IM_ SGH AI Lab

The AI opportunity for eGovernment in Poland

The opportunity for the Polish Government to move from ambitious advocacy to fast and coordinated implementation

An Implement Consulting Group study
Commissioned by Google
In partnership with SGH Warsaw School of Economics

Generative AI has significant potential to enhance productivity in public administration, creating 7% more value for money, equivalent to an annual contribution of PLN 8 billion.

AI in public administration is a good place to start. This report explores the substantial potential of generative AI in Poland's public administration, which is well suited for early AI benefits with low risk.

Early AI adoption by governments can accelerate AI uptake across the economy by setting an example within existing regulations**.** Furthermore, the government plays a crucial role in clarifying and simplifying the regulations governing AI use in Poland.

What is eGovernment?

The European Commission defines eGovernment as:

"Effective digital public services which can provide a wide variety of benefits. These include more efficiency and savings for governments and businesses, increased transparency, and greater participation of citizens in political life.

[…] eGovernment involves more than just the tools: it involves rethinking organisations and processes and changing behaviour so that public services are delivered more efficiently to people.

Implemented well, eGovernment enables citizens, enterprises and organisations to carry out their interactions with government more easily, more quickly and at lower cost."

The government must overcome five key barriers…

- Fragmented decision-making
- Fear of breaking the rules
- Ensuring public trust
- Regulatory uncertainty
- Risk of vendor lock-in

Make the AI potential executable…

Think ‘task-based’

Cross-cutting tasks underpin most jobs in public administration. The top five tasks represent 80% of the potential. However, fragmented decision-making leads to many pilots without scalable impact. The government should focus on key cross-cutting tasks to achieve economies of scale while addressing local needs. This requires a cross-institutional AI procurement plan with clear roles and responsibilities to ensure alignment and scalability.

Think ‘risk-conscious’

Low-risk, internal AI applications constitute 20% of the economic potential. The fear of breaking rules in a complex regulatory environment is slowing AI adoption. Therefore, the government of Poland should begin with the low-risk applications and gradually move to user-sensitive, externally-facing applications to unlock the remainder of the potential.

Think ‘impact-oriented’

The implementation of AI solutions should be motivated by the needs of citizens and businesses, improving user experience and reducing the time and hassle in their interactions with the public administration. Generative AI can reduce the administrative burden for businesses in Poland by PLN 6–7 billion annually.

Note: The term ‘*public administration*’ in this report refers to the administration of public institutions, including the organisation and administration of public services and legislation, while **not** including health and education of the public sector.

Get critical enablers in place…

Create cloud clarity

A secure and competitive cloud infrastructure is crucial to cost-efficiently implement advanced AI at scale. The Polish government acknowledges this and, while investing in national infrastructure like the Government Cloud and the ZUCH platform, has yet to fully align its cloud capacity and procurement frameworks with the demands of large-scale generative AI.

Make smart procurement choices

Governments must carefully assess the risk of vendor lock-in and ensure an interoperable AI procurement framework. Vendor lock-in risk leads to suboptimal, inefficient and costly AI solutions in the public administration. 60% of surveyed government agencies in various EU countries report experiencing vendor lock-in effects.

Implement an ambitious AI strategy

The Draft State Digitalisation Strategy (2025–2035) outlines a strategic framework for integrating generative AI across public-sector operations. To translate this vision into concrete outcomes, it must first be formally adopted and published. Following adoption, leadership will need to establish clear implementation milestones and coordinate efforts across public authorities to address current barriers to deployment.

Introduction

A large and untapped potential

To realise the AI potential in the public administration, Poland must overcome five key barriers

AI can enhance public services to benefit citizens, businesses and employees

The Ministry of Digital Affairs' draft for a new State Digitalisation Strategy (2025–2035) states that AI can…

Improve decision-making

This technology can significantly improve industry capacity, efficiency and quality of service delivery, as well as supporting decision-making and resource management

Substitute work

Artificial intelligence, as a technology that is both complementary and substitutive for highly skilled workers, offers great potential for taking over some tasks from humans while increasing the efficiency of performing other tasks […]

Improve efficiency

Automation, the use of industrial robots, RPA systems and artificial intelligence can support human work, increase its efficiency or even fully replace it.

Improve quality of care

Artificial intelligence and other new digital technologies are being used safely and effectively to improve the quality of patient care

To realise these benefits, this analysis addresses five key barriers and outlines how to unlock the AI potential.

Source: Implement Economics based on Ministry of Digital Affairs (2025)

The Polish government can get 7% more value for money by adopting generative AI

Generative AI presents a significant economic opportunity for Poland, potentially contributing 5% (PLN 150–170 billion) to GDP annually in ten years.

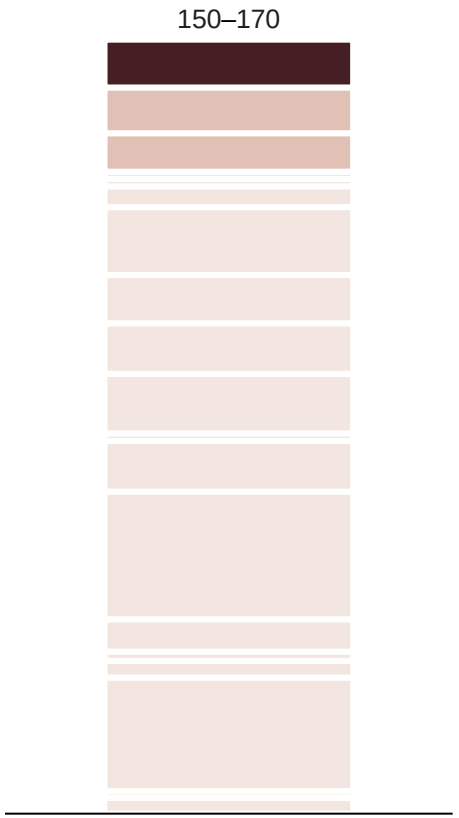
In public administration, AI can save time, personalise services, and expedite processes. Widespread adoption of generative AI in public administration can create PLN 8 billion in gross value added with the same resources. The potential is equivalent to 0.6% of public expenditure.

Demonstrating successful AI use in public administration will be key for unlocking the full economic potential of generative AI.

60%

of surveyed public administration employees already use AI to draft documents or reports.

Economic potential of generative AI in Poland
PLN billion at widespread adoption



Public administration

Other public sectors, incl. health and education

Private sectors

7% more value for money, equivalent to **PLN 8** billion annual contribution

Note: The economic potential in public administration is measured in terms of gross value added (GVA). GVA is the standard measure of economic value at sector level and is a major part of the gross domestic product (GDP), which also includes net taxes. See appendix for details. Public expenditure based on 2023 data. 'Public administration' refers to NACE sector O (Public administration and defence; compulsory social security) and comprises activities related to the administration of the state and the economic and social policy of the community, but not health, education and activities performed by private organisations, voluntary associations, or businesses providing similar services.
Source: Implement Economics based on Labour Force Survey from Warsaw School of Economics (WSE), Eurostat, O*NET, Briggs and Kodnani (2023).

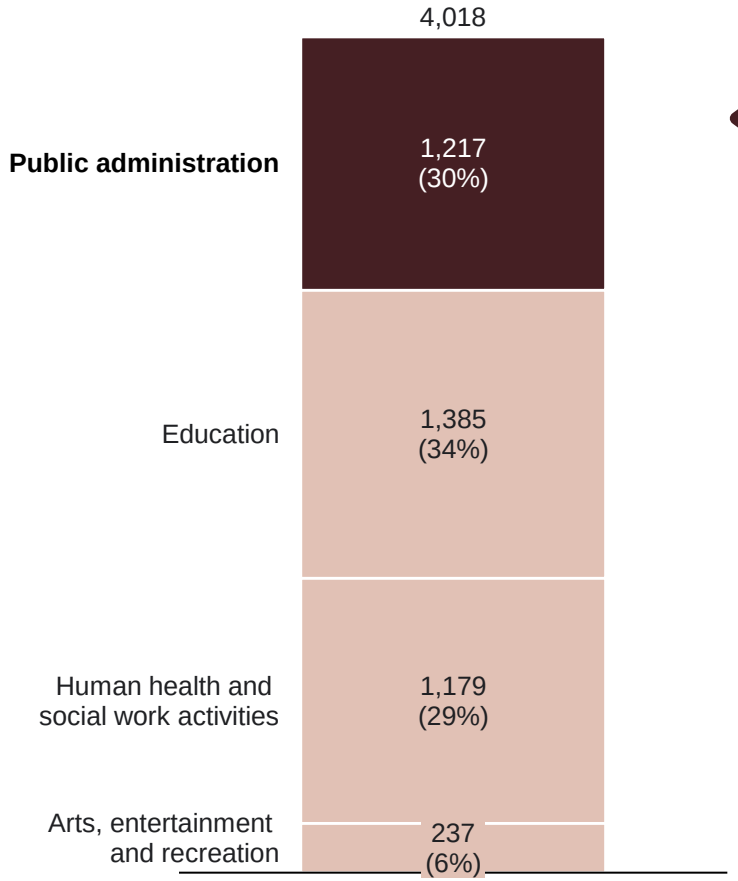
Administration forms the backbone of the public sector

The public sector is an important part of Poland's economy and society. Public expenditure is equivalent to 47% of Poland's GDP. Further, the public sector accounts for around 30% of all jobs and delivers services benefitting citizens and businesses.

Public administration makes up around a third of public sector jobs. Their work has characteristics that allows it to benefit from generative AI, such as text heavy work, repetitive tasks and complex analysis.

Public administration includes all levels of government and forms the administrative backbone of the public sector.

Employment in the public sector in Poland
Thousand employees, 2023



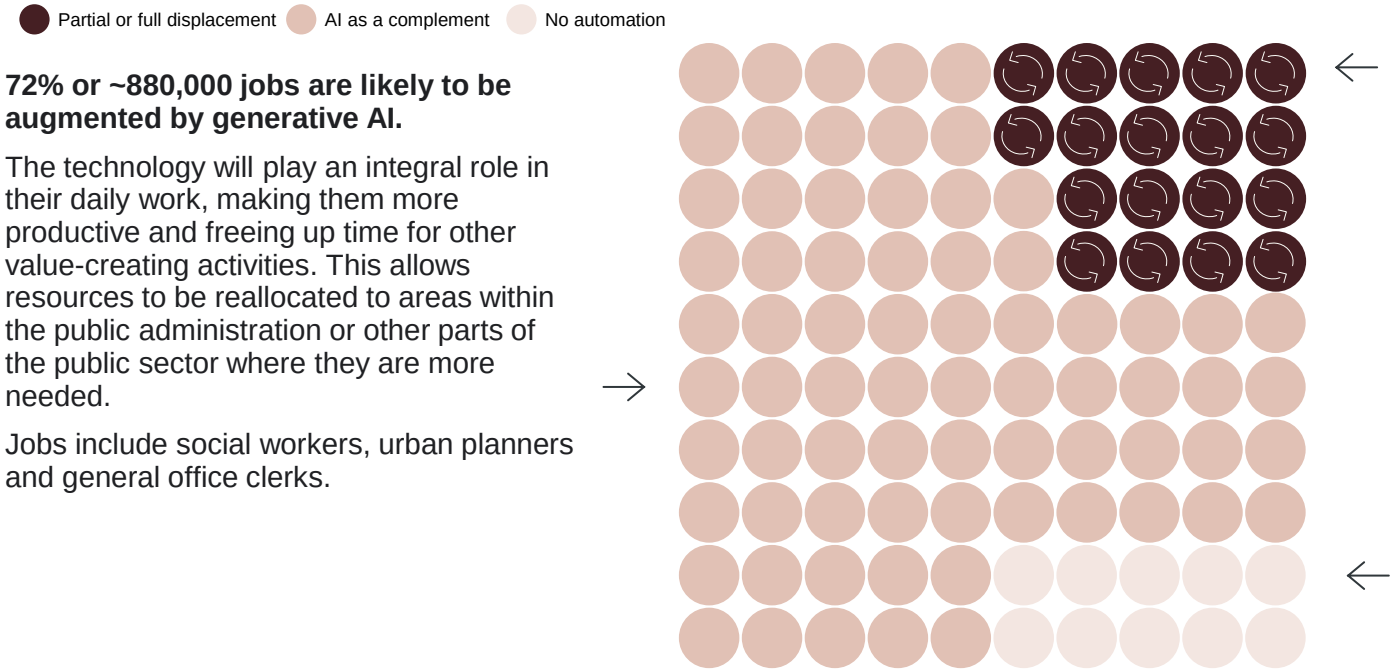
The public administration is the focus of this report. It provides value through key functions such as:

- **Citizen advisory**: Providing guidance on government services, legal rights, and administrative procedures.
- **Individual case handling:** Processing citizen applications for public services.
- **Finance and budgeting:** Managing public funds and disbursing benefits, subsidies and aid.
- **General governance and regulation:** Drafting, evaluating and implementing policies to address societal needs.

Source: Implement Economics based on Eurostat and IMF.

Most public administration jobs can be complemented by generative AI

Exposure to automation by generative AI in public administration in Poland
% of jobs in public administration



72% or ~880,000 jobs are likely to be augmented by generative AI.

The technology will play an integral role in their daily work, making them more productive and freeing up time for other value-creating activities. This allows resources to be reallocated to areas within the public administration or other parts of the public sector where they are more needed.

Jobs include social workers, urban planners and general office clerks.

18% or ~220,000 jobs are estimated to be highly exposed to generative AI, leading to some job transitions.

These workers may experience a shift in responsibilities as generative AI automates over half of their tasks, like tools such as citizen facing chatbots handling general inquiries automatically. This improves the speed and quality of administrative tasks, saving resources for the central and local governments.

Jobs include citizen service functions, lawyers, and budget analysts.

10% or ~120,000 jobs in public administration face little or no automation from generative AI.

These workers carry out manual or human-to-human work, including physical maintenance of public infrastructure and on-site inspections to ensure compliance and safety in public spaces.

Having human agency at the centre of AI adoption is essential to maximise the societal benefits. Civil servants must be upskilled to understand and use the new tools. Although the government has already taken steps to strengthen digital competencies through initiatives like AI Basics for Public Administration by the Polish Development Fund (PFR), further efforts are needed to address the specific challenges and opportunities of generative AI.

Source: Implement Economics based on detailed O*NET mapping to detailed ISCO level 4 employment data.

The public sector risks falling behind in AI adoption

The Skills of the Future Programme addressed SMEs with representatives from the public sector and enrolled 19,747 people out of almost 40,000 applicants.

Following the programme, SMEs are very keen on use and are willing to further implement AI solutions. There is a risk that the public sector will be left behind in digitalisation and AI adoption

SGH Warsaw School of Economics

Following the programme…

71% …are already using the acquired skills at work…

25% …and a further 25% intend to do so

91% …said they were more effective at work after the course

80% … have a strongly positive attitude towards using AI at work

Lessons for the public sector…

Even a relatively short course brings a big change in attitude towards AI and is quickly translatable into practice, resulting in increased efficiency.

However, a course dedicated to the public sector should place more emphasis on data protection and the legal regulations concerning AI.

Feeling that implementing AI in the office may be difficult because there must be an institutional acceptance (heads of public institutions) to implement change.

Source: Implement Economics based on survey conducted by Warsaw School of Economics.

Public institutions see AI as a future enabler—but lack key prerequisites

The use of AI is generally perceived as an opportunity, though primarily as a future prospect – for example, in the form of virtual assistants and process automation.

Currently, AI is mainly used individually by staff for tasks such as proofreading, content generation, or small-scale analytical work. There is a lack of formalised AI use to support core processes essential to the functioning of public institutions.

Some occasional pilots explore broader AI implementation, and there are isolated examples of integrating AI into ongoing operations.

Optimism about the speed and scale of AI adoption – and knowledge of its potential – is greater at higher levels of public administration. Concerns that AI will eliminate public sector jobs are low; instead, AI is seen as a way to 'patch the staff gaps' caused by ongoing personnel shortages.

The recent political context – such as Russia's attack on Ukraine and the threat of a US tariff war – has further underscored the importance of developing local AI capabilities or government-controlled AI tools.

Key interview takeaways: Interviewee recommendations and risks

- Regulations that define acceptable and safe forms of AI use, particularly data protection at national level (legislation) and at institutional level
- IT and financial support for innovation plus measures to improve data quality/digitalisation of processes (also hardware)
- Staff training in the use of AI – leaders or entire teams

- Staffing/competence shortages
- Loss/leakage of sensitive data
- Public sector lagging behind market solutions, in effect: dependence on large commercial entities

> *We have not implemented tools related to artificial intelligence in the processes that the office carries out (...) If it happens, it is actually acting a little bit outside the established norms, because currently there is no regulation on the use of artificial intelligence by the office, so when an employee uses this type of tool, such as ChatGPT, he or she does it, well, a little bit informally.*
>
> - **Regional Administration**

> *It (AI implementation) has to have the support of superiors, yes and even more so these trainings (on the use of AI) maybe should be for employees as well, but I would focus more on these leaders, they know the specifics (of the work) and they see how it has to be done and they will strive for this.*
>
> - **Central Administration**

Source: Implement Economics based on qualitative interview conducted by SGH Warsaw School of Economics.

High-impact sectors are ready for AI – but lack of rules and infrastructure risks slowing adoption and growth

Public Health sector

- A very important issue is the protection and management of personal data. While there is relatively good-quality data on the payer's side (NFZ) and regarding the course of treatment through the e-health system (P1), there is still room for improvement. At the same time, the upcoming EU regulations under the European Health Data Space (EHDS) framework are highly relevant.
- One significant barrier remains the lack of clear rules for sharing and processing data for training AI models. There are growing discussions on whether and how to use medical data to build AI-based medical solutions that contribute to the development of national AI capabilities in healthcare. AI support is increasingly seen as a way to meet the growing demand for medical services, especially in light of staff shortages among doctors and nurses. However, the current lack of integration among the software systems used by different medical providers poses a major challenge. There is a pressing need to invest in nationwide solutions.
- Additionally, it is essential to establish a system of incentives for medical entities to implement AI technologies.

Public Energy sector

- Cybersecurity is a very important issue in the energy sector. While there is recognition of the significant potential for gains and savings through the transformation and effective use of AI, these come with considerable costs as well.
- The sector is currently awaiting top-down administrative regulations, along with appropriate incentives and funding, to move forward. Compared to sectors like healthcare, there is relatively less concern about data protection.
- A separate but equally relevant issue is the high energy consumption associated with AI data centers.

> *Doctors want to be supported in their daily work by a so-called medical assistant, i.e. a person who, for example, when the professor is doing an ultrasound examination (...), enters the data (...). Something that could actually already be done by artificial intelligence (...). The time of a doctor who enters the data himself is more or less the admission of a patient for 20–30 minutes of work. Whereas with an assistant, a professor can admit a patient in 10–15 minutes (...) it is simply twice as fast.*
> ***- Healthcare facility***

> *While large commercial players have funds where they can actually use and experiment (sandbox) (...) in hospitals or institutions, especially in these smaller towns, there are financial constraints, lack of staff, lack of IT departments that could simply operate in modern solutions. Also, I don't see the possibility here that most of the entities themselves want to go through the digital transformation and the use of artificial intelligence.*
> ***- Healthcare expert***

> *We are entering a certain automation (...) it became clear that the costs are large. I see (as a solution) some central government projects where the Prime Minister's Office, the Ministry of Digital Affairs are building a big project that will involve many units. It will be a billion-dollar project, but we would have unified solutions. (...) If there were a visionary among the rulers, it could surely be realised.*
> ***- Central Administration***

Public employees are already using generative AI

Public First poll

Generative AI models offer robust built-in capabilities and are user-friendly. Currently, more than half of workers in Poland's public administration use AI tools.

Simultaneously, 21% of surveyed public administration workers say their institutions have invested in AI solutions, such as purchasing licences or implementing local applications.

Despite this progress, generative AI is still in its nascent stages and has yet to attain widespread adoption at the institutional level.

79%

of surveyed public administration employees believe that AI tools will be important for the public sector in the next 10 years.

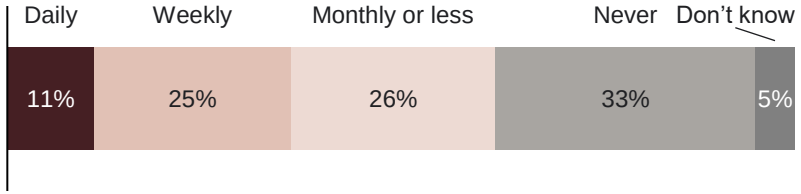
62%

of surveyed public administration workers in Poland use AI tools.

21%

of surveyed public administration workers in Poland say their institutions have invested in AI solutions.

How often do you use AI tools at your current job, if at all?
% share of respondents



Note: 307 respondents (Local government = 187; Central government = 72). Based on survey questions: How often do you use AI tools at your current job, if at all? and Thinking now about the public sector institution that you work for. As far as you are aware, is it already making use of artificial intelligence in any way?
Source: Implement Economics based on Public First polling.

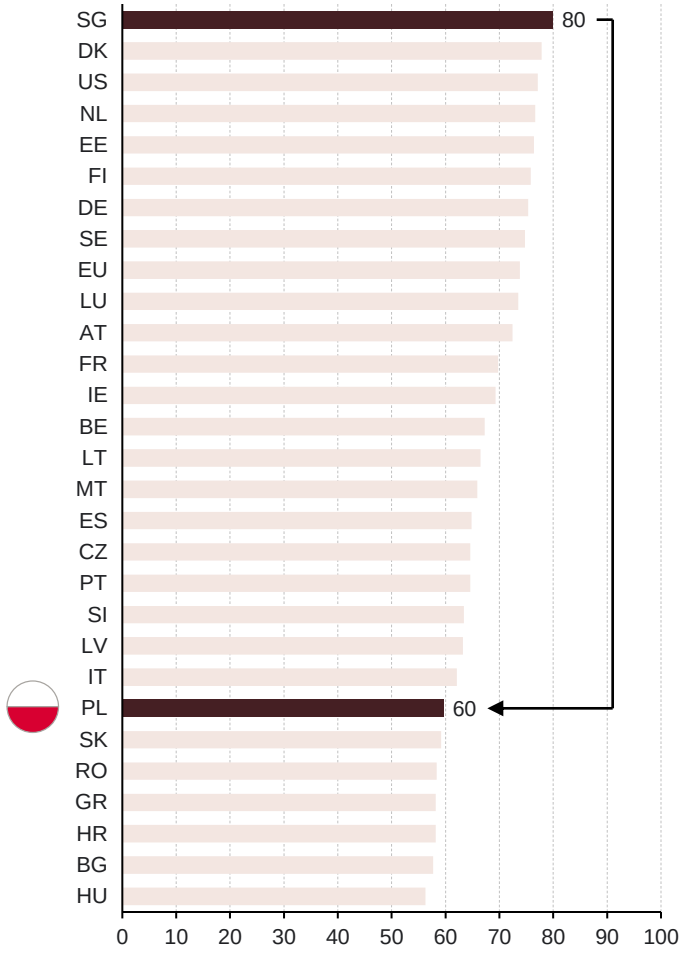
The government strategy for AI in Poland needs revision

Poland ranks 26th in the European DESI in digital public service for citizens and trails behind peers in the IMF AI Preparedness Index, indicating room for improvement compared to other EU countries.

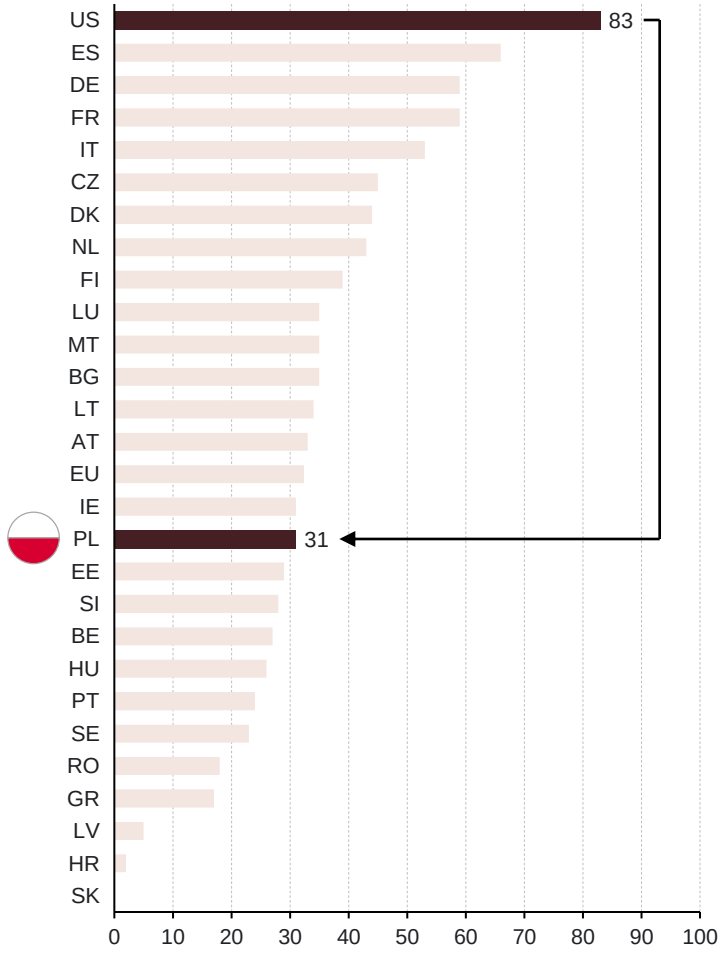
Poland is on a par with many of its peers on the Tortoise Media Global AI Index with a score of 31 as compared to the EU27 average of 32. The index measures the depth of commitment from national governments to AI, based on spending commitments and national strategies. However, Poland's current AI strategy from 2020 does not sufficiently reflect the emerging opportunities and risks introduced by generative AI. If not updated, Poland risks falling behind quickly.

The Draft State Digitalisation Strategy (2025–2035) aims to address Poland's AI preparedness and capacity gap by identifying key enablers such as strengthened digital infrastructure, targeted talent development programmes, and unified governance mechanisms. Once adopted, these measures are intended to support future competitiveness across both the public and private sectors.

AI Preparedness Index
IMF, April 2024 (Index max = 100)



AI Capacity Index, Government Strategy
Tortoise, 2024 (Index max = 100, global leader)

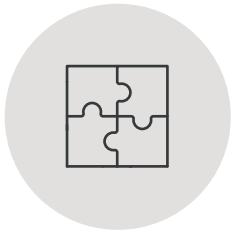


Notes: The AI Preparedness Index (AIPI) assesses the level of AI preparedness based on a rich set of macro-structural indicators that cover the countries' digital infrastructure, human capital and labour market policies, innovation and economic integration, and regulation and ethics.
Sources: Implement Economics based on European Commission (2024), IMF and Tortoise Media Global AI Index, 2024

Five key barriers hamper progress in Poland

This report draws on research from the Polish Ministry of Digital Affairs, AI commissions from neighbouring countries and the European Commission to identify five key barriers to overcome for the AI adoption to be successful:

PART I
Making the potential executable



Fragmented decision-making

Lack of a central public generative AI effort leads to many pilot projects without scalable results

Fear of breaking the rules

Public institutions struggle to use advanced AI tools due to strict EU compliance requirements

Ensuring public trust

Implementation of AI solutions in public administration requires support by citizens and employees

PART II
Getting the critical enablers in place

Regulatory uncertainty

Public institutions hesitate to adopt AI tools due to regulatory uncertainties related to cloud computing

A risk of vendor lock-in

Vendor lock-in can cause significant hidden costs for public institutions

This report details solutions to each of the above-mentioned barriers

Think ‘task-based’

Think ‘risk-conscious’

Think ‘impact-oriented’

Create cloud clarity

Make smart procurement choices

Source: Implement Economics based on the European Commission (2024), Ministry of Digital Affairs (2025)

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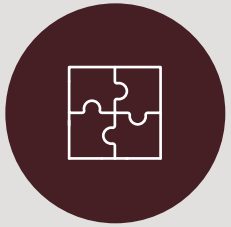


Think ‘task-based’

Think ‘risk-conscious’

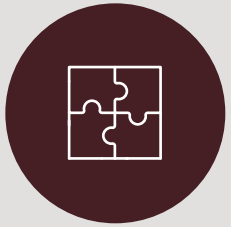
Think ‘impact-oriented’

PART I

Making the potential executable

In implementing the new digital strategy, the government of Poland should think ‘**task-based’, ‘risk-conscious’** and ‘**impact-oriented’** to realise the potential of generative AI in public administration.

> *Digitalisation and the deployment of artificial intelligence (AI) are also essential to the ability of public administrations to deliver European public goods, for example in the field of health, justice, education, welfare, mobility and environmental protection.*
>
> **Mario Draghi (2024)**



PART I

Think ‘task-based’

- Adopt a task-based framework to achieve scalability in AI solutions.

Lack of a central effort in implementing generative AI in the public sector results in uncoordinated pilot projects without scalable outcomes

Despite great opportunity to benefit from AI use in public administration, a lack of centrally focused efforts presents three main challenges:

Fragmented decision-making

Poland's public sector has driven innovative AI initiatives through central programmes such as GovTech Polska and coordinated efforts by the Ministry of Digital Affairs. However, the National AI Strategy from 2020 does not address emerging technologies such as generative AI. As a result, individual public authorities have often pursued isolated projects without a unified framework.

Absence of common infrastructure

Poland has developed key components to support public-sector AI adoption, including the Government Cloud, GovTech Polska, and a national Polish language model. However, access and integration remain uneven. Many authorities lack the capacity to use shared infrastructure effectively, and the current setup is not yet scaled or standardised to meet the needs of all institutions, limiting widespread adoption.

Barriers to data sharing

Poland has improved data accessibility through initiatives like the Data Opening Programme 2021–2027 and the National Interoperability Framework (NIF), which promotes cross-authority data exchange. Despite this, fragmented systems, non-standardised data, and outdated IT infrastructure continue to hinder AI adoption in the public sector. Strict data protection rules further complicate sharing, limiting the development of effective, cross-sector AI solutions.

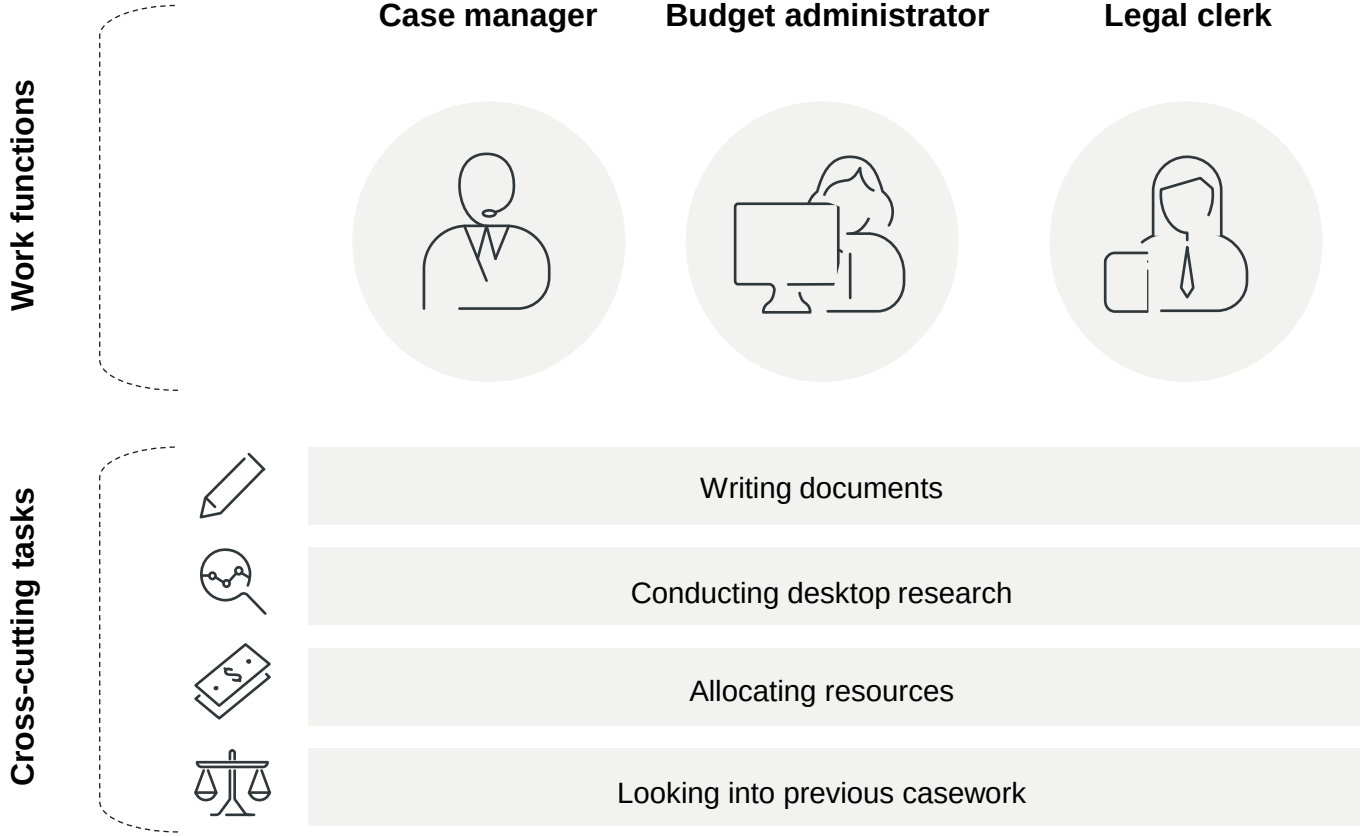
Source: Implement Economics based on Ministry of Digital Affairs (2025)

Cross-cutting tasks form the basis of most public administration jobs

The public sector is one of the largest employers in Poland, with public administration employees making up a significant share of the sector. Despite the diversity of the roles and fields of these employees, they carry out similar key tasks that follow comparable processes.

For example, tasks such as case handling are carried out by employees with varying job titles across multiple institutions.

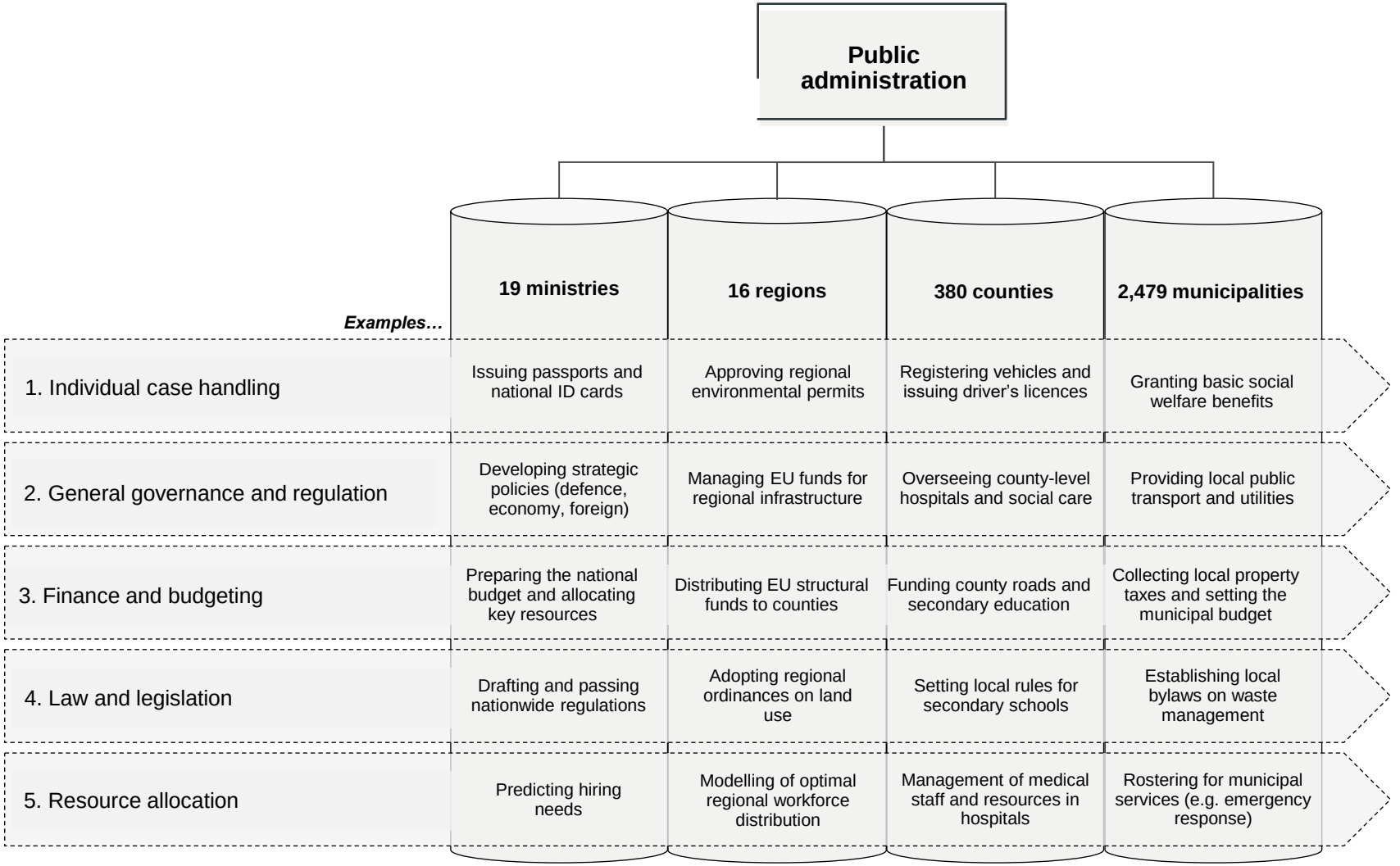
To effectively implement AI in public administration, using a task-based framework that focuses on shared processes is essential for achieving scalable solutions.



Generative AI has the potential to augment tasks performed across all public institutions in Poland

The Polish public sector spans 19 ministries, 16 regions, 380 counties, and 2,479 municipalities. Altogether, the public sector employs around 4 million people in Poland.

The tasks in public administration hold a large degree of similarity, creating an ideal opportunity to implement scalable AI solutions that can simultaneously benefit multiple public institutions, enhancing efficiency and collaboration.



Note: There is much uncertainty around the capability and adoption timeline of generative AI. The estimation of the potential of AI across key cross-cutting tasks is based on an augmentation of Briggs & Kodnani (2023) with granular Polish employment data and an expert-assessed, exhaustive framework of the task composition within public administration, which is mapped to the rich database of task descriptions within O*NET.
Source: Implement Economics based on O*NET, Eurostat, Gov.pl, and Labour Force Survey from SGH Warsaw School of Economics (WSE).

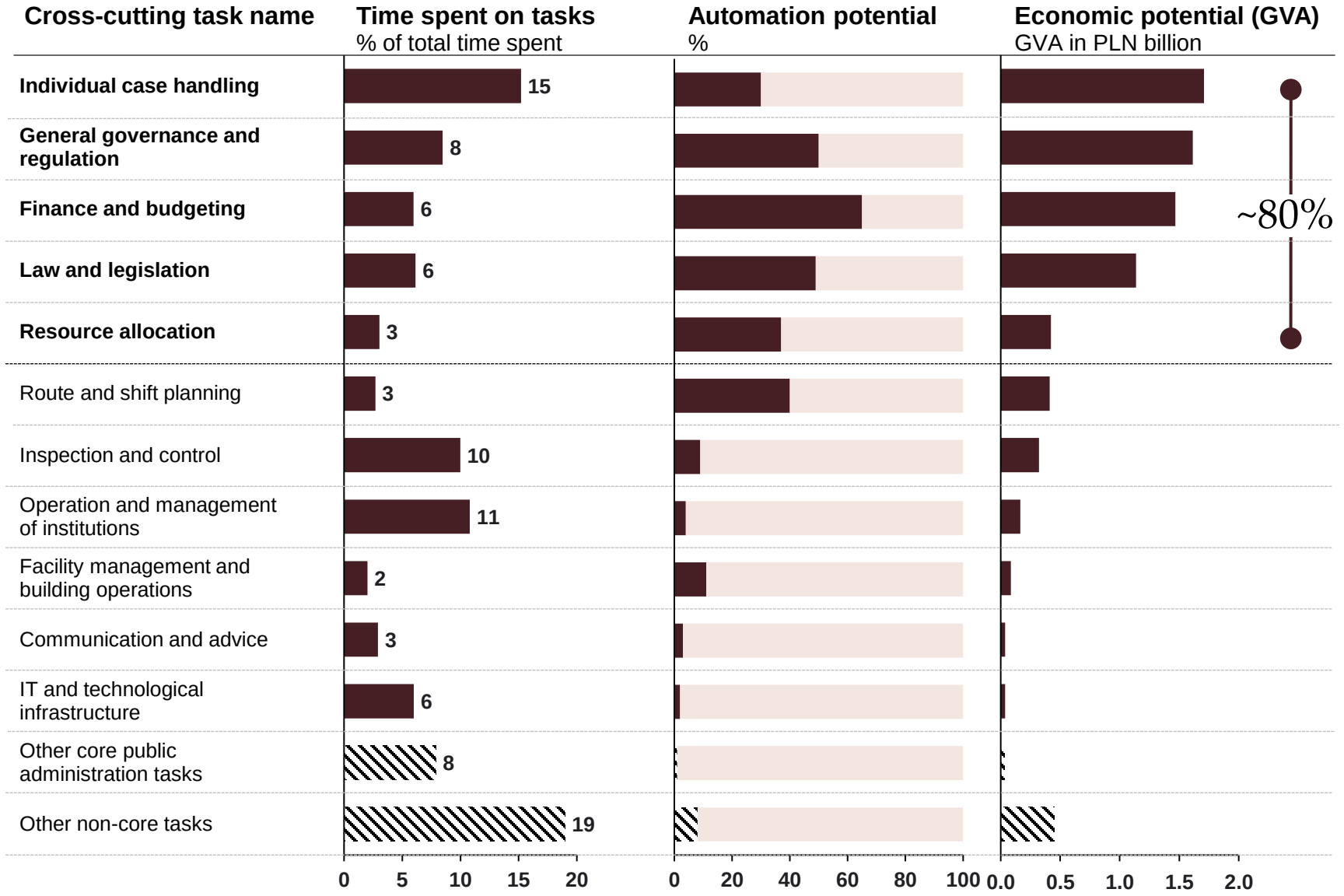
Focusing on the top five cross-cutting tasks could realise 80% of the potential

Implement Economics has analysed the potential of generative AI within public administration at task-level using employment data from the Poland statistical authority and detailed occupation descriptions.

We find that the lion's share of the potential in public administration is found within five major cross-cutting tasks:

- Individual case handling
- General governance and regulation
- Finance and budgeting
- Law and legislation
- Resource allocation

Although these tasks are estimated to make up around 38% of time spent by Polish civil servants, they account for about 80% of the economic potential due to the high degree of automatability.



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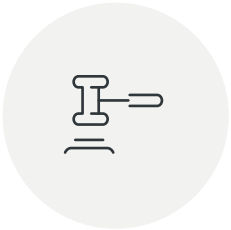
Source: Implement Economics based on O*NET, Briggs & Kodnani (2023), Eurostat and Labour Force Survey aggregated data prepared by Warsaw School of Economics (SGH).

Generative AI can complement cross-cutting tasks in several aspects

Individual case handling

Generative AI can review application forms for missing documentation, pinpoint follow-up questions that need input from the applicant, and route cases directly to the relevant department.



General governance and regulation

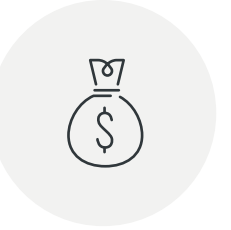
Generative AI can automatically compare proposed rules against existing legislation to spot potential conflicts or compliance gaps, as well as compiling relevant legal precedents to help agencies stay consistent with governance standards.

Finance and budgeting

Generative AI can detect budget overruns, identify potential cost-saving measures, and forecast revenue shortfalls, helping public administrators prioritise spending, optimise resource allocation, and maintain transparent financial oversight.

Law and legislation

Generative AI can assist in drafting legal texts, analysing legislative proposals, and identifying potential legal conflicts, helping lawmakers craft precise and well-aligned policies.



Resource allocation

Generative AI can analyse service usage patterns, population needs, and operational data to recommend efficient allocation of staff, funding, and infrastructure across departments, ensuring better coverage and responsiveness.





Five cross-cutting tasks hold 80% of the economic potential

Achieving scalability while balancing local needs

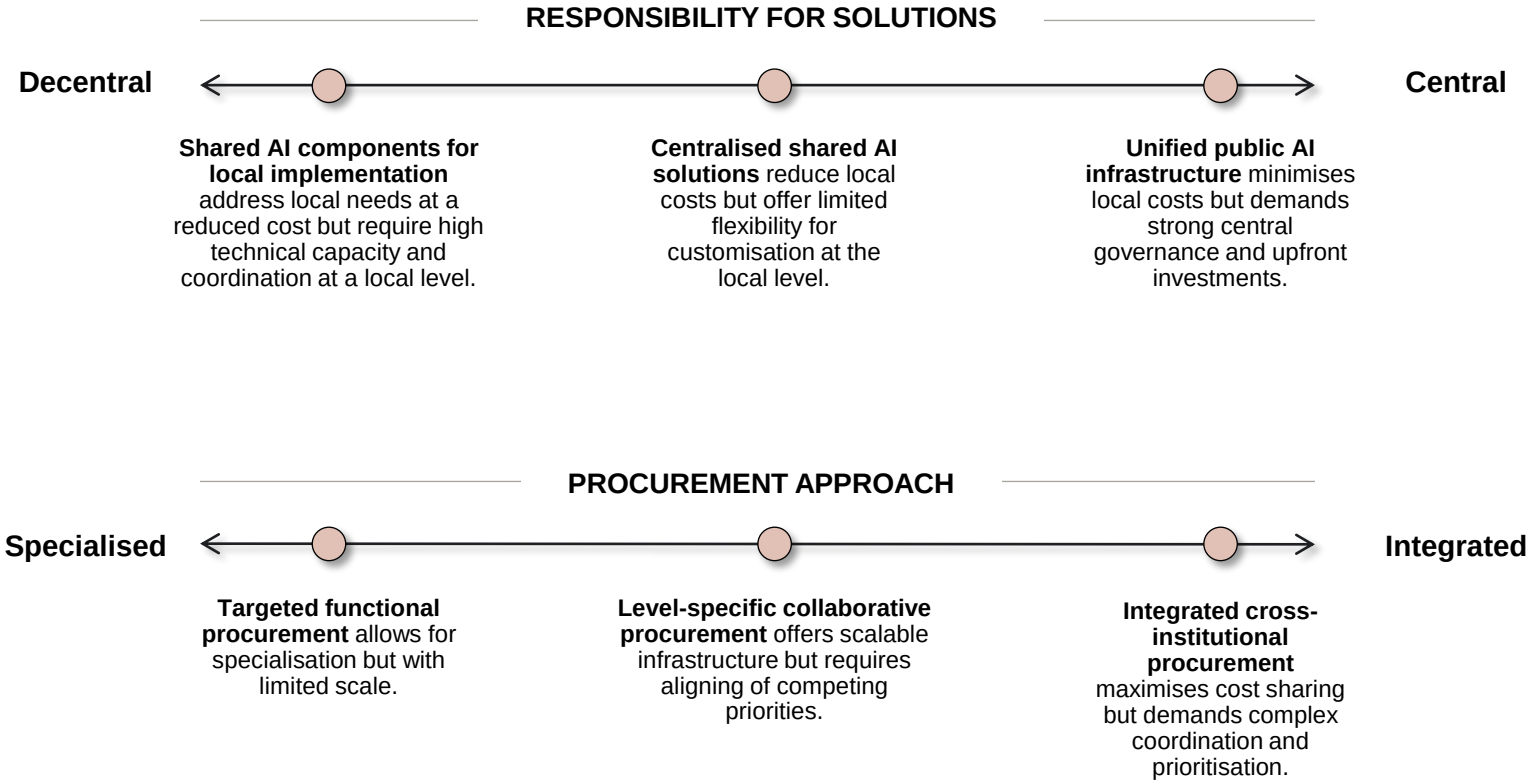
Approximately 80% of the potential lies in the top five key tasks shared across institutions. However, AI solutions must also address local needs to remain effective.

To maximise impact, public administrations should prioritise scalable solutions that avoid duplication while ensuring flexibility to meet local requirements.

The government should clearly define roles and responsibilities across levels of government to ensure alignment with users while ensuring scalability.

To address the lack of a central generative AI effort and reduce inefficiencies caused by siloed AI investments, strategic decisions should focus on cross-institutional AI procurement.

Strategic dimensions in public AI procurement



Source: Implement Economics based on Ministry of Digital Affairs (2025)

PART I

Think ‘risk-conscious’

- Low-risk and internally-oriented use cases can realise 20% of the total AI potential in public administration.

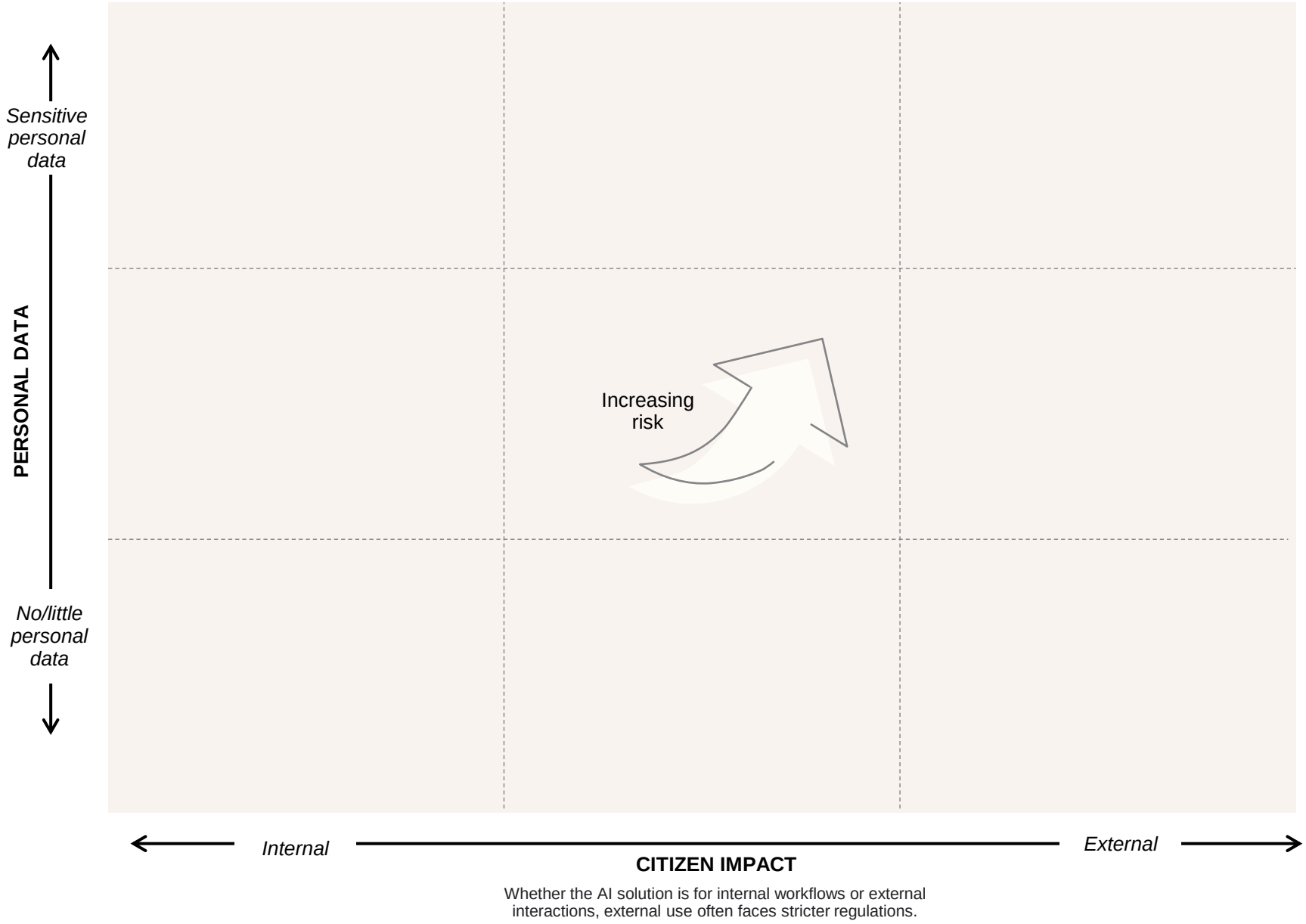
Public institutions are risk-averse and face a complex regulatory landscape

Implementing AI in public institutions is complicated by overlapping regulations like GDPR, the AI Act, and the AI Code of Practice, which can create uncertainty and inaction.

Leaders in public administration are aware of the risks. However, being overly risk-averse or failing to assess risks properly can lead to inaction.

A handful of low-risk applications of AI that do not use personal data and are internally-oriented exist. These are a good place to get started with tangible adoption of generative AI applications prior to addressing those that both use personal data and are externally-facing.

The regulatory challenges can be understood in terms of two dimensions of risk



Whether the AI solution is for internal workflows or external interactions, external use often faces stricter regulations.

Source: Implement Economics based on GDPR EU.

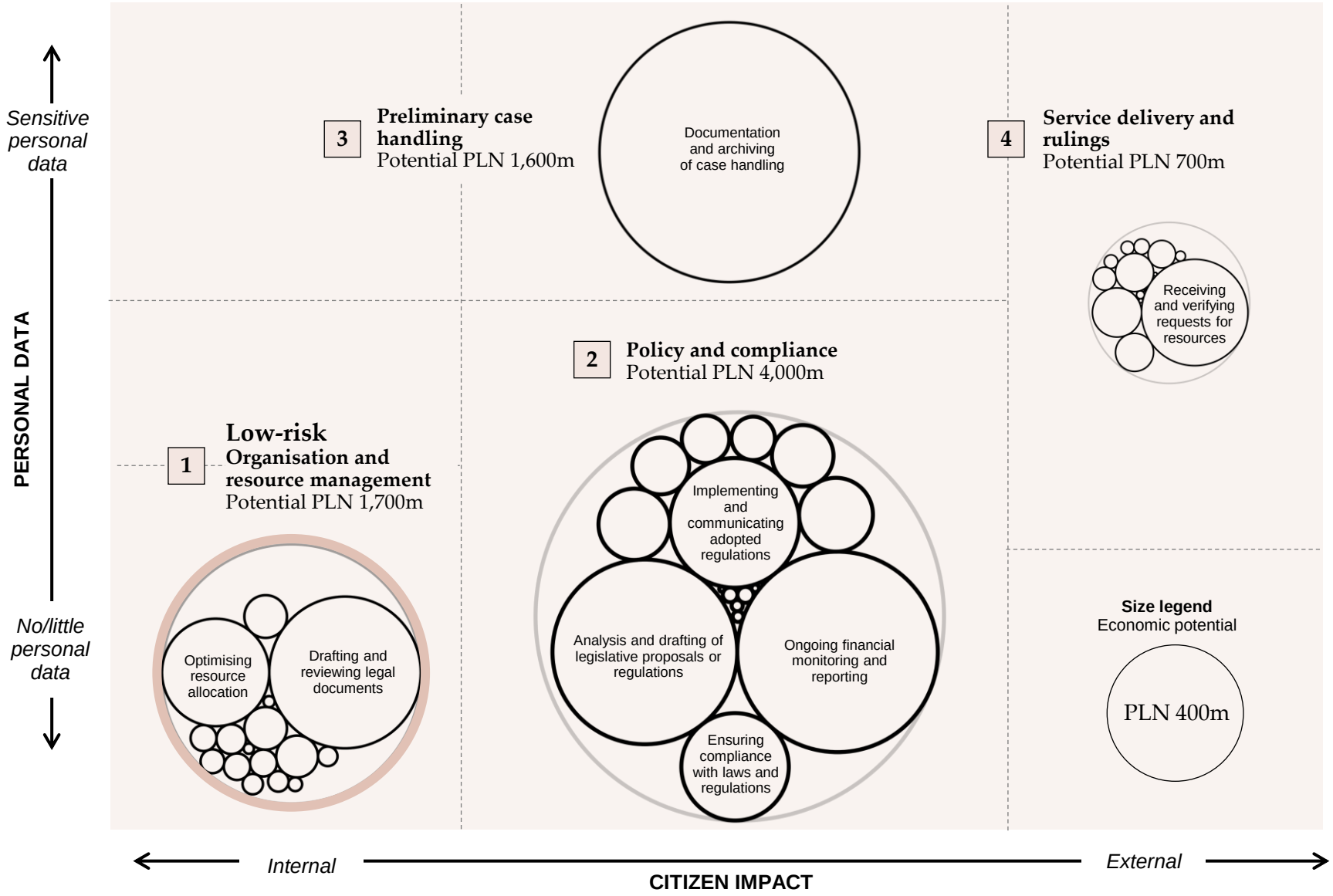
Low-risk AI applications account for 20% of the potential in public administration

The risk of key cross-cutting tasks is mapped across two dimensions:

- The degree of citizen impact (internally- vs. externally-oriented AI applications)
- The sensitivity and use of personal data

This mapping produces four clusters of potential AI applications that can be used as a roadmap towards AI adoption in public administration:

1. **Organisation and resource management** applications, which are very low-risk and should be addressed in the coming years. Our analysis shows that **PLN ~1,700 million**, equivalent to **20**% of the economic potential, lies in these low-risk, internal tasks.
2. **Policy and compliance** applications that use some personal data but are not completely externally-oriented.
3. **Preliminary case handling,** which uses a lot of sensitive data but is not directly citizen- and business-facing.
4. **Service delivery and rulings**, which are directly citizen- and business-facing and use a lot of personal data.



Note: The estimation of the potential of AI across key cross-cutting tasks is based on an augmentation of Briggs & Kodnani (2023) with granular Polish employment data and an expert-assessed, exhaustive framework of the task composition within public administration, which is mapped to the rich database of task descriptions within O*NET. Estimates are based on the most detailed employment data available for sector O in PL in 2019 at the ISCO level 4 as well as ISCO level 3 in 2023.
Source: Implement Economics based on O*NET, Briggs & Kodnani (2023), Eurostat and Labour Force Survey aggregated data prepared by Warsaw School of Economics (SGH).

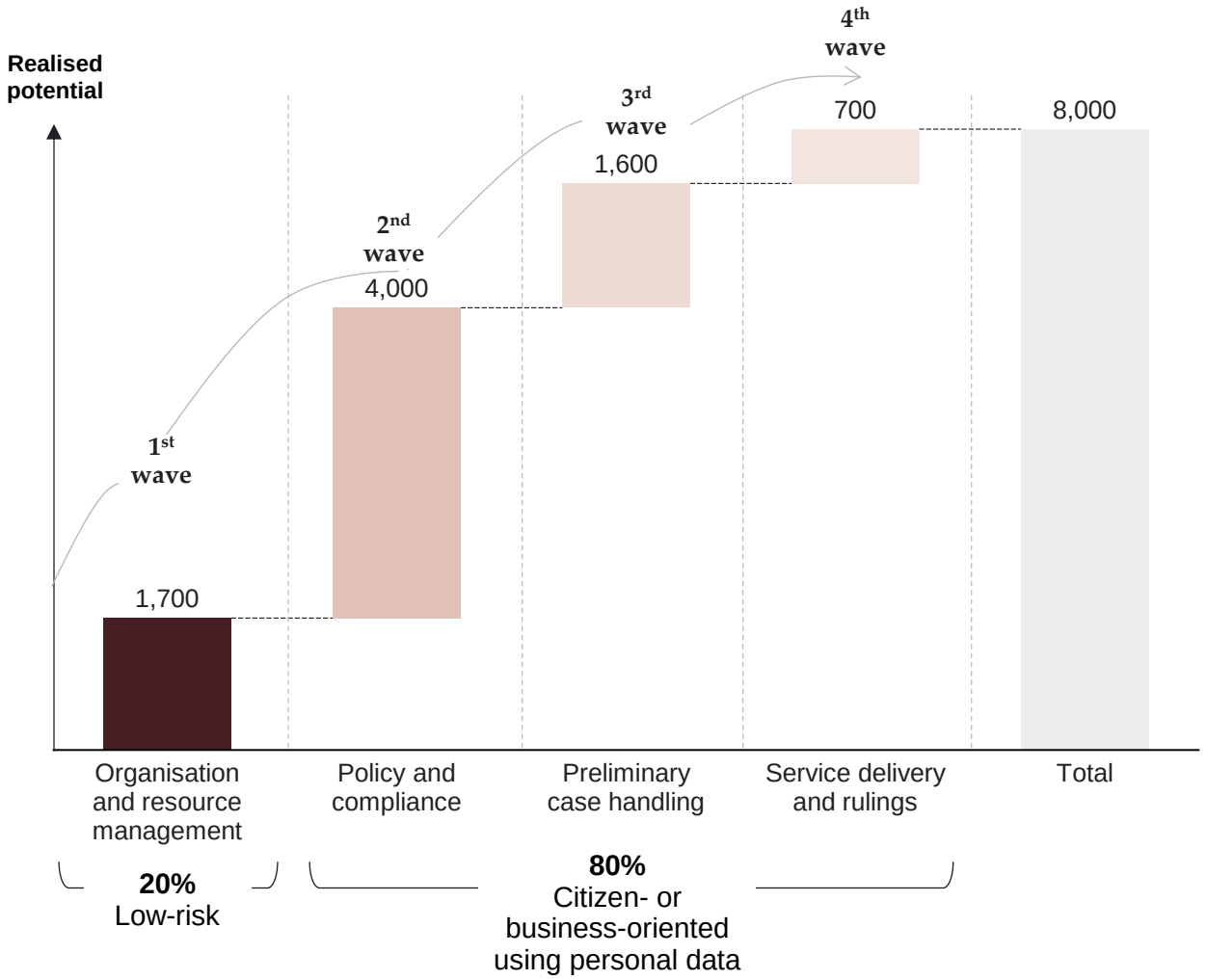
Start with the lowest risk and work up to tasks with high citizen impact

In a first wave, public authorities could consider implementing low-risk, internal AI applications that do not involve sensitive data. These initiatives offer valuable learning experiences and develop the AI capabilities needed for more complex, external-facing solutions.

Simultaneously, central government should ensure that critical enablers are in place to begin adoption of the 2nd and subsequent waves of advanced AI applications, which make up the remaining 80% of the potential.

While the greatest immediate potential for AI in public administration lies within internal administrative processes, the broader application of AI in citizen- and business-facing services holds transformative potential for the public sector as a whole.

Potential value creation from generative AI in public administration in Poland
PLN million increase at widespread adoption



Note: There is much uncertainty around the capability and adoption timeline of generative AI. The estimation of the potential of AI across key cross-cutting tasks is based on an augmentation of Briggs & Kodnani (2023) with granular Polish employment data and an expert-assessed, exhaustive framework of the task composition within public administration, which is mapped to the rich database of task descriptions within O*NET. Our estimate is the isolated potential of generative AI at widespread adoption. The estimated boost from generative AI may not be fully additive to growth projections. Estimates are based on the most detailed employment data available for sector O in PL at the ISCO level 4.
Source: Implement Economics based on O*NET, Briggs and Kodnani (2023) an Labour Force Survey aggregated data prepared by Warsaw School of Economics (WSE).

PART I

Think ‘impact-oriented’

- Use cases directly or indirectly impacting citizens or businesses constitute 80% of the AI potential in public administration

Support is key to successful implementation

AI is being used to improve government services in various ways, not least to make systems more secure and shorten review times.

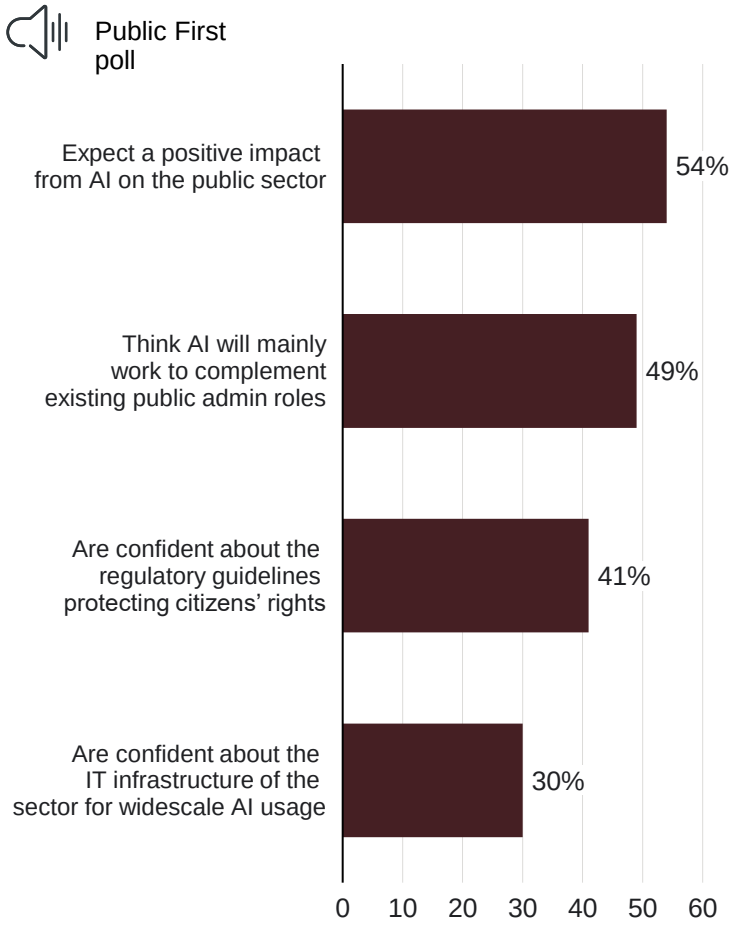
Recent survey data from Public First shows that most public administration employees from Poland expect that AI will have a positive impact on the public sector. Further, around half think that AI will complement existing roles in public administration.

However, confidence regarding the conditions for implementation is lagging. Specifically, employees are doubtful that the sector has the appropriate IT infrastructure for widescale AI usage.

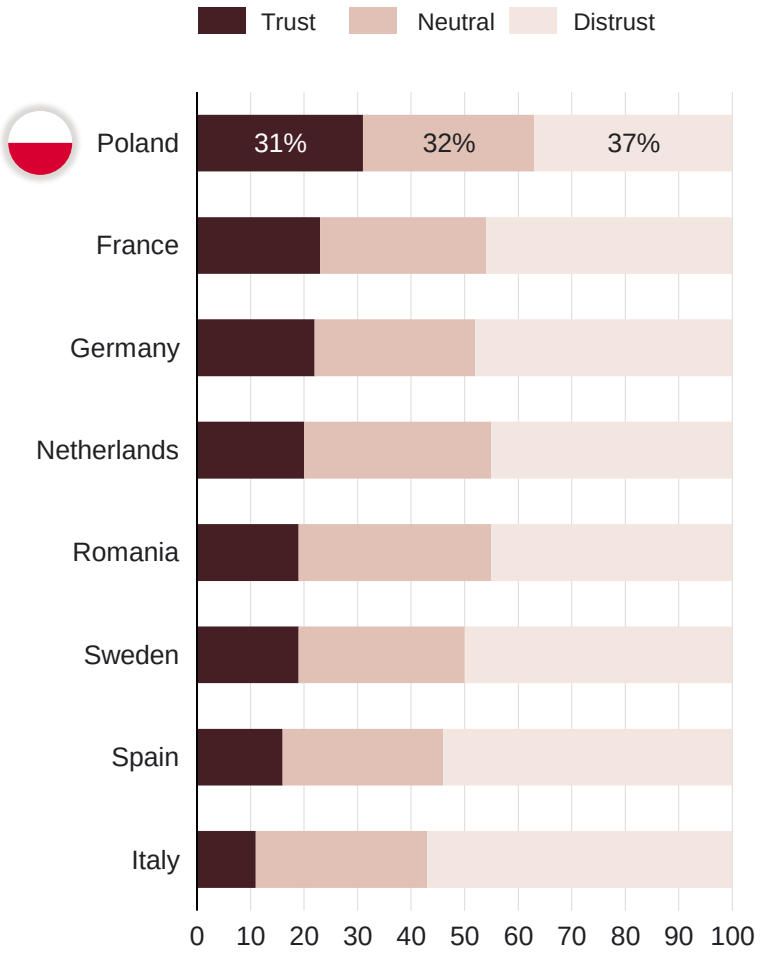
Poland has the highest level of public trust that their government will ensure that AI is in the best interest of the public among European peers.

To increase public support for AI in government, it is crucial to implement AI applications with clear benefits for citizens and employees.

Employee support in use of AI
Percentage of surveyed public administration employees (%)



Citizen trust that national governments will ensure that AI is in the best interest of the public



Note: In the right figure, 4,006 respondents were asked the question 'How much do you trust national governments and public authorities in ensuring that AI is in the best interest of the public?'.
Source: Implement Economics based on survey data from Scantamburlo et al. (2023) (right figure), and Public First on behalf of Google (left figure).

Generative AI can save time and hassle for citizens when interacting with public administration

By integrating generative AI into public administration, services can become faster, smarter and more accessible for citizens

Citizen

Examples of interactions	Examples of how generative AI can improve interactions
Applying for personal identification documents – e.g. passport, ID cars or driver's licence.	Generative AI can guide citizens through the application process with personalised instructions and automatically pre-fill forms.
Registering life events – e.g. births, deaths, marriages or changes in civil status.	Generative AI can help streamline data entry by auto-updating civil registries across systems, reducing delays for citizens.
Accessing social benefits – e.g. applying for unemployment benefits, pensions or housing assistance.	Generative AI can evaluate applications faster by analysing eligibility criteria, ensuring quicker benefit payouts.
Paying taxes – e.g. managing property and income tax payments or filing annual tax returns etc.	Generative AI can generate clear and tailored tax explanations as well as pre-filled tax forms based on historical data.
Enrolling in public education – registering children for day care, schools or applying for student loans.	Generative AI can create tailored school recommendations, efficiently analysing applications, citizen needs and optimising capacity.
Address changes or housing permits – e.g. notification of move or applying for building permits.	Generative AI can pre-fill forms and create suggestions for required documentation, reducing citizen effort.
Voting and civic participation – registering to vote, casting ballots or attending public hearings.	Generative AI can summarise election materials and help citizens register easily.
Resolving disputes or fines – e.g. appealing decisions, paying traffic tickets or addressing legal issues.	Generative AI can process and draft legal documents, reducing wait times for citizens seeking resolution.

Generative AI can simplify businesses interactions with public administration

By assisting in documentation, reporting and application processes, generative AI can save time and money for businesses when interacting with public administration

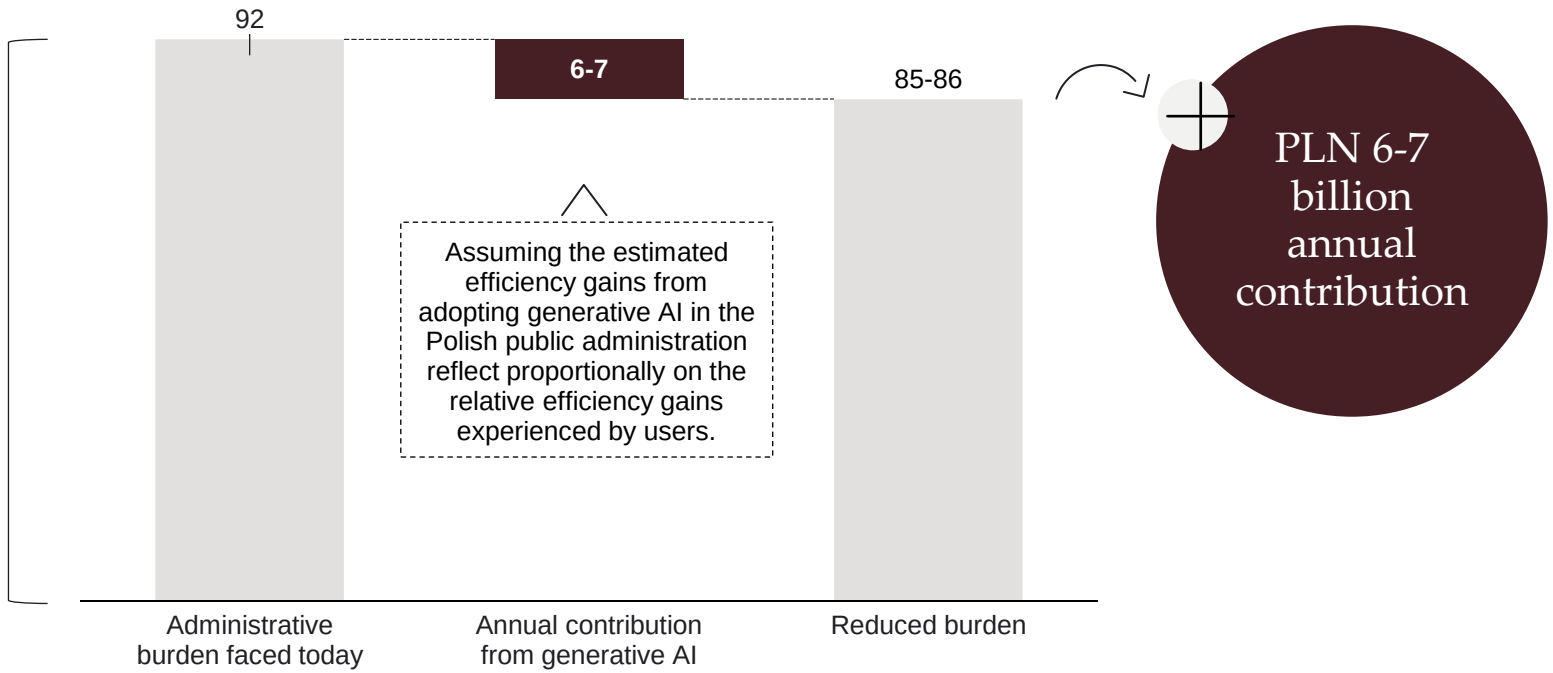
Businesses

Examples of interactions	Examples of how generative AI can improve interactions
Applying for government contracts – e.g. submitting tender offers or meeting compliance criteria.	Generative AI can provide tailored templates and compliance checklists to streamline bid preparation.
Obtaining or renewing permits – e.g. applying for operation licences, construction permits, or health and safety certifications.	Generative AI can act as virtual assistant, guiding users through form completion.
Applying for financial support – e.g. grants, subsidies, innovation funding, or support programmes.	Generative AI can streamline funding applications by suggesting tailored inputs and ensuring alignment with programme criteria.
Claiming financial rebates – e.g. claiming tax refunds or rebates.	Generative AI can analyse receipts and flag eligible expenses, helping businesses maximise their rebate potential.
Filing regulatory compliance reports – e.g. submitting required reports for business operations or audits.	Generative AI can automate report creation, transforming raw data into polished submissions.
Collaboration with employment services – e.g. accessing pool of jobseekers and participation in subsidised upskilling programmes.	Generative AI can bridge the gap between businesses and jobseekers by matching skills to needs.
Navigating pre-qualification processes – e.g. completing steps to demonstrate eligibility for specific programmes or services.	Generative AI can simplify eligibility checks, offering step-by-step guidance and pre-screening data for quick approvals.
Submitting applications for certifications – e.g. applying for professional, compliance, or operational certifications.	Generative AI can help businesses assemble the perfect submission, identifying key documents and formatting tips.

Generative AI can reduce Polish companies' administrative burden by PLN 6-7 billion

Polish companies are facing a significant administrative burden, defined as the effort required to supply mandatory information under national and EU laws and regulations. Generative AI has the potential to significantly reduce this burden.

Administrative burden faced by Polish companies
PLN billion at widespread adoption



2.9%
of GDP
estimated administrative burden for Polish companies

Perspective

Beyond administrative cost savings, generative AI in public administration is expected to bring additional business impacts, such as:

- Freeing up resources for other value creating tasks.
- More efficient allocation of resources.
- Increasing the speed and flexibility of company processes.

Note: The administrative burden faced by Polish companies has been adjusted from 2011 prices to 2023 levels. There is much uncertainty around the capability and adoption timeline of generative AI. The estimation of the potential of AI across key cross-cutting tasks is based on an augmentation of Briggs & Kodnani (2023) with granular Polish employment data and an expert-assessed, exhaustive framework of the task composition within public administration, which is mapped to the rich database of task descriptions within O*NET. Our estimate is the isolated potential of generative AI at widespread adoption. The estimated boost from generative AI may not be fully additive to projections. The administrative burden estimate is based on a 2011 OECD analysis. While subsequent efforts – such as Poland's administrative simplification plan – may have reduced some of this burden, new EU regulations particularly in the tech sector have likely offset these gains.
Source: Implement Economics based on Eurostat, OECD and own calculations.

Case: Poland's Tax Authority deploys AI solution Kaspro to reduce processing times and improve accessibility

The challenge

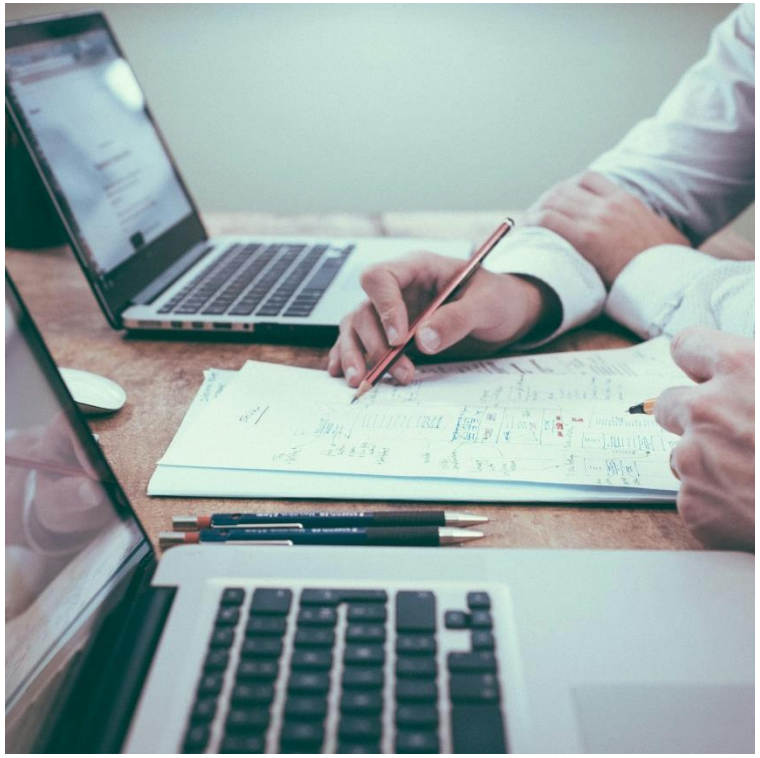
- Long queues and delayed responses
- Staff tied up with repetitive tasks
- No support outside office hours

The solution

- Kaspro reviews tax filings and answers common queries
- Identifies errors, risks, and patterns in real time
- Integrated with online services for fast, automated guidance 24/7

The impact

- Processing time cut by ~30%
- Used by tens of thousands; benefits millions
- Round-the-clock access to tax help



Note: Most of the implemented use cases are supported by other initiatives, an important consideration when evaluating their overall impact.
Source: Implement Economics based on Polish Ministry of Finance

Case: Luxembourg's Guichet.lu now leverages an AI-powered assistant to cut workload and deliver faster, more personalised online citizen services

The challenge

- Complex administrative procedures
- Forms require manual filling by citizens
- Long waiting times for help

The solution

- A generative AI tool was deployed on Guichet.lu and MyGuichet.lu
- The system auto-generates personalised responses
- The solution pre-fills forms and supports multiple languages

The impact

- Enhanced citizen satisfaction through faster, more accurate, and user-friendly online services
- A reduced administrative workload has significantly shortened processing times, enabling public officers to focus on exceptional cases

Note: Most of the implemented use cases are supported by other initiatives, an important consideration when evaluating their overall impact.
Source: Implement Economics based on Guichet.lu

Case: In Belgium, 92% of users are satisfied with the service from an AI-powered recruitment solution that improves job matching and saves time for citizens

The challenge

- Skills gap between workforce and employers' needs.
- Traditional recruitment process is time-consuming and resource-intensive.
- Lack of personalisation and customisation in job suggestions.

The solution

- AI generated suggestions for upskilling and training.
- Map out where there is the highest probability of finding work.
- Extensive personalisation and pre-filling of questionnaires.

The impact

- 92% of citizens are satisfied with their contact with the job centre.
- 80% reduction in time spent on job-match questionnaires.

Note: Most of the implemented use cases are supported by other initiatives, an important consideration when evaluating their overall impact.
Sources: Implement Economics based on VDAB annual report (2023) and Superlinear and VDAB reinvent orientation test with Artificial Intelligence.

Case: Digital case handling has reduced waiting time on building permits for companies and citizens by more than 40% in Denmark's Municipality of Copenhagen

The challenge

- Long waiting times on building permits.
- Complex legislation.
- Rising stock of unhandled cases.

The solution

- An AI assistant is used to navigate complex legislation.
- Documents drafted for case handlers using generative AI.
- Robots automatically execute parts of the case handling.

The impact

- Waiting time reduced by 4.5 months (more than 40%).
- Stock of unhandled cases reduced more than 70%.
- Released time spent on guiding applicants in the most complex cases.

Note: Most of the implemented use cases are supported by other initiatives, an important consideration when evaluating their overall impact.
Source: Implement Economics based on Københavns Kommune (2023).

Case: Estonia has a bold vision for generative AI, and currently citizens and companies can use Bürokratt, a network of virtual assistants providing six different services across eight institutions

The ambition

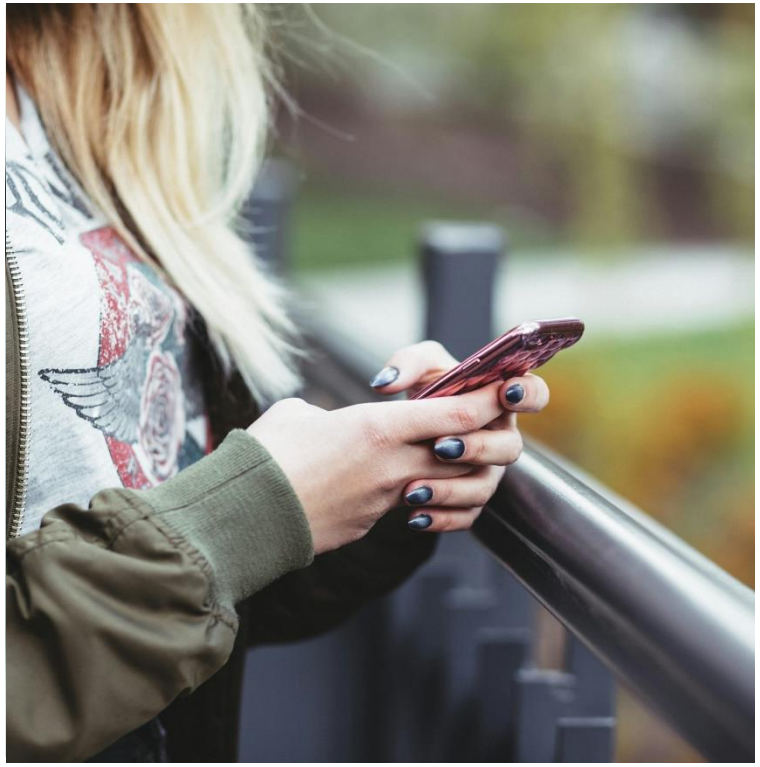
- 90% of citizen requests should be handled by virtual assistants in 2026.
- 70% reduction of citizens' administrative burden by 2030.
- Digital government should be cloud-native by 2030.

The solution

- A network of virtual assistants built on a scalable architecture.
- Modular development based on continuous citizen feedback.
- Data security and privacy by design using a common data infrastructure.

The impact

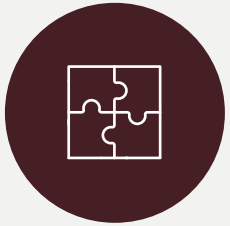
- Six different services across eight institutions.
- Multichannel virtual assistants can be accessed via voice and text.
- Private developers can integrate and extend Bürokratt's capabilities.



Note: Most of the implemented use cases are supported by other initiatives, an important consideration when evaluating their overall impact.
Source: Implement Economics based on Estonia's Ministry of Economic Affairs and Communications (2024).

Summary of part I

In designing a new national AI strategy, the government of Poland should think…



Task-based

Prioritise cross-cutting tasks to achieve economies of scale while addressing local needs. Implement a cross-institutional AI procurement strategy with clear roles and responsibilities across government levels to ensure user alignment and scalability.

Risk-conscious

Start with low-risk, internal AI solutions, and gradually move to more user-sensitive, external AI applications to realise the bulk of the potential.

Impact-oriented

Concentrate on AI applications with real user impacts, i.e. solutions that reduce the time and hassle of citizens' and businesses' interactions with public administration.

Create cloud clarity

Make smart procurement choices

PART II

Getting the critical enablers in place

Public administrations need to address critical barriers to enable the opportunity of generative AI

To benefit from state-of-the-art AI solutions, public administration relies on…

Smart regulations

AI adoption at scale requires simplified rules and harmonised implementation

- **Simpler, light, faster.** Simplified rules and legal certainty are key enablers of AI adoption, as highlighted by the Competitiveness Compass.
- **Ethical guidelines.** AI systems must adhere to principles of transparency, fairness, and accountability to maintain public trust.
- **Interoperability standards.** Harmonised rules across jurisdictions ensure AI solutions can be implemented seamlessly at scale.
- **Focused on outputs.** Regulation should target AI outputs, ensuring quality while preventing harm.

Data

AI needs data and the ability to combine data from different sources

- **High-quality data is essential** for developing and running high-performing AI models.
- **Workflow data must be accessible** to support employees in their daily operations.
- **Data-sharing frameworks.** Mechanisms should facilitate safe and efficient data exchange across government entities and private partners.

Infrastructure and tools

AI builds on large models, tailored tools, computing power and data storage

- **Computing resources.** Cloud services providing computing power and storage capacity to develop and run AI models.
- **Advanced AI models.** Large language models that are released at regular intervals, for example Gemini from Google or Open AI's GPTs.
- **AI platforms and tools.** These are often developed from the major language models. These enable public administrations to integrate AI into their processes and services.
- **AI applications.** Ready-to-use cloud solutions delivered via platforms.

Skills

AI works with humans, and public employees need the skills to work effectively with AI

- **Broad AI competencies** are essential for civil servants to understand when and how to use AI. From a management perspective, effective change management is crucial for successful adoption.
- **Specialised expertise and cross-disciplinary teamwork.** Building capacity for AI roles such as data scientists and ML engineers while fostering collaboration between IT, legal, and policy to ensure effective AI integration.
- **IT procurement competence.** Strong capacity of procurement professionals to navigate the complexities of AI and multi-cloud technologies.

…yet two key barriers must be overcome to enable effective generative AI adoption in public administration:

Regulations create uncertainties around data usage and cloud computing

Specialised IT requirements lead to a risk of vendor lock-in

These two barriers are addressed in the next pages.

Source: Implement Economics based on the European AI Commission (2024) and Draghi (2024).

PART II

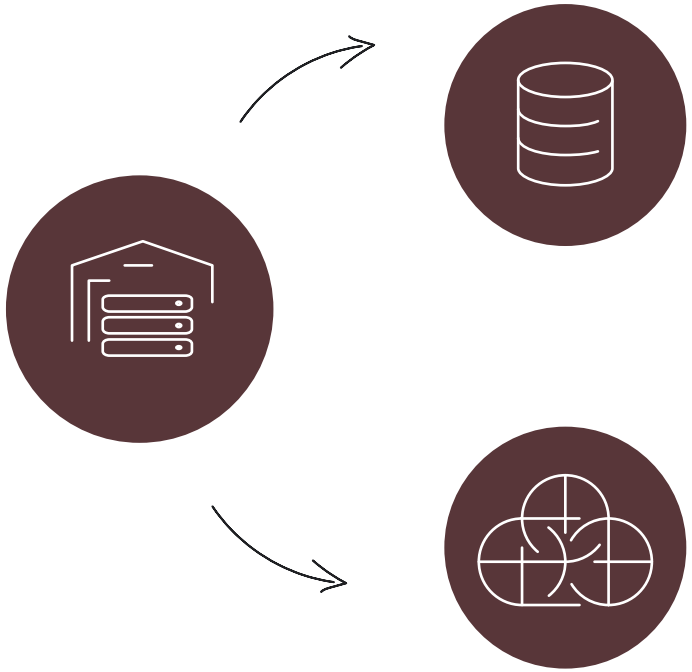
Create cloud clarity

- Privacy and security concerns can lead to misconceived preference for on-prem solutions.

Public authorities face uncertainty in AI adoption due to conflicting EU data and cloud regulations

The EU enforces strict regulations to safeguard privacy and protect individual rights in AI and data usage…

EU regulations, such as GDPR and the AI Act, are designed to safeguard citizens' rights by enforcing strict compliance on personal data protection and ethical AI use, ensuring transparency, accountability, and fairness in digital systems.



…however, the complexity of these rules creates uncertainty, hindering public authorities from adopting AI solutions

Lack of clarity around data usage. The lack of clear guidelines on data use and inter-agency sharing creates hesitation, delaying innovation, and contributes to a fragmented AI landscape.

Uncertainty around cloud-based solutions. Fragmented and complex rules with unclear interpretations make it difficult for authorities to know whether widely used cloud infrastructure meets legal obligations. This lack of clarity often results in hesitation, costly delays, and the adoption of suboptimal solutions.

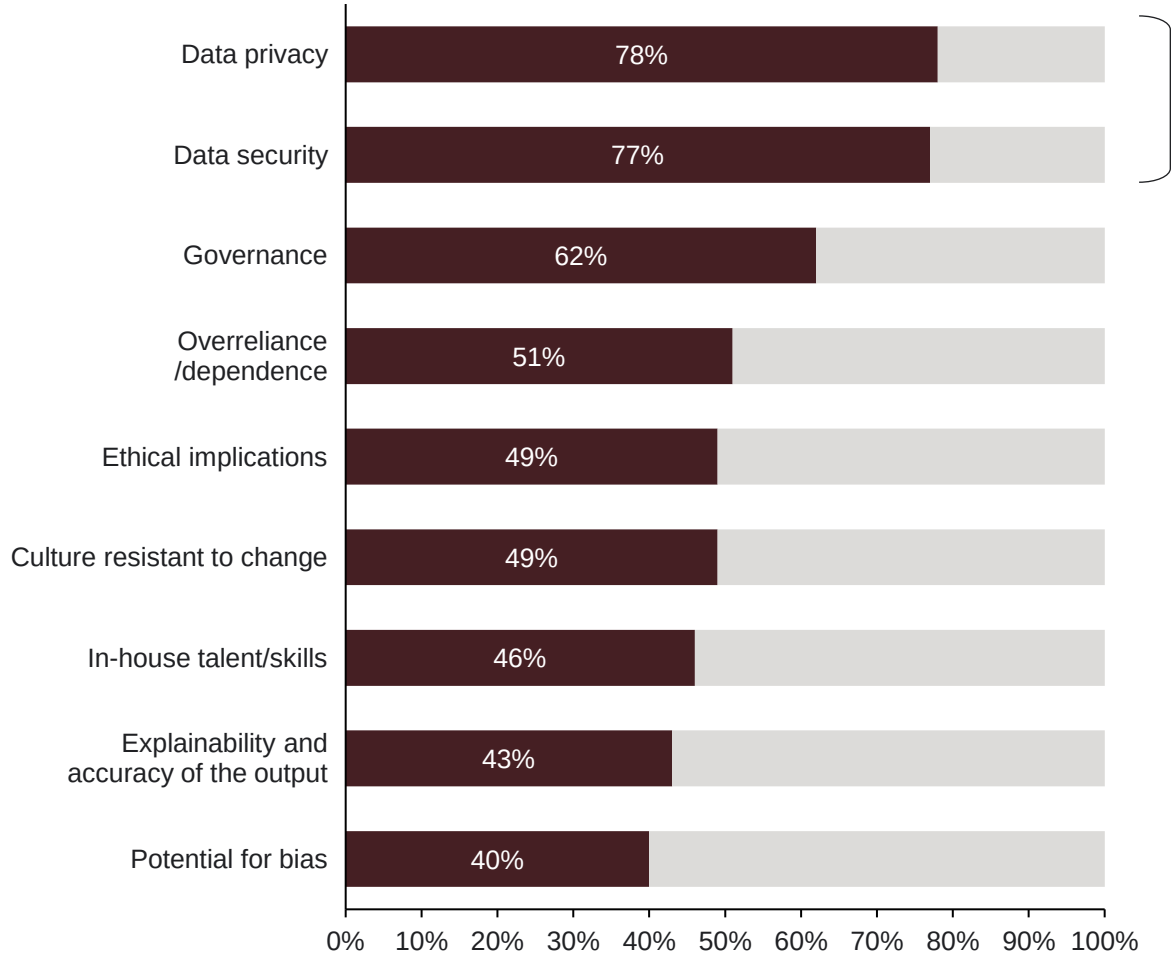
Source: Implement Economics based on European Commission (2024).

Authorities hesitate to adopt AI tools due to concerns over data privacy and security

European organisations are concerned about leveraging cloud-based AI tools and sharing data across multiple stakeholders due to stringent data privacy and security regulations.

However, sovereign cloud solutions like Google Cloud can address these challenges by ensuring data, operational, and software sovereignty, enabling secure data collaboration while maintaining compliance with European standards.

What are your concerns regarding the usage of generative AI in your organisation?
% of respondents among government leaders globally



This highlights the critical role of AI infrastructure and tools in scaling generative AI solutions and emphasises the need for proactive strategies to ensure responsible use.

Note: The survey was conducted by Coleman Parkes from February to April 2024, targeting 1,600 decision-makers in generative AI strategy or data analytics across government organisations and other key sectors globally. The results shown specifically reflect responses from government organisation respondents.
Source: Implement Economics based on SAS Institute (2024).

A secure and competitive cloud infrastructure is crucial for AI use at scale

AI infrastructure for the public sector must be:

- **Efficiently scalable** to accommodate new solutions and fluctuations in demand.
- **Adaptable** to integrate emerging leading technologies and capable of operating on a multi-cloud level.
- **Secure,** ensuring data privacy and leveraging best-in-class cybersecurity capabilities to protect against the evolving threat landscape.
- **Interoperable**, enabling seamless collaboration and data exchange between authorities.

Given the high computational and specialised hardware requirements for state-of-the-art AI, adapting on-premises supercomputers is both prohibitively expensive and inefficient.

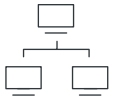
Widespread AI adoption in public administration depends on a secure, robust cloud infrastructure that meets these unique demands. Therefore, the most cost-efficient and scalable solutions are best sourced from specialised suppliers.

To achieve scalability, adaptability, security and interoperability, the AI infrastructure must provide:

Compute capacity

Leading AI models

Data storage and pipelines



Network and connectivity

AI tools and applications

Security measures and monitoring

Poland is expanding its use of cloud services to support AI in public administration. The Cloud in Government Services guide outlines how authorities can use national infrastructure like the Government Cloud via the ZUCH platform.

While national solutions are central, relying solely on private setups and proprietary models such as the PLLuM limits scalability and risks becoming outdated. A flexible multi-cloud model is needed to foster innovation, though assessing risks tied to non-domestic providers remains a challenge.

Source: Implement Economics based on Chmura (2021)

Establish clear regulatory guidance and procurement practices for data sharing and using cloud-based tools to unlock the AI potential

Poland's national Government Cloud supports sovereign cloud adoption, risk-based data sharing, and interoperability, but may not be able to provide the increased cloud capacity and flexibility required to support generative AI consistently across all levels of government. Enhancing central coordination, enabling multi-cloud solutions, and establishing clear standards should ensure digital sovereignty, business continuation, and data protection in the public procurement and adoption of cloud-based tools and infrastructure.

Expand the centralised cloud strategy. Ensure relevant cloud services are available across all levels of government, including local and regional authorities, to avoid fragmentation and uneven capabilities. Centralised procurement guidance will ensure that security and compliance standards are universally applied.

Ensure flexibility and resilience. Central government should adopt flexible procurement strategies to avoid overreliance on any single cloud provider. It should define robust contract terms – including exit strategies, data portability, encryption, and audit rights – to protect critical public services. Monitoring subscription and licence costs is key to maintain resilience and prevents paying for unnecessary functionalities.

Safeguard digital sovereignty, interoperability, and resilience. The current Government Cloud Service Policies should enforce robust standards for data exchange and interoperability, ensuring that critical public services remain continuously available. By clarifying data localisation requirements while encouraging cross-border collaboration, Poland can safeguard sovereignty, foster innovation, and protect national interests.

Conduct and update risk assessments. Mitigate risks through government-wide risk assessments, evaluating sovereignty, service continuity, data protection, cost, and innovation. Regularly update assessments for all cloud services, adapting to evolving risks.

PART II

Make smart procurement choices

To adopt AI at scale, the Polish government needs to re-invent the way they procure digital services to ensure flexibility, innovation and competition

Vendor lock-in prevents Polish public administration from rolling out AI tools

Vendor lock-in is holding back public institutions across the EU, creating hidden costs, delaying new AI projects and making it hard to switch suppliers as needs change.

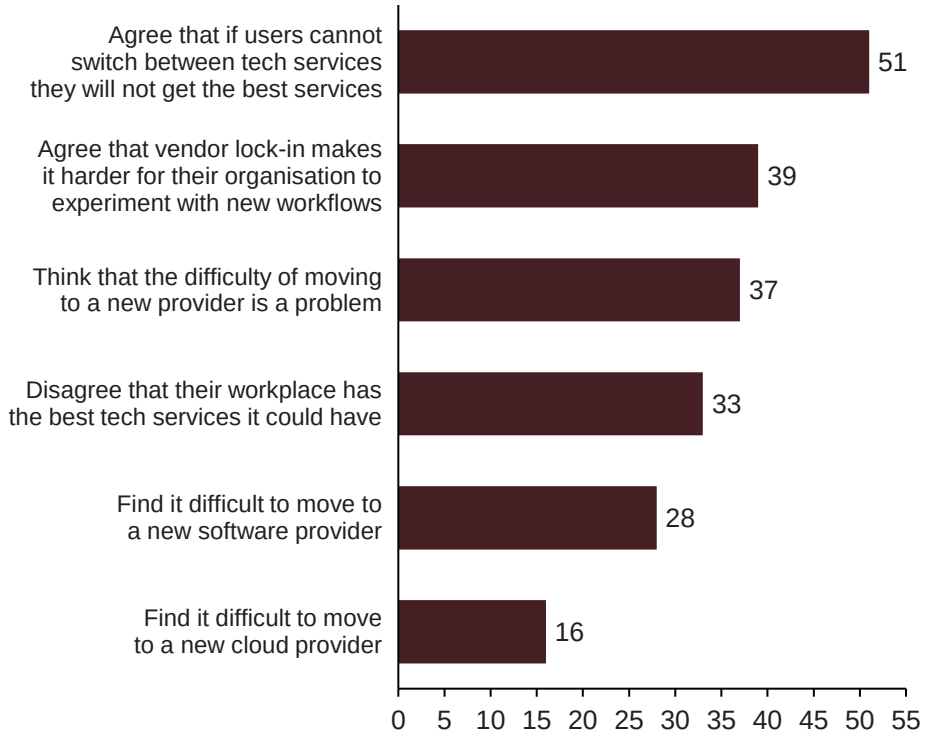
In Poland, half of surveyed administration workers say restrictive software-licensing terms block their ability to roll out AI tools.

Further, users agree that vendor lock-in is preventing them from accessing best-in-class services.

These constraints translate into budget overruns, stalled digital initiatives and reduced interoperability with emerging platforms.

The presence of vendor lock-in in Polish public administration

Percentage of surveyed public administration employees (%)



50%

50% of surveyed public administration employees say concerns about **certain software licensing practices are preventing** their institution from expanding its use of AI.

> […] technological or vendor lock-in can be a particular risk in ICT procurement. Public organisations find themselves unintentionally 'locked' into particular ICT solutions due to failures to make tender documentation sufficiently flexible and to allow for future vendor turnover.
>
> **The OECD** in Managing risks in the public procurement of goods, services and infrastructure

Note: Survey includes 307 Polish public administration employees.
Source: Implement Economics based on survey data from Public First on behalf of Google, and the European Commission

Restrictive licensing terms hold back vendor switching

Public institutions frequently use specialised IT systems designed for specific needs, which limits their flexibility and makes adopting new technologies like generative AI difficult. Vendor lock-in occurs when institutions rely on a few suppliers, restricting adaptability and causing high costs due to technology dependence.

Restrictive contractual terms make cloud switching and multi-cloud adoption more costly or even unviable. Several studies have examined this:

In a recent survey of +1,200 IT decision-makers across five European countries, Savanta, a data intelligence company, finds evidence of restrictive licensing and other activities that inhibit market competition.

> *Licensing issues in the public sector are also rife, with 6 in 10 organisations that have considered switching saying that a key reason why they didn't change IaaS providers was due to existing licensing terms.*

The Competition & Markets Authority in the UK *provisionally* found that restrictive licensing **harms competition** in cloud services.

In the EU, the Commission is currently considering investigating restrictive software licensing.

> *We have also provisionally found that there are technical barriers and commercial barriers in the form of egress fees to switching and multi-cloud that harm competition in cloud services in the UK by locking customers into their initial choice of provider which may not reflect their evolving needs.*

In a recent study, the German think tank ZnT finds that restrictive licensing imposes a significant financial burden, with transferring existing software licences to third-party cloud services potentially costing up to 25% of annual expenditure.

> *… restrictive licensing practices by dominant software and cloud providers are creating a financial burden, limiting choice, and hindering innovation.*

60%

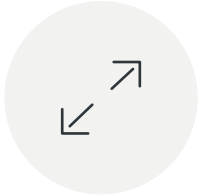
of surveyed IT decision-makers in the public sector cited licensing restrictions as a key barrier to switching.

Note: Survey results for Social Market Foundation, Savanta Survey (respondents comprise N=1,241 IT decision-makers across UK, France, Germany, Netherlands and Spain – here summarised as representative for the EU27). The reports mentioned here further provide insightful estimates on the financial burden caused by vendor lock-in. However, these calculations rely on a number of assumptions, making them unfit for direct conclusions.
Source: Implement Economics based on Jenny, F. (2023), CMA (2025), SMF (2024), ZNT (2025) and Savanta (2024).

Ensure flexibility and hybrid capabilities to meet evolving needs in public procurement

Governments must prioritise flexible procurement strategies to mitigate the risk of overreliance on a single provider, emphasising open data standards and interoperability to ensure long-term competition and adaptability. An AI procurement strategy should ensure that vendors meets key criteria, including:

Guarantee data security and compliance, ensuring adherence to national and EU laws (e.g. GDPR) while maintaining strict security protocols.



Offer scalable and flexible infrastructure, capable of adjusting resources based on the changing needs of public administration while ensuring reliable performance.

Align with public sector ethical standards, ensuring AI solutions promote fairness, transparency, and mitigate risks like algorithmic bias.

Provide clear service level agreements with accountability, ensuring defined performance metrics, uptime guarantees, and fast response times for addressing service failures**.**

Ensure interoperability with existing systems, enabling seamless integration with current government IT infrastructure to reduce disruption and implementation costs.

Provide carbon footprint data using state-of-the-art data on the hour-by-hour carbon free energy for the operational emissions of the data centre.

Summary of part II

To address critical enablers, the government of Poland should…

Create cloud clarity

Develop a clear framework for secure and adaptable cloud adoption by centralising strategies and improving oversight.

Regularly update risk assessments to ensure innovation, transparency, and resilience.

Make smart procurement choices

Optimise AI and cloud procurement by ensuring flexibility, scalability, and alignment with open standards to avoid vendor lock-in.

Strengthen the government's position by monitoring subscription costs, purchasing only necessary functionalities, and enforcing ethical, secure, and sustainable practices in contracts with vendors.

PART III

A bold vision for the government of Poland

Set ambitious targets and make an actionable strategy with clear milestones

Poland's Draft State Digitalisation Strategy (2025–2035) proposes coordinated governance for AI adoption in public administration by identifying national institutions to lead ecosystem development and monitor AI-related risks. It outlines the introduction of ethical and fundamental-rights impact assessment frameworks to ensure the safe and transparent use of AI systems.

Once the strategy has been formally adopted, turning its proposals into tangible outcomes will require strong cross-government coordination.

Establishing a dedicated public-sector AI task force could provide the necessary structure to align use cases across authorities and operationalise the strategy's ambitions. This task force should develop common frameworks for procurement, regulation, and competence development – ensuring consistent implementation and accelerating the responsible uptake of AI across public administration.

High-level roadmap for capturing the AI opportunity within public administration

1 — Establish an AI task force and address the five key barriers

1–2 years

- Adopt a task-based framework and approach to the implementation strategy.
- Establish clear key performance indicators (KPIs).
- Establish clear regulatory guidance and procurement practices for cloud-based tools.
- Prioritise flexible procurement strategies to avoid overreliance on a single provider, focusing on open data standards and interoperability to ensure long-term competition and adaptability.

2 — Use risk and impact measures to prioritise

3–5 years

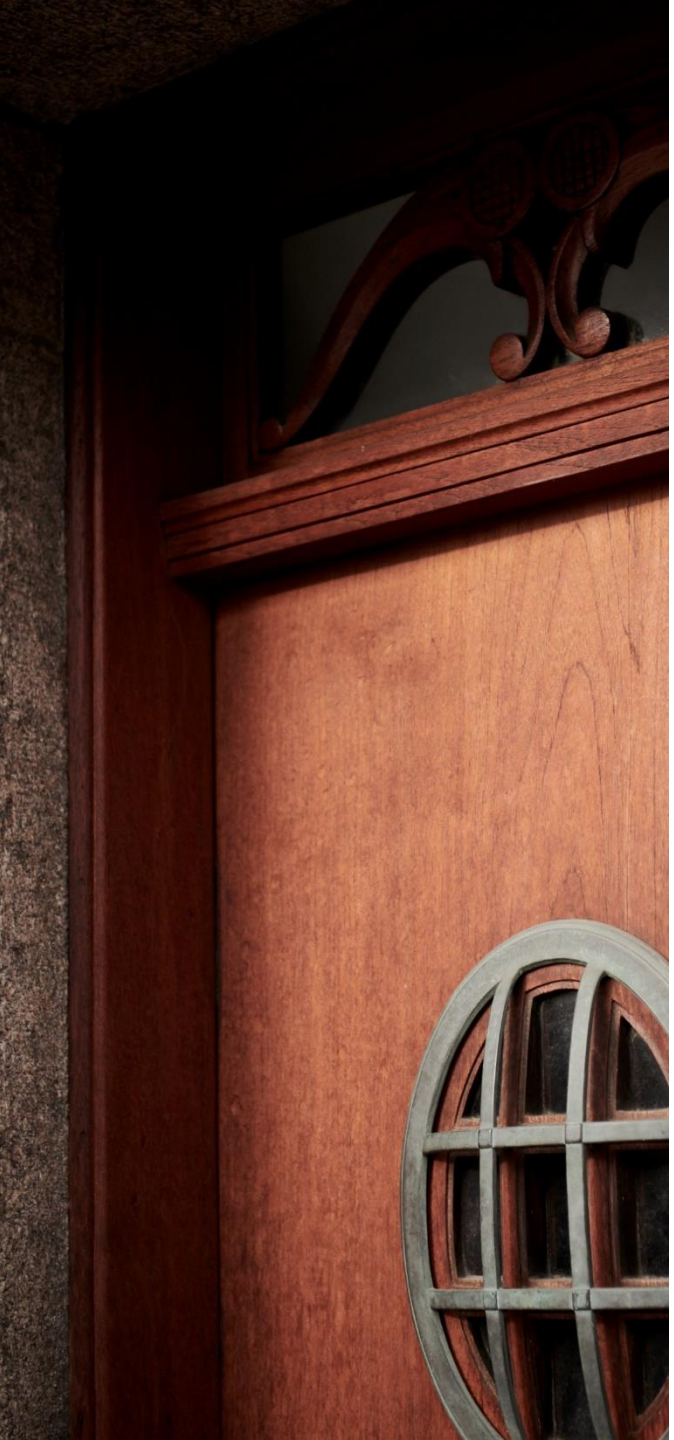
- Allocate funds toward executable and scalable applications.
- Implement scalable solutions and anchor them with cross-cutting tasks.
- Set targets for services with high citizen and business impact.
- Ensure critical enablers are in place.

3 — Scale successful applications

7–10 years

- Scale successful applications across tasks, making sure knowledge and experience are shared between institutions.
- Ensure public administration employees retain key skills to fully capture the augmenting effects of AI.

Source: Implement Economics based on Ministry of Digital Affairs



Appendix

Modelling the potential impacts of AI on public administration

Overview of the methodological approach to calculating the exposure to and productivity impact from generative AI

1. **Automation potential of work activities:** The exposure to generative AI is calculated by breaking down the automation potential of unique task descriptions and their associated general work activity in the occupational task database O*NET. In line with Briggs and Kodnani (2023), the methodology assumes that 13 of 41 overall work activities (e.g. getting information, performing administrative activities etc.) can potentially be automated by generative AI, and in the base scenario we assume that tasks with a difficulty up to level 4 on the O*NET-defined scale can be automated.

2. **Mapping automation potential of work activities to occupations:** First, the 41 work activities for 900 US occupations are mapped using importance-average activities for each occupation, providing an estimate of the share of each occupation's total workload that AI has the potential to automate. Secondly, this number is projected from US to European occupations through the European Commission's crosswalk between ESCO and O*NET and finally compiled into aggregated occupations (using the sub-occupation employment). This leaves us with the three shares that describe how big a share of the work activities for each occupation is expected to see: No automation, AI complement and Likely replacement. For public administration, we map detailed ISCO level 4 employment data in NACE sector O in Poland to the above-mentioned taxonomy.

3. **Quantifying productivity gains in public administration:** Generative AI is assumed to affect the productivity of the work activities for each occupation as follows: The 'No automation' share of work activities is assumed to be unaffected by generative AI. 'AI complement' work activities experience a productivity boost from automation. 'Likely replacement' is the share of work activities in a sector that is expected to be entirely automated/replaced. These workers are expected to be re-employed in slightly less productive jobs. The three effects are calculated in public administration in Poland and scaled by the sector's value added to determine the full productivity potential/generation of new jobs from generative AI. Only part of the total long-run productivity increases from generative AI is expected to materialise in the economy during the initial ten-year period of technology adoption following an S-curve adoption trajectory.

4. **Mapping the potential to cross-cutting tasks:** The calculated potential is distributed across cross-cutting tasks within public administration by mapping detailed work activities to an expert-assessed and exhaustive framework that encompasses the work carried out within this sector.

- The method in this paper is in line with the methodology developed by Briggs and Kodnani (2023) in 'The Potentially Large Effects of Artificial Intelligence on Economic Growth'.
- The estimation of the potential of AI across key cross-cutting tasks (step 4) is based on an augmentation of Briggs & Kodnani (2023) with Polish employment data and an expert-assessed, exhaustive framework of the task composition within public administration, which is mapped to the rich database of task descriptions within O*NET.

Note: Methodology is based on Briggs and Kodnani (2023).
Source: Implement Economics based on the European Commission, Eurostat, O*Net and Briggs and Kodnani (2023).

Authors
- Bodil Emilie Hovmand
- Marcus Lohmann
- Alexander Jagd Oure
- Nikolaj Tranholm-Mikkelsen
- Sofie Tram Pedersen
- Sissel Andersen
- Martin H. Thelle

Disclaimer

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