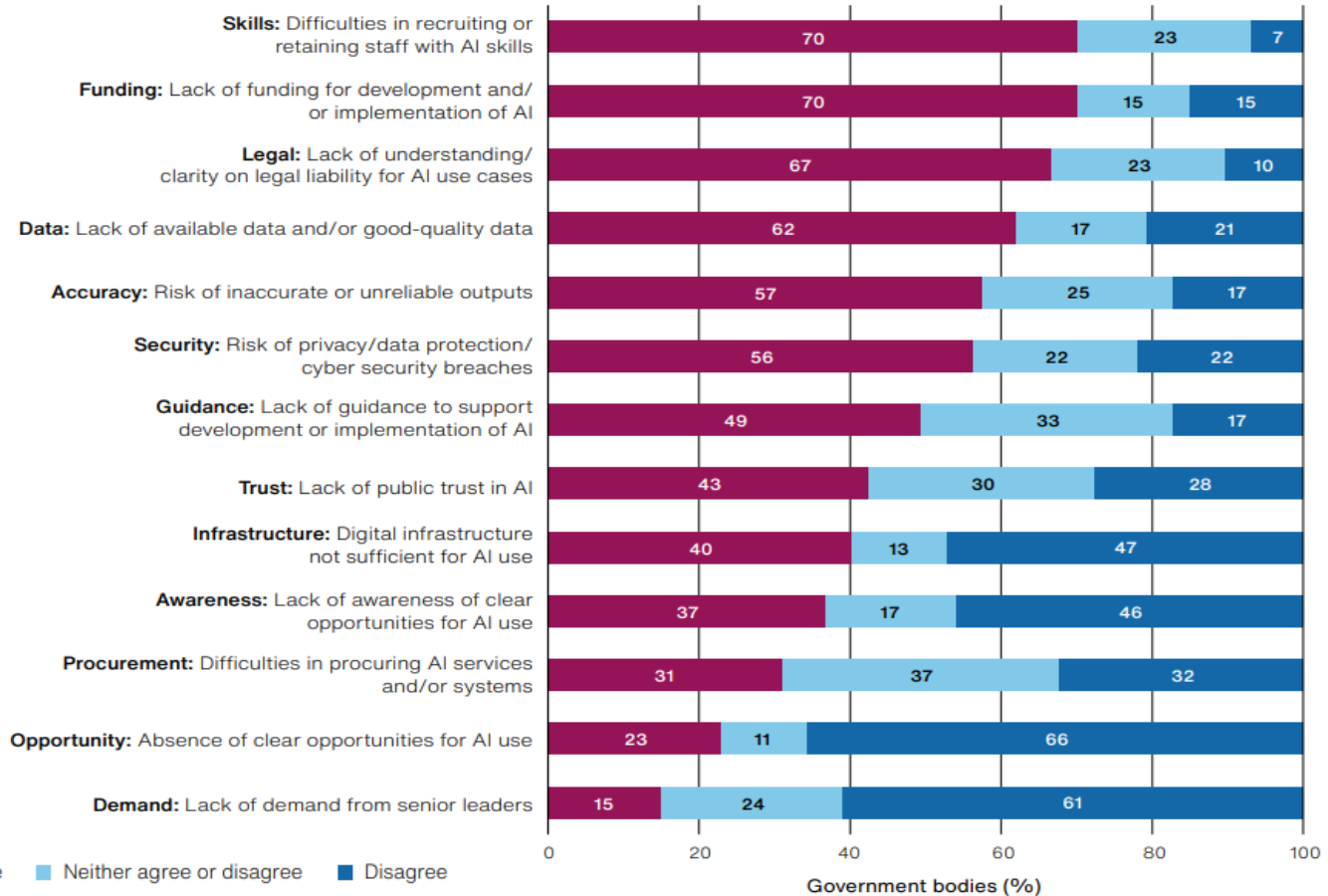Research & monitoring

Text generation

Managing operations

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The impacts expected by government

Government bodies (%)

- **Deployed AI** (maroon)
- **Piloted or planned AI** (light blue)

Category	Deployed AI	Piloted or planned AI
Improved service quality	88	92
Service cost reduction (including freeing up resources for other tasks)	69	89
Improved service speed	63	84
Development of new services	38	33
Personalisation of services	16	25
Substantial redesign or transformation of a service	16	36
Other	16	3

Barriers faced by government bodies

"To what extent do you agree or disagree that the following are barriers to implementing AI use cases in your organisation?"

Barrier	Agree	Neither agree or disagree	Disagree
Skills: Difficulties in recruiting or retaining staff with AI skills	70	23	7
Funding: Lack of funding for development and/or implementation of AI	70	15	15
Legal: Lack of understanding/clarity on legal liability for AI use cases	67	23	10
Data: Lack of available data and/or good-quality data	62	17	21
Accuracy: Risk of inaccurate or unreliable outputs	57	25	17
Security: Risk of privacy/data protection/cyber security breaches	56	22	22
Guidance: Lack of guidance to support development or implementation of AI	49	33	17
Trust: Lack of public trust in AI	43	30	28
Infrastructure: Digital infrastructure not sufficient for AI use	40	13	47
Awareness: Lack of awareness of clear opportunities for AI use	37	17	46
Procurement: Difficulties in procuring AI services and/or systems	31	37	32
Opportunity: Absence of clear opportunities for AI use	23	11	66
Demand: Lack of demand from senior leaders	15	24	61

Government bodies (%)

What issues did we find?

Strategy and Governance

Lack of coherent plan

Overall ownership and accountability

Governance arrangements

Implementation

Insight and learning

Learning lessons from transformation

Legacy systems and data quality

Standards, guidance, and assurance

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Conclusions

AI has the potential to deliver large-scale productivity gains in the public sector

- While AI is not widely used across government, 70% of government bodies we surveyed are piloting or planning the use of AI

- Government departments are required to create AI adoption plans by June 2024

Achieving large scale benefits will require major digital transformation

- Achieving large scale benefits is likely to require not just adoption of new technology but significant changes in business processes and corresponding workforce changes

- Government needs to learn lessons from previous cross-government transformation efforts

Fundamental barriers to AI adoption, such as legacy systems, data access and sharing must be addressed

- The overall programme for AI adoption should be supported by a realistic plan for the skills, funding and wider enablers needed

- Otherwise, these will limit the extent to which it can exploit the future potential of AI

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Next steps

Read our report on AI

www.nao.org.uk/reports/use-of-artificial-intelligence-in-government

See also

www.nao.org.uk/reports/digital-transformation-in-government-addressing-the-barriers

www.nao.org.uk/insights/digital-transformation-in-government-a-guide-for-senior-leaders-and-audit-and-risk-committees

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