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The AI opportunity for eGovernment in Belgium

The opportunity for the Belgian Government to move from believer to leader

April 2025

Generative AI has significant potential to enhance productivity in public administration in Belgium, creating 10% more value for money, equivalent to an annual contribution of EUR 4 billion.

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

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

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
- Lack of public support
- Regulatory uncertainty
- Vendor lock-in risk

Make the AI potential executable…

Think ‘task-based’

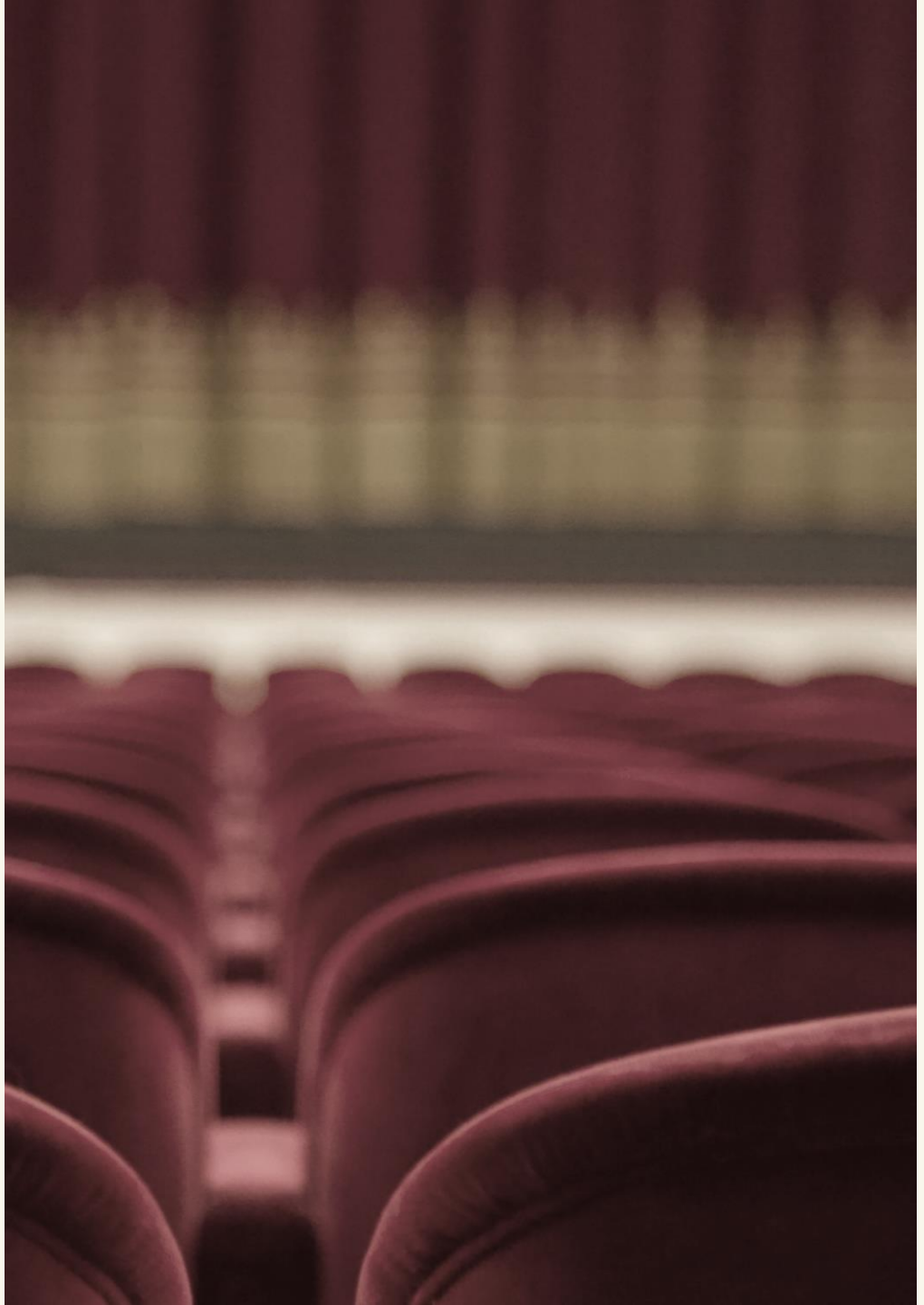
Cross-cutting tasks underpin most jobs in public administration. The top five tasks in Belgium represent 75% of the potential. However, fragmented decision-making leads to many pilots without scalable impact. The government should focus on key cross-cutting tasks to achieve economies of scale while addressing 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 total potential. The fear of breaking rules in a complex regulatory environment is slowing AI adoption. Therefore, the Belgian government should begin with the low-risk applications and gradually move to user-sensitive, externally-facing applications to unlock most of the potential.

Think ‘impact-oriented’

The implementation of AI solutions should be motivated by the needs of citizens and businesses, improving the 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 Belgium by EUR 0.7-0.8 billion.



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.

Get critical enablers in place…

Create cloud clarity

A secure and competitive cloud infrastructure is crucial for cost-efficiently implementing advanced AI at scale. However, misconceptions about on-premise systems prevent public institutions from adopting cloud infrastructure. The government should establish a framework for secure and compliant cloud adoption, enabling public actors to innovate while safeguarding transparency and sovereignty.

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. Across five European countries, 60% of surveyed IT decision makers in the public sector cited licensing restrictions as a key barrier to switching.

Implement an ambitious AI strategy

To fully harness the AI potential in the public sector, Belgium should set ambitious targets and create an actionable strategy with clear milestones. The Belgian National convergence plan for the development of AI aims to fully exploit the opportunities of AI. The government should adopt an AI strategy that includes risk and impact measures for prioritising and scaling successful applications.

Introduction

A large and untapped potential

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

> *If Belgium and Europe want to become front-runners in the global economy, we need to promote the development and application of AI in our country.*
>
> **Belgian Federal Public Service Policy and Support (BOSA)**
> in National convergence plan for the development of AI

AI can enhance the efficiency and quality of public services benefitting citizens, businesses and employees

Enhance public services

Ensure social and economic benefits by encouraging continuous skills development in AI, building a robust and prosperous AI economy and optimising public services through AI.

BOSA in AI4Belgium

Increase efficiency

AI applications have the potential to increase the efficiency and effectiveness of service delivery, but also to support government decision-making with the simulation of different policy options.

BOSA in AI: Perception and adoption in Belgian Public Administrations

Free up time for higher-value tasks

The adoption of AI in the public sector could bring benefits such as personalised services for citizens, fewer repetitive tasks for civil servants (liberating time for more tasks that have more value as listening, creating, improving services,…)

BOSA in AI: Perception and adoption in Belgian Public Administrations

Improve decision-making

The adoption of AI in the public sector could bring benefits such as […] detection of harmful content on the internet, support decision-making processes where a high number of data and variables are involved […]

BOSA in AI: Perception and adoption in Belgian Public Administrations

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

Source: Implement Economics based on BOSA (2022).

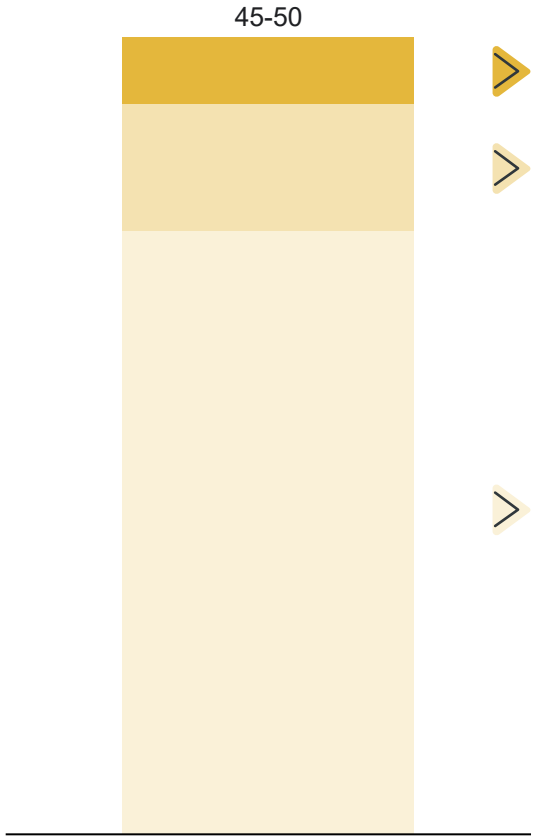
The Belgian government can get 10% more value for money by adopting generative AI

Generative AI presents a significant economic opportunity for Belgium, potentially contributing 9% (EUR 45-50 billion) of GDP annually in ten years.

In public administration, generative AI can significantly enhance productivity and drive cost-efficiency. Widespread adoption of generative AI in public administration can create EUR 4 billion in gross value added with the same resources. The potential is equivalent to 1.3% of public expenditure.

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

Economic potential of generative AI in Belgium
EUR billion at widespread adoption



10% more value for money, equivalent to **EUR 4 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 (EUR 317.6 billion). "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 organizations, voluntary associations, or businesses providing similar services.
Source: Implement Economics based on Eurostat, National Bank of Belgium, O*NET, Briggs and Kodnani (2023).

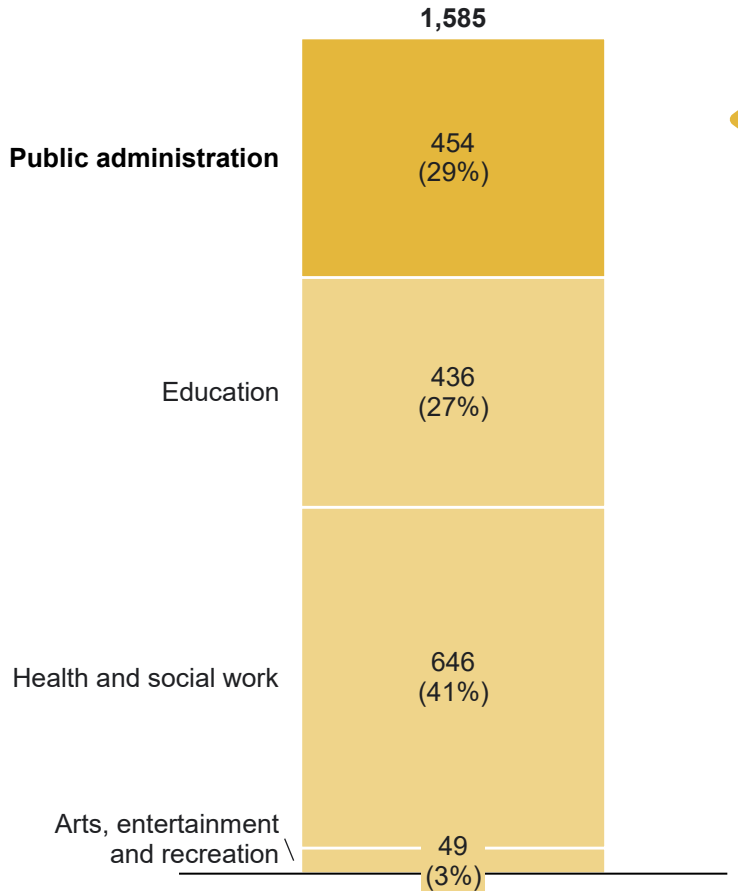
Public administration is the backbone of the public sector in Belgium

The public sector is an important part of the Belgian economy and society. Public expenditure is equivalent to 53% of Belgium's GDP. Further, the public sector accounts for around 31% of all jobs and delivers services benefiting citizens and businesses.

Public administration makes up 29% of public sector jobs. Their work has characteristics that allow 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 backbone of the public sector.

Employment in the public sector in Belgium
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.

Most public administration jobs can be complemented by generative AI

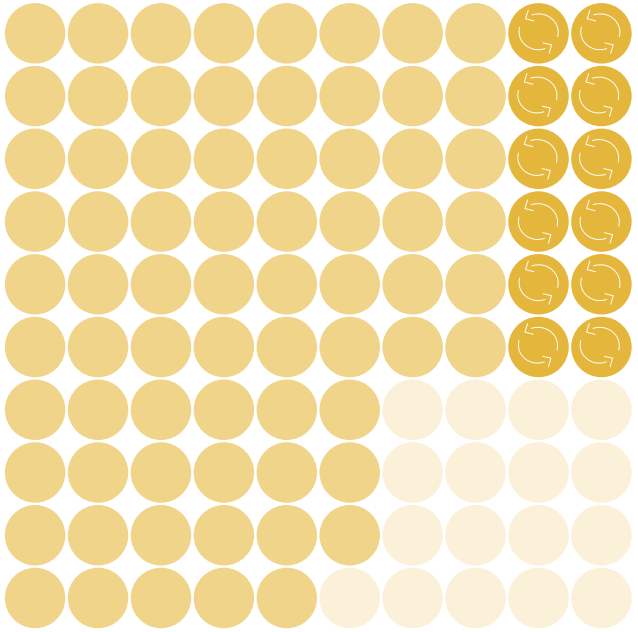
Exposure to automation by generative AI in public administration in Belgium
% of jobs in public administration

Partial or full displacement | AI as a complement | No automation

71% or ~320,000 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.



12% or ~55,000 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, with tools such as citizen facing chatbots handling general inquiries automatically, for example. 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.

17% or ~75,000 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.

It is essential to have human agency at the centre of AI adoption to maximise the societal benefits. Civil servants must be upskilled to understand and use the new tools. Although the National convergence plan for the development of AI outlines initiatives for upskilling and reskilling, further efforts are needed to address the specific challenges and opportunities of generative AI.

Source: Implement Economics based on Eurostat, Briggs & Kodnani (2023) and BOSA.

The government strategy for AI in Belgium needs revision

Belgium ranks 16th in the European DESI Ranking as of 2022 and scores 82 out of 100 in digital public services for citizens as of 2024. This is reflected in Belgium's score of 67 in the AIPI.

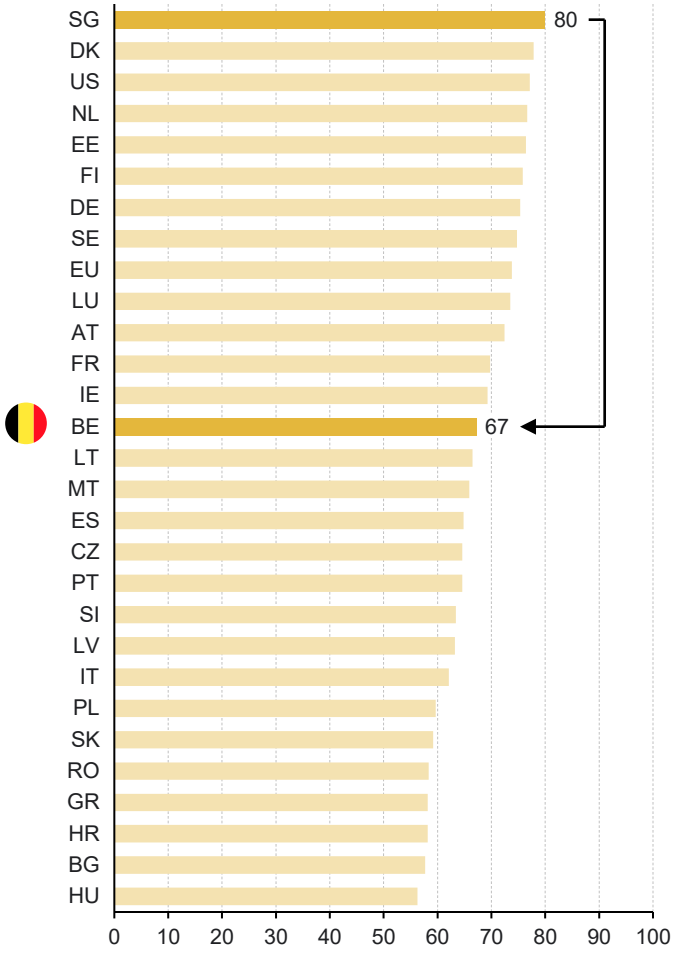
Further, the country is outranked by peers such as France, Netherlands and Germany in the Tortoise Government Strategy index. The index measures the depth of commitment from national governments to AI, based on investigating spending commitments and national strategies.

Belgium should revise their government strategy to get AI ready.

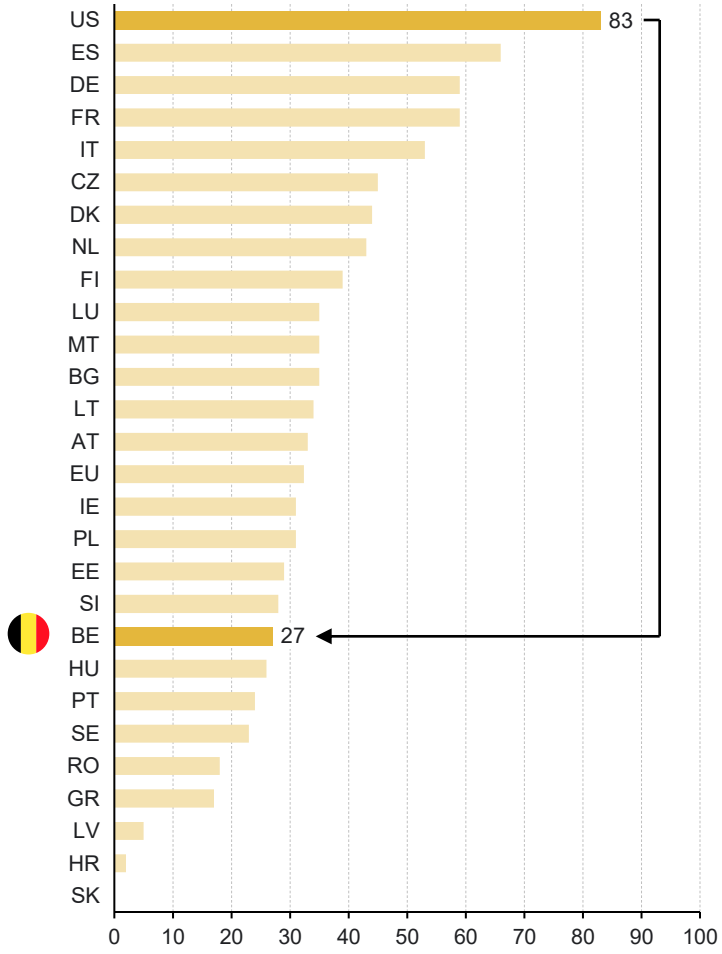
13%

of surveyed Belgian workers have **used generative AI tools** in their jobs.

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



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

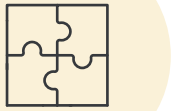


Note: The AI Preparedness Index (AIPI) assesses the level of AI preparedness based on a rich set of mass-cut-structural indicators that cover the countries' digital infrastructure, human capital and labour market policies, innovation and economic integration, and regulation and ethics.
Source: Implement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

Five key barriers hamper progress in Belgium

This report draws on research from Belgium, leading Nordic countries, and the European Commission to identify five key barriers to be overcome for AI adoption to be successful:

PART I
Making the potential executable



Fragmented decision-making

Fragmented decision-making in government leads to many pilot projects without achieving scalable results

Fear of breaking the rules

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

Lack of public support

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

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 EU Commission (2024), BOSA (2022) and the Swedish AI Commission (2024).

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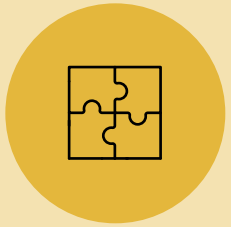


Think ‘task-based’

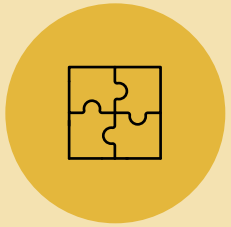
Think ‘risk-conscious’

Think ‘impact-oriented’

PART I

Making the potential executable

In designing a new national AI strategy, the Belgian government should think **task-based, risk-conscious** and **impact-oriented** to realise the potential of generative AI in public administration.



PART I

Think ‘task-based’

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

> *[…] if the public sector uses AI, it can help to: provide advice and services that better meet the needs of citizens; improve the quality of processes and services […]*
>
> **Belgian Federal Public Service Policy and Support (BOSA)**
> in National convergence plan for the development of AI

Fragmented decision-making across government levels leads to numerous pilots with no scalable impact

Despite the great opportunity to benefit from AI use in public administration, fragmented decision-making presents three main challenges:

Fragmented governance and isolated investments

Belgium's decentralised governance model can lead to fragmented decision-making and uncoordinated investments, as public funding is split across multiple regional entities (Flanders, Wallonia, Brussels, the French-speaking community and the German-speaking community), each with its own focus and priorities. This can prevent authorities from leveraging shared successes and scaling AI solutions across the public sector.

Absence of common infrastructure

The lack of shared infrastructure for AI development can result in authorities choosing isolated solutions that are often incompatible with broader systems. This fragmentation is further exacerbated by the absence of open standards and APIs, which could otherwise facilitate interoperability between solutions. Without a unified platform for AI experimentation and deployment, collaboration and resource optimisation remain unattainable.

Barriers to data sharing

Belgium has extensive data resources, yet significant legal and technical barriers hinder their accessibility and exchange. GDPR, national privacy laws, and inconsistencies in systems and standards create obstacles to data sharing between authorities. As a result, authorities struggle to harness data effectively for AI-driven innovation.

Source: Implement Economics based on BOSA (2022), State of Belgian Tech Report 2024, LSE Consulting and Public Health, European Commission, Belgium's Data Procetion Authority.

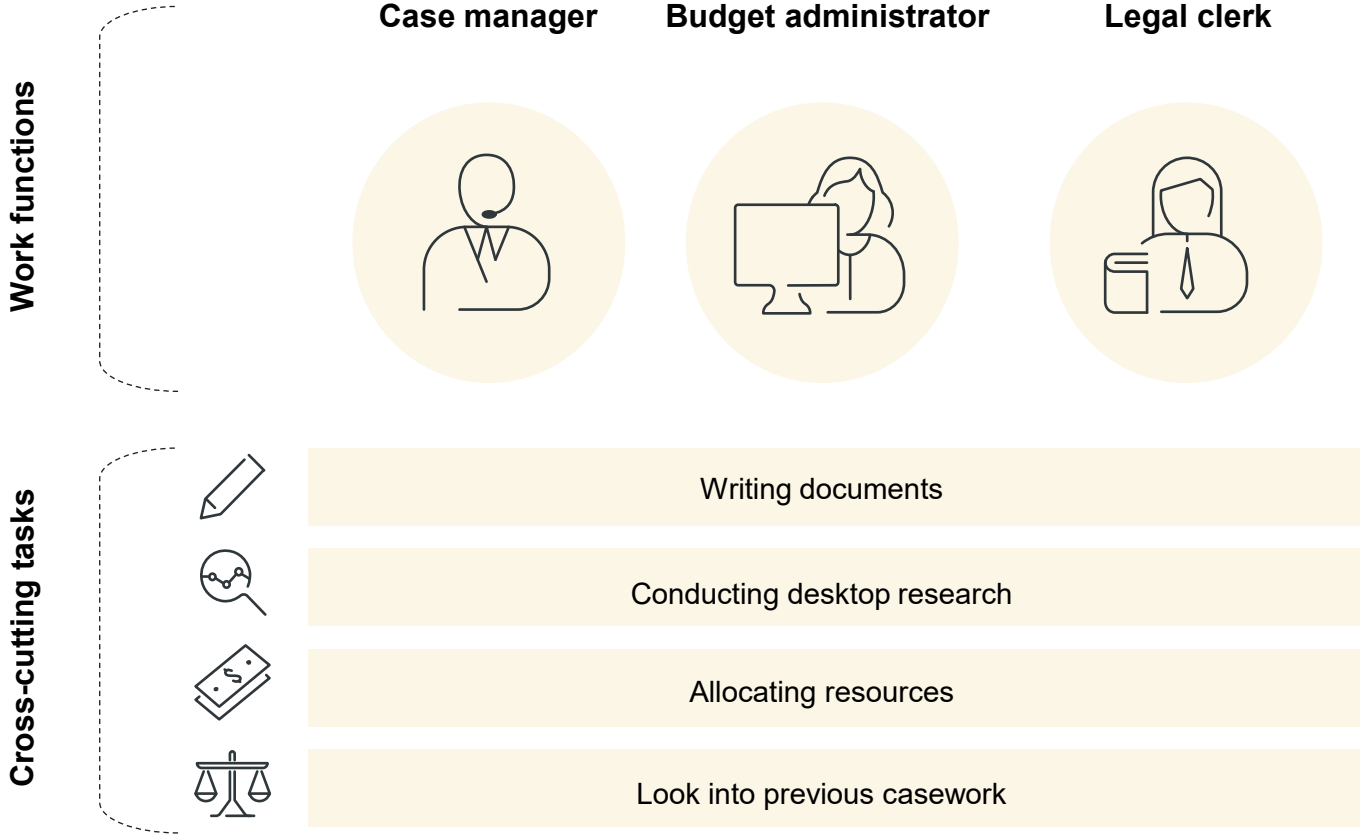
Cross-cutting tasks form the basis of most public administration jobs

The public sector is the largest employer in Belgium, with public administration employees making up around a quarter 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.

Examples of work functions and cross-cutting tasks in public administration



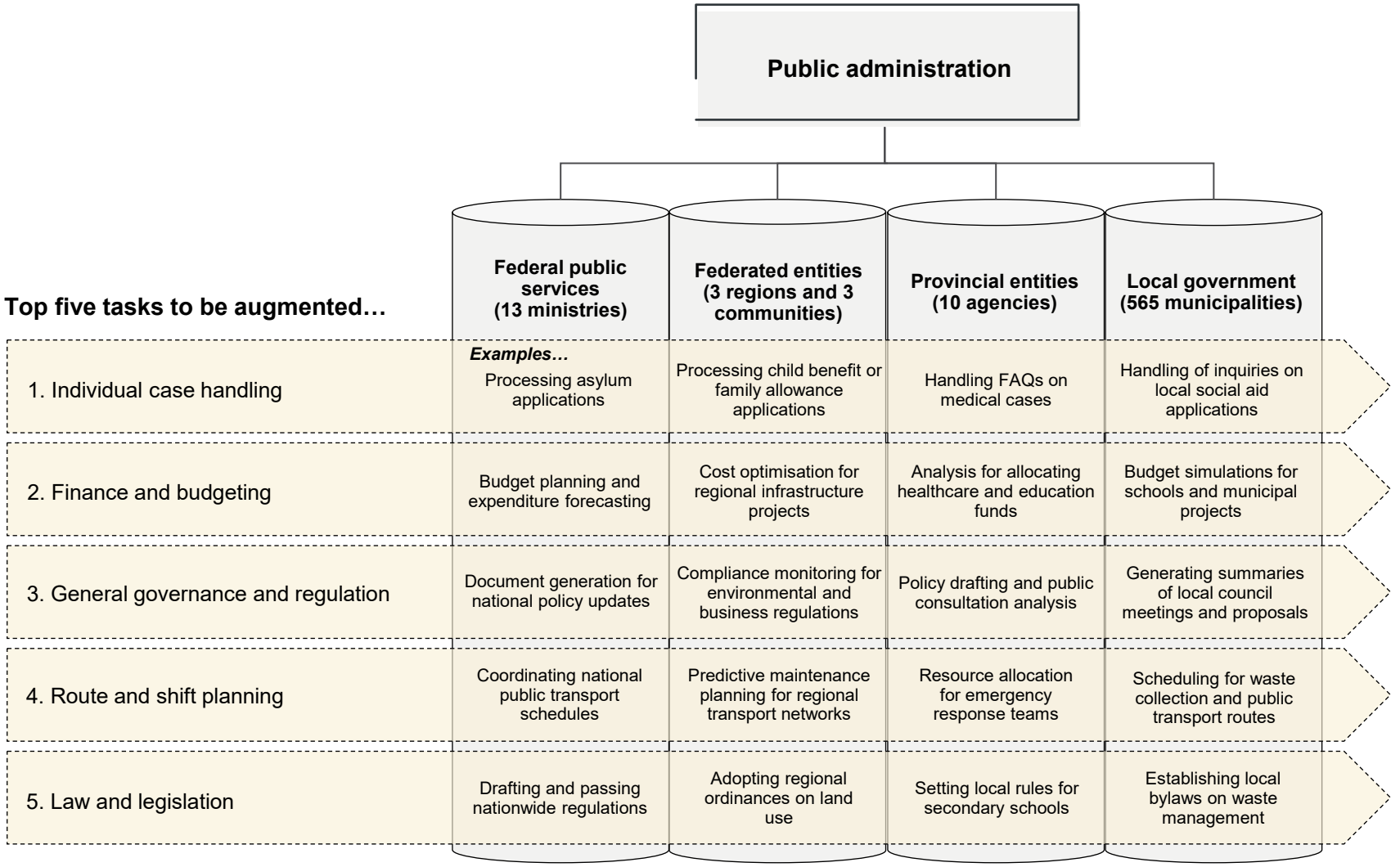
Source: Implement Economics based on Statistics Belgium, Eurostat, and O*NET.

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

The Belgian public sector consists of the federal state, regions and communities. Unique to Belgium is its language- and culture-linked regions comprising Flanders, Wallonia and the Brussels-Capital Region. Further, Belgium is made up of 10 provinces and 565 municipalities.

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.

Structure of the public administration in Belgium



Source: Implement Economics based on Belgium.be and O*NET.

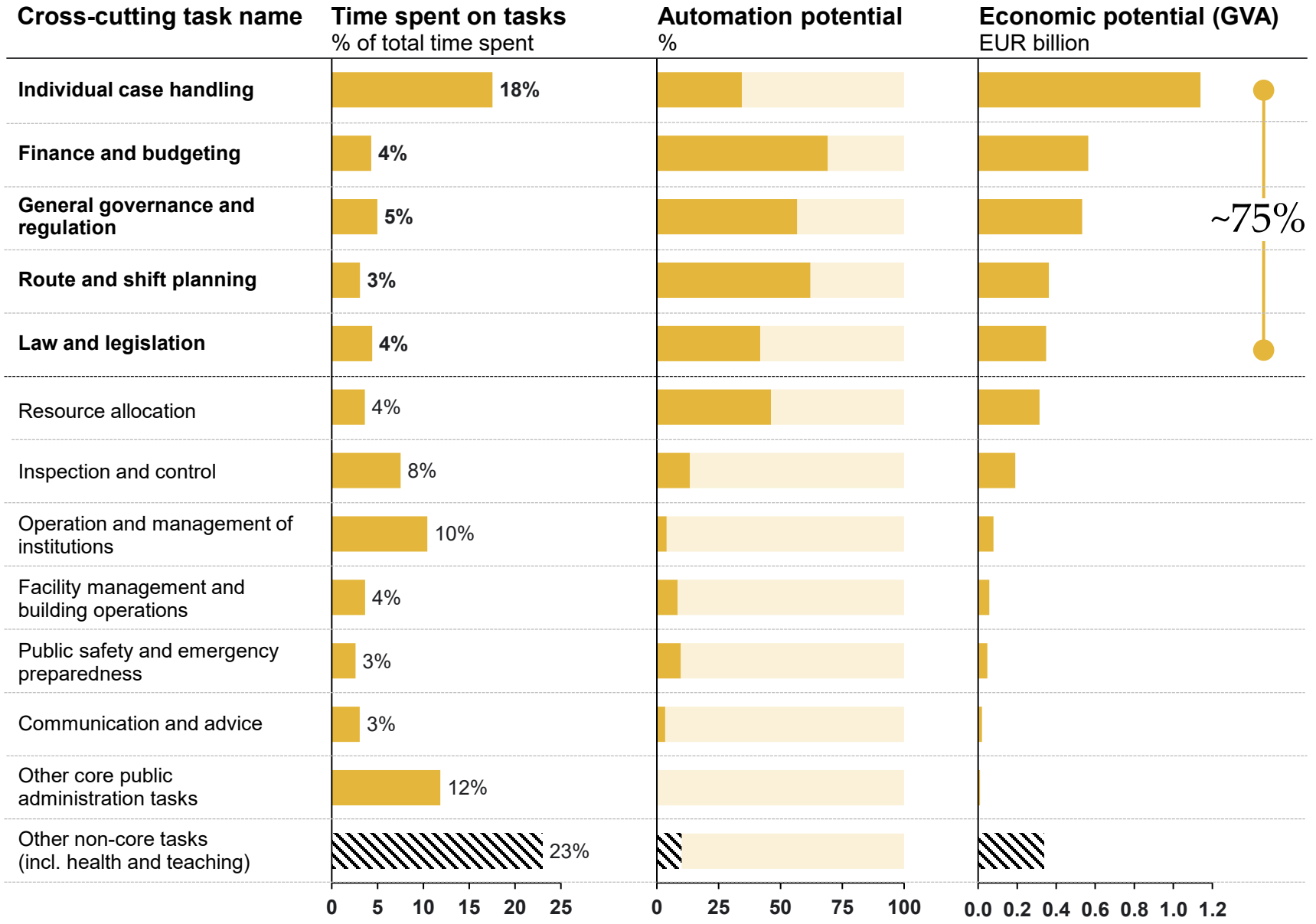
Focusing on the top five cross-cutting tasks could realise 75% of the potential

Implement Economics has analysed the potential of generative AI within public administration on a task-level using granular employment data from the Belgian 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
- Finance and budgeting
- General governance and regulation
- Route and shift planning
- Law and legislation

Although these tasks are estimated to make up around 34% of the time spent by Belgian civil servants, they account for about 75% of the economic potential due to the high degree of automatability.



Note: Percentages may not sum to 100 due to rounding. 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 Belgian 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. The automation potential of cross-cutting tasks may vary from country to country due to the occupation composition of the workforce carrying out the tasks.
Source: Implement Economics based on O*NET, Briggs & Kodnani (2023) and Statistics Belgium.

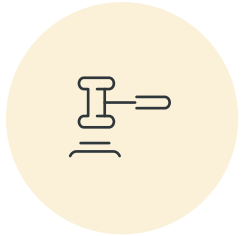
Generative AI can complement cross-cutting tasks in several aspects

Individual case handling

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

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.



General governance and regulation

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

Route and shift planning

Generative AI can evaluate historical and real-time data to plan optimal bus schedules, garbage collection routes, or emergency services coverage by identifying peak usage times, predicting traffic congestion, and dynamically adjusting routes or shift assignments.

Law and legislation

Generative AI can help draft and review legal documentation, as well as ensure compliance with existing laws and regulations.

Top five cross-cutting tasks holds 75% of the total economic potential

Achieving scalability while balancing local needs

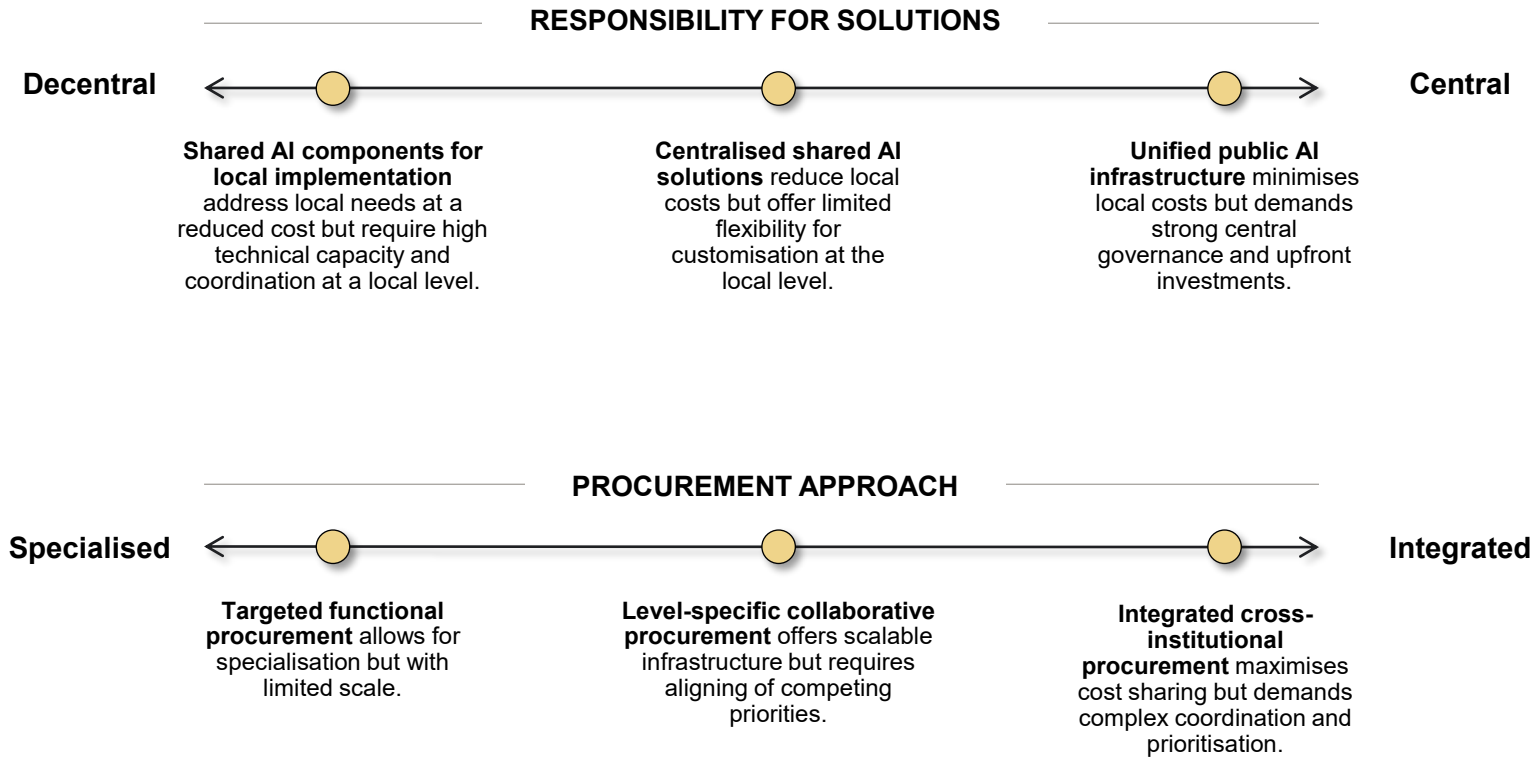
Approximately 75% of the potential lies in the top five key tasks shared across institutions. However, AI solutions must also address local needs to remain effective.

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 fragmented decision-making and reduce inefficiencies caused by siloed AI investments, strategic decisions should focus on cross-institutional AI procurement.

Strategic dimensions in public AI procurement



PART I

Think ‘risk-conscious’

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

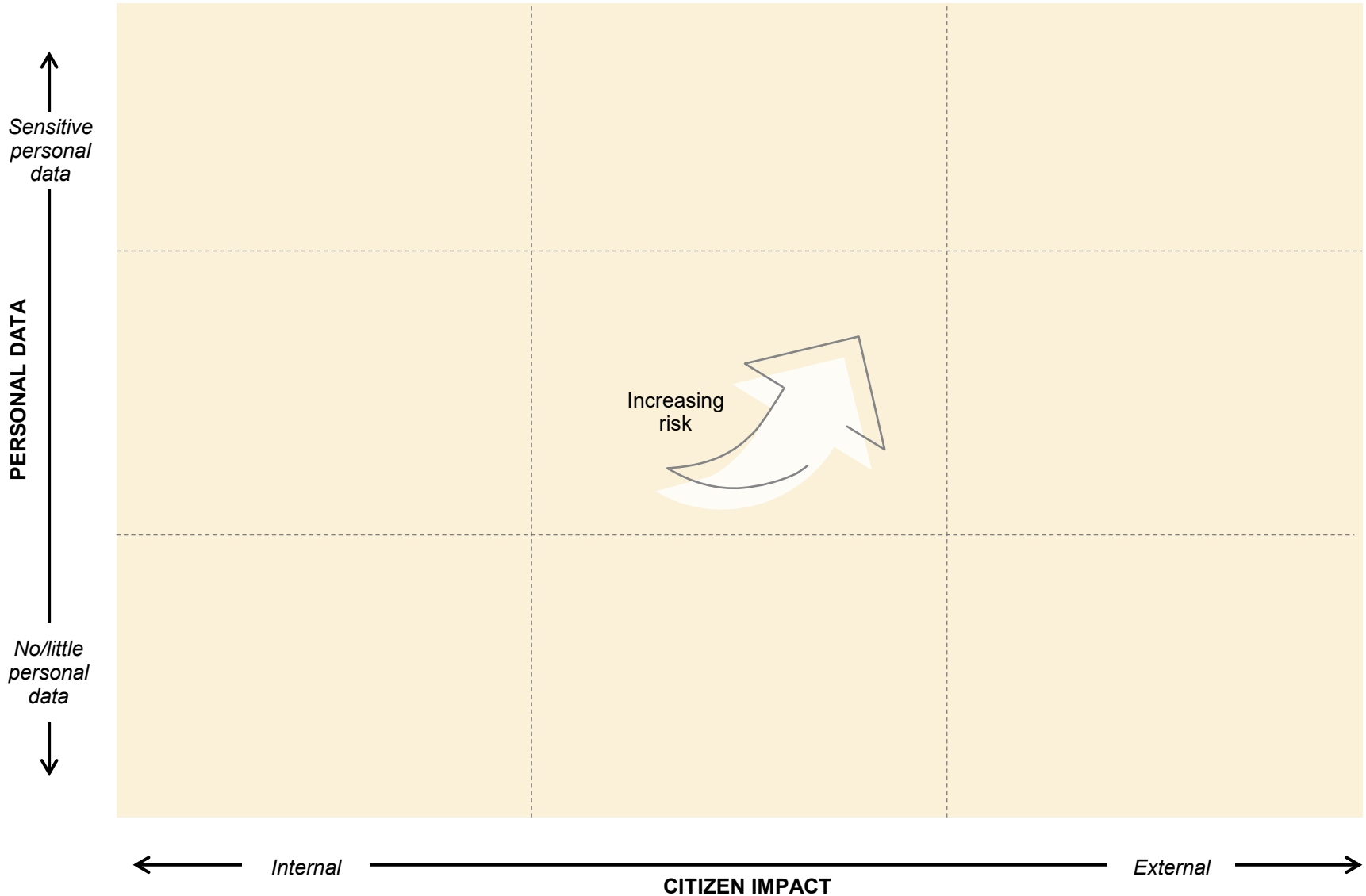
Public institutions are risk-averse and face a complex regulatory landscape

Implementing AI in public institutions is complicated by the existence of overlapping regulations, such as GDPR, the AI Act, and the AI Code of Practice, which creates 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.

There are a handful of low-risk applications of AI that do not use personal data and are internally-oriented. 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



Source: Implement Economics based on GDPR EU.

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

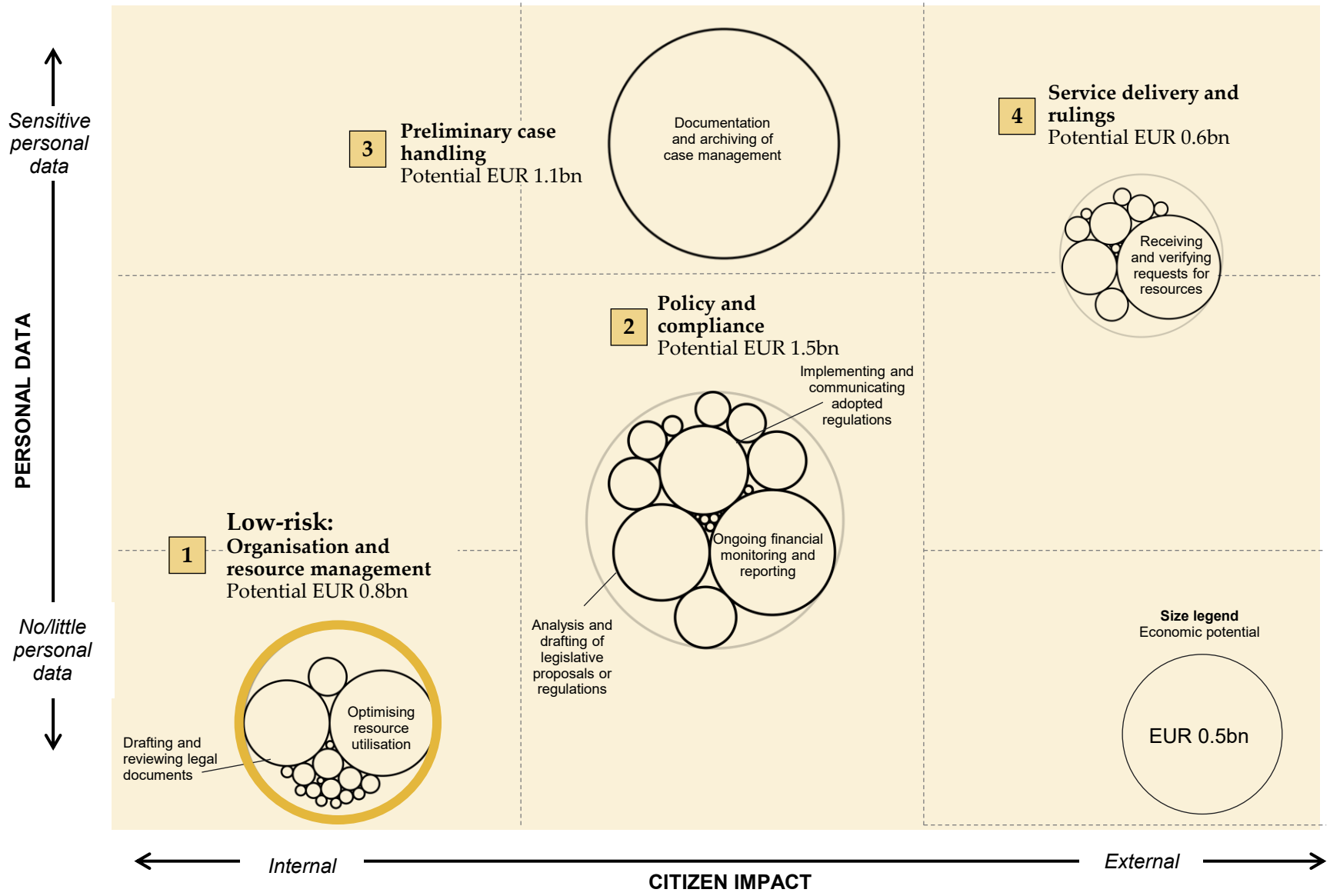
The risk of key cross-cutting tasks is mapped across two dimensions:

- 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 **EUR 0.8 billion**, 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 considerable sensitive data but is not directly citizen- and business-facing.
4. **Service-delivery and rulings**, which are directly citizen- and business-facing and use considerable 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 Belgian 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, Briggs & Kodnani (2023) and Statistics Belgium.

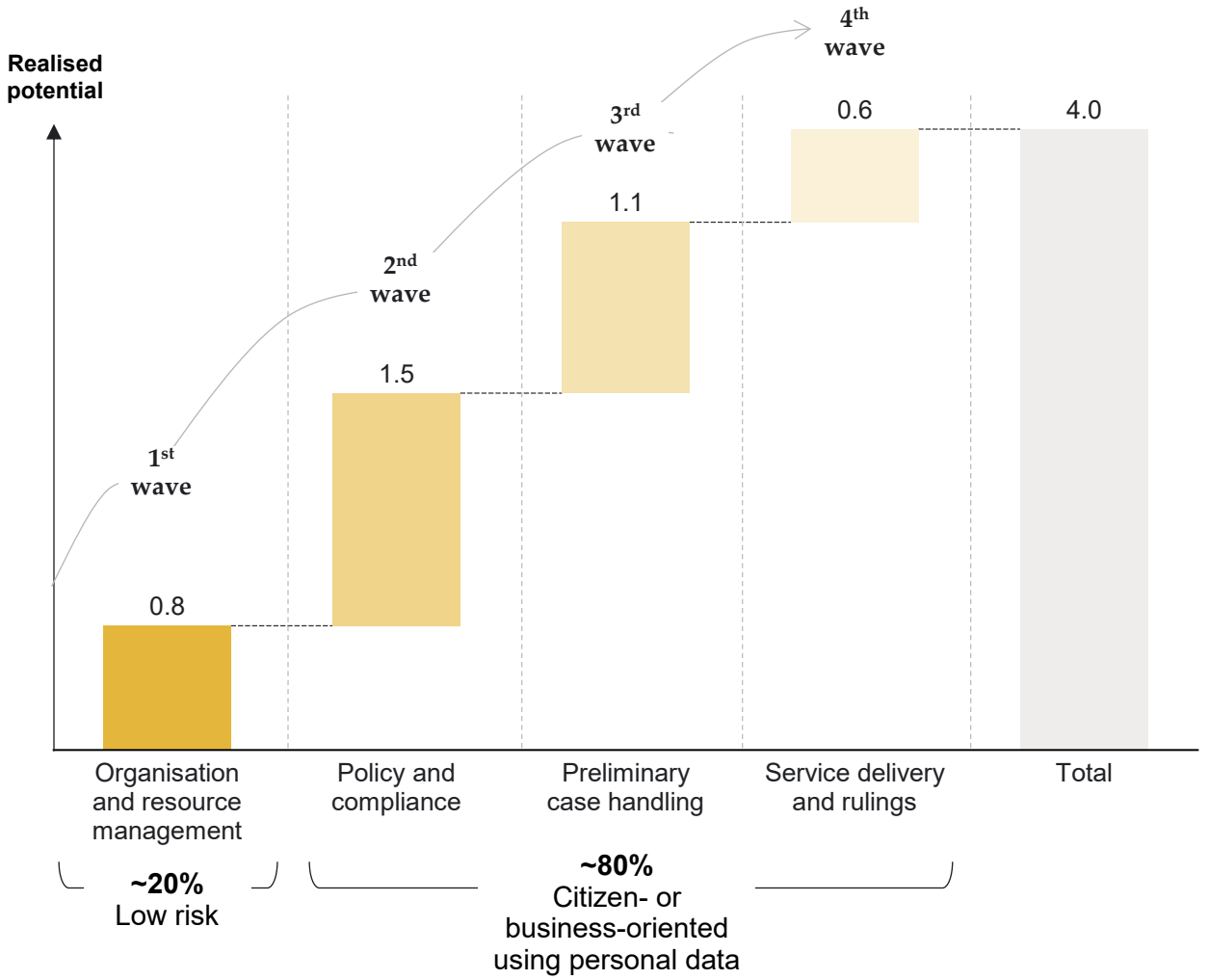
Start with the lowest risk and work up to tasks with high citizen impact

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, the 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 Belgium
EUR billion 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 Belgian 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.
Source: Implement Economics based on Statistics Belgium, O*NET, Briggs and Kodnani (2023).

PART I

Think ‘impact-oriented’

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

> *This national plan aims to position the government as an AI player. Citizens and public sector staff are at the centre of the idea.*
>
> **Belgian Federal Public Service Policy and Support (BOSA)**
> in National convergence plan for the development of AI

Belgium needs to ensure public support in the AI transformation

The Belgian population is generally positive towards AI use in government systems. A recent Ipsos survey shows that around 80% consider it important to use AI to make government systems secure and hotlines more efficient.

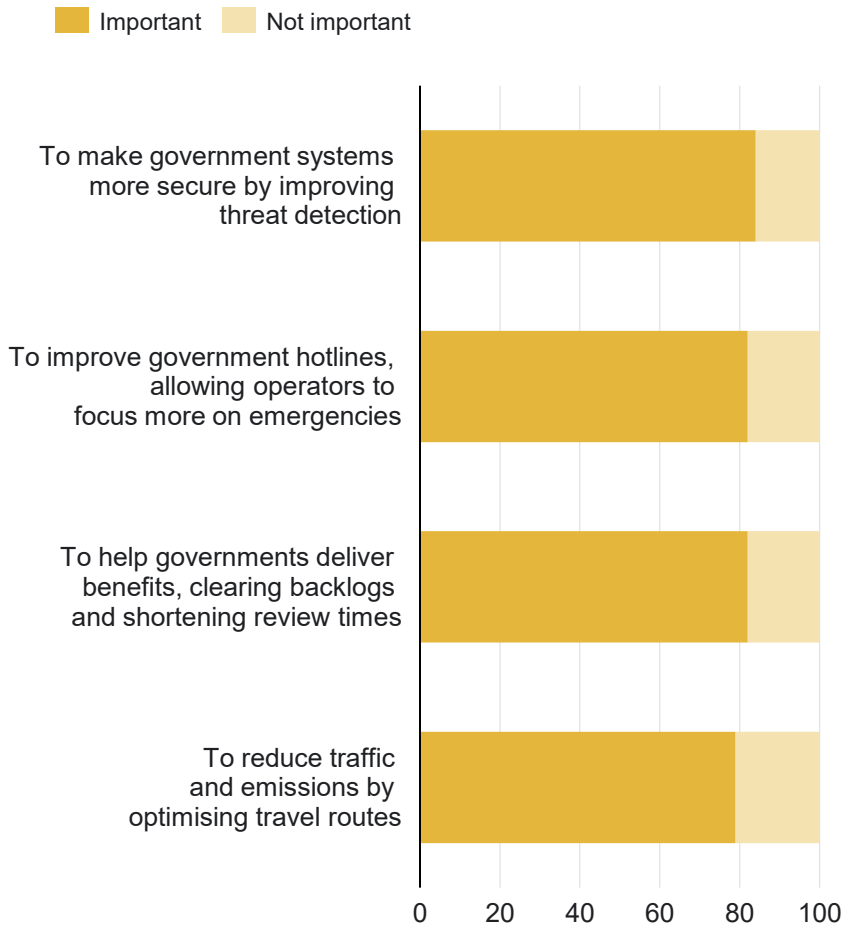
However, Belgians have comparatively low levels of trust in authorities to exert control over AI. Belgium should ensure public support to effectively capture the AI opportunity.

To build public support for AI in government, it is vital to focus on citizen- and business-oriented applications that deliver clear societal benefits, rather than emphasising purely technical or cost-saving measures.

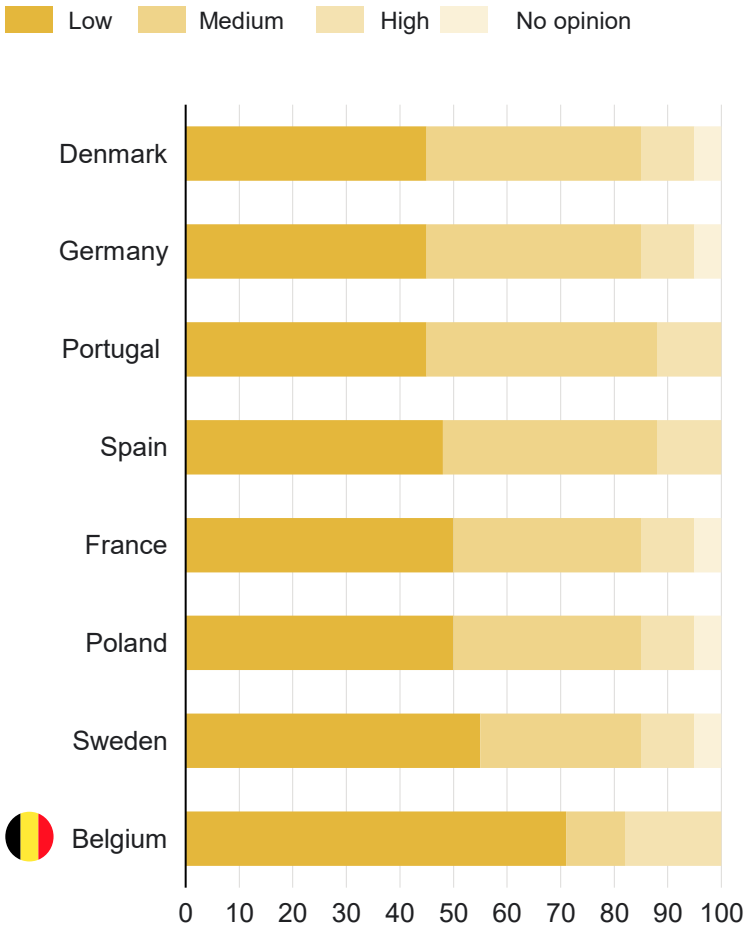
65%

of Belgians support **AI companies working with governments** to test AI tools for government services. This is below the **global average of 71%.**

Share of respondents who consider usage area for AI important for society
%



Trust in authorities to exert effective control over AI
%



Note: Left figure: The question asked in the survey was: *Here are some ways AI is being used. Please indicate how important, if at all, you think each one is for society.* Right figure: The question asked in the survey was: *To what extent do you trust authorities to exert effective control over (organisations and companies using) AI?* Survey includes in total 4,008 respondents and was carried out in 2021.
Source: Implement Economics based on survey data from BEUC, BOSA, KU Leuven as well as an Ipsos poll conducted between 17th September – 8th October, on behalf of Google.

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

Citizens

Examples of interactions	Examples of how generative AI can improve interactions
Applying for personal identification documents - e.g. passport, ID cards or driving licence.	Generative AI can guide citizens through the application process, providing personalised instructions and automatically pre-filling 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 and 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 fines 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 tenders 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 operating licences, construction permits, or health and safety certifications.	Generative AI can act as a 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.

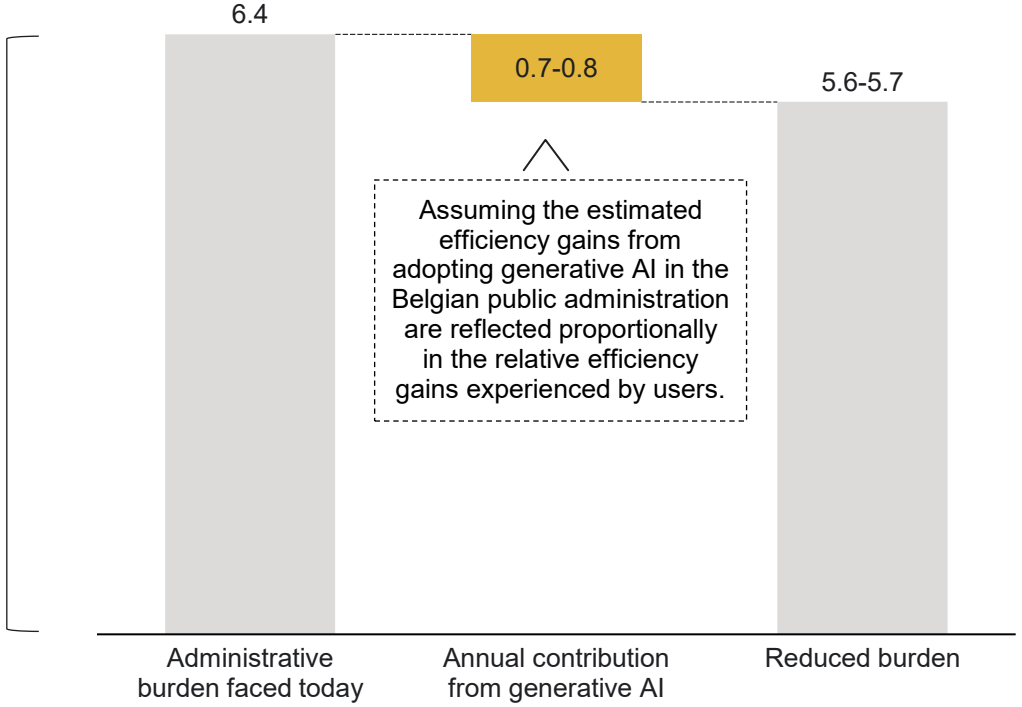
Generative AI can reduce Belgian companies' administrative burden by EUR 0.7-0.8 billion

Belgian 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 Belgian companies across all levels of government
EUR billion at widespread adoption

1.1%
of GDP

Administrative burden for Belgian companies



EUR 0.7-0.8 billion annual contribution

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.
- Increased speed and flexibility in company processes.

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 Belgian 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. While the study is old, the estimate aligns with recent studies for comparable countries, e.g. Growth Agency, Statistics Sweden. The administrative burden is based on data from the Bureau fédéral du Plan.
Source: Implement Economics based on the Bureau fédéral du Plan, O*NET and own calculations.

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 (VDAB).
- 80% reduction in time spent on job match questionnaires.

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

Case: The Swedish Tax Agency has reduced waiting time on business registrations by 3.5 days, and an AI-powered chatbot is handling about 50% of its conversations outside opening hours

The challenge

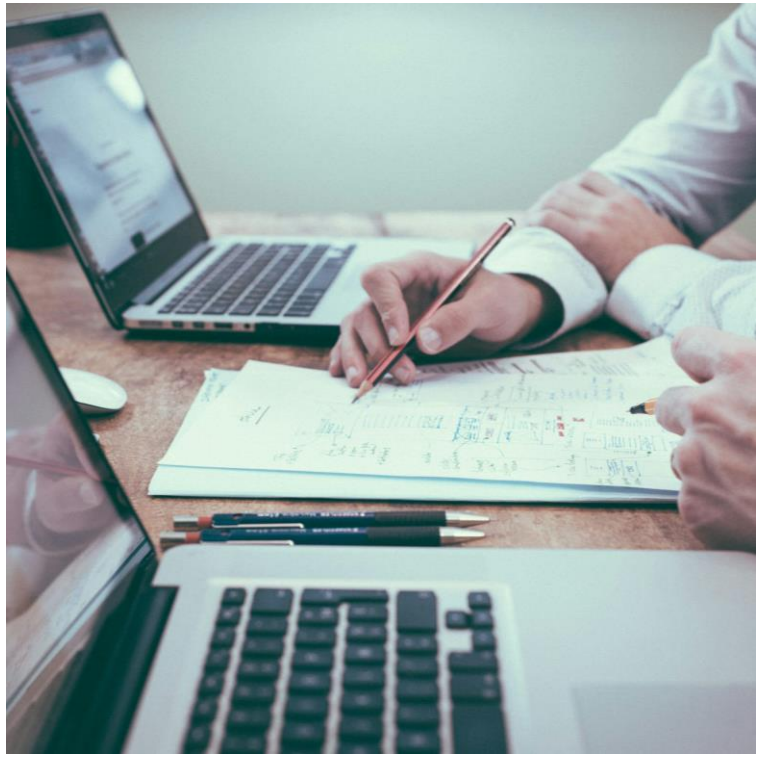
- Long waiting times on phone and e-mail.
- Citizens and businesses could only contact during opening hours 9-15.
- Bottlenecks during tax deadlines.

The solution

- Almost 30 AI services deployed.
- AI chatbot answering tax and personal record questions.
- 24/7 service to assist citizens and businesses any time.

The impact

- Chatbot handling ~500,000 conversations annually.
- ~50% of chatbot conversations answered outside opening hours.
- Waiting time for business registrations reduced by ~3.5 days.



Note: Most use cases implemented are supported by other initiatives, an important consideration when evaluating their overall impact.
Source: Implement Economics based on the Swedish AI Commission (2024) and Skatteverket Annual Report 2022 (2023).

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 by more than 70%.
- Released time spent on guiding applicants in the most complex cases.

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

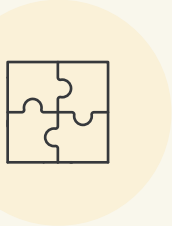
The impact

- 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 use cases implemented 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

The Belgian government would benefit from updating its national AI strategy, ensuring that its approach is …



‘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’ > Begin with low-risk, internally-facing, AI solutions and gradually move on to more user-sensitive, externally-facing, AI applications that can 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

It has become important that government data can be reused, that third parties can access data silos in the private sector and that citizens have the opportunity to share or make greater use of their personal data.

Belgian Federal Public Service Policy and Support (BOSA)
in National convergence plan for the development of AI

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 in the Competitiveness Compass and the AI Continent Action Plan.
- **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 large 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 on the next pages.

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

PART II

Create cloud clarity

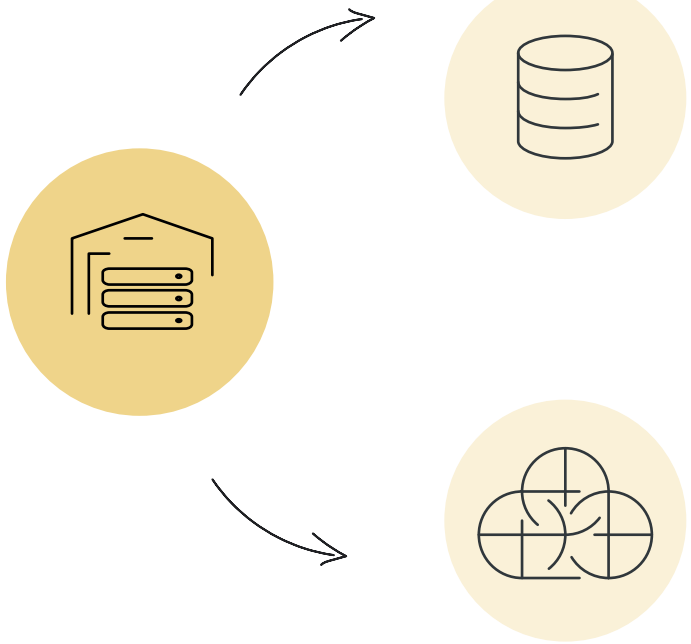
- Privacy and security concerns can lead to misconceived preference for on-prem solutions.

> *[…] the infrastructure will need to offer different levels of capacity and flexibility to support potentially hundreds of thousands of users.*
>
> **Belgian Federal Public Service Policy and Support (BOSA)** in National convergence plan for the development of AI

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.

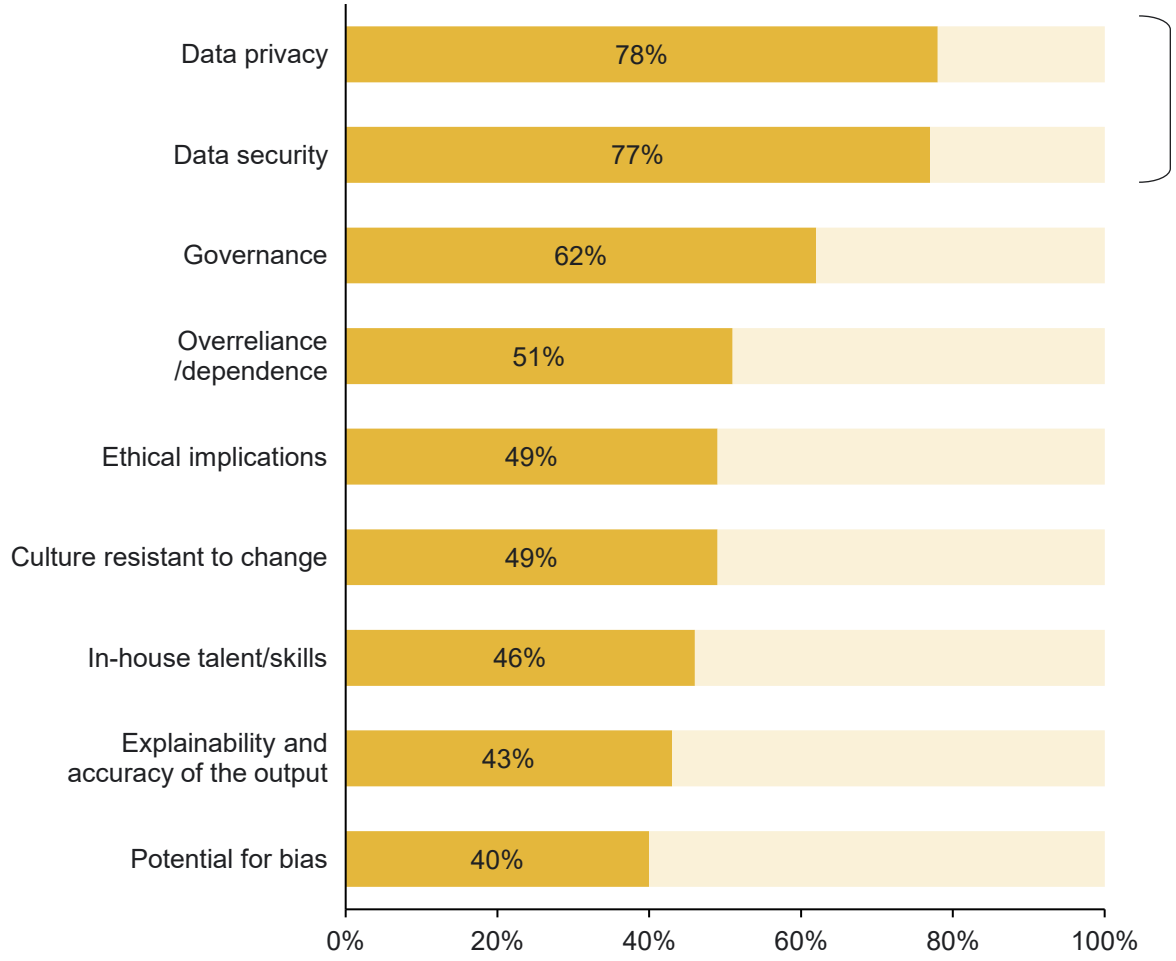
Source: Implement Economics based on the European Commission (2024).

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 from specialised companies can address these challenges by ensuring data, operational, and software sovereignty, thus 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 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-premise supercomputers is both prohibitively expensive and inefficient.

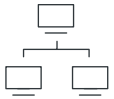
Widespread AI adoption in public administration depends on a secure, robust cloud infrastructure that meets these unique demands. Therefore, the most cost-efficient and scalable solutions are best sourced from specialised suppliers.

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

The Belgian National convergence plan for the development of AI focuses on leveraging a robust, data-driven infrastructure to accelerate AI adoption within public administration. While the government aims to improve access to cloud services through selected providers and consolidated agreements, a more explicit multicloud vision—combining national and international capacities—will be essential to meet the growing compute and infrastructure demands of AI at scale. Clarifying risk management approaches for foreign cloud vendors and reinforcing a secure, sovereign foundation can help unlock broader, responsible AI adoption across public services.

Source: Implement Economics based on BOSA (2022).

Cloud provides a cost-effective AI infrastructure adaptable to technological advancements

To effectively use generative AI in public administration, substantial computing resources are needed.

On-premise infrastructure demands significant upfront investment and risks becoming outdated before costs are recovered, locking institutions into current technology levels.

In contrast, cloud infrastructure offers flexibility, lower initial costs, and scalable usage, allowing continuous adoption of new technologies.

These developments reflect the price of modern, high-end computing power and the increasing computing needs of LLMs – prior to these developments, the long-term viability of on-premise computing may have exceeded those of cloud.

160%

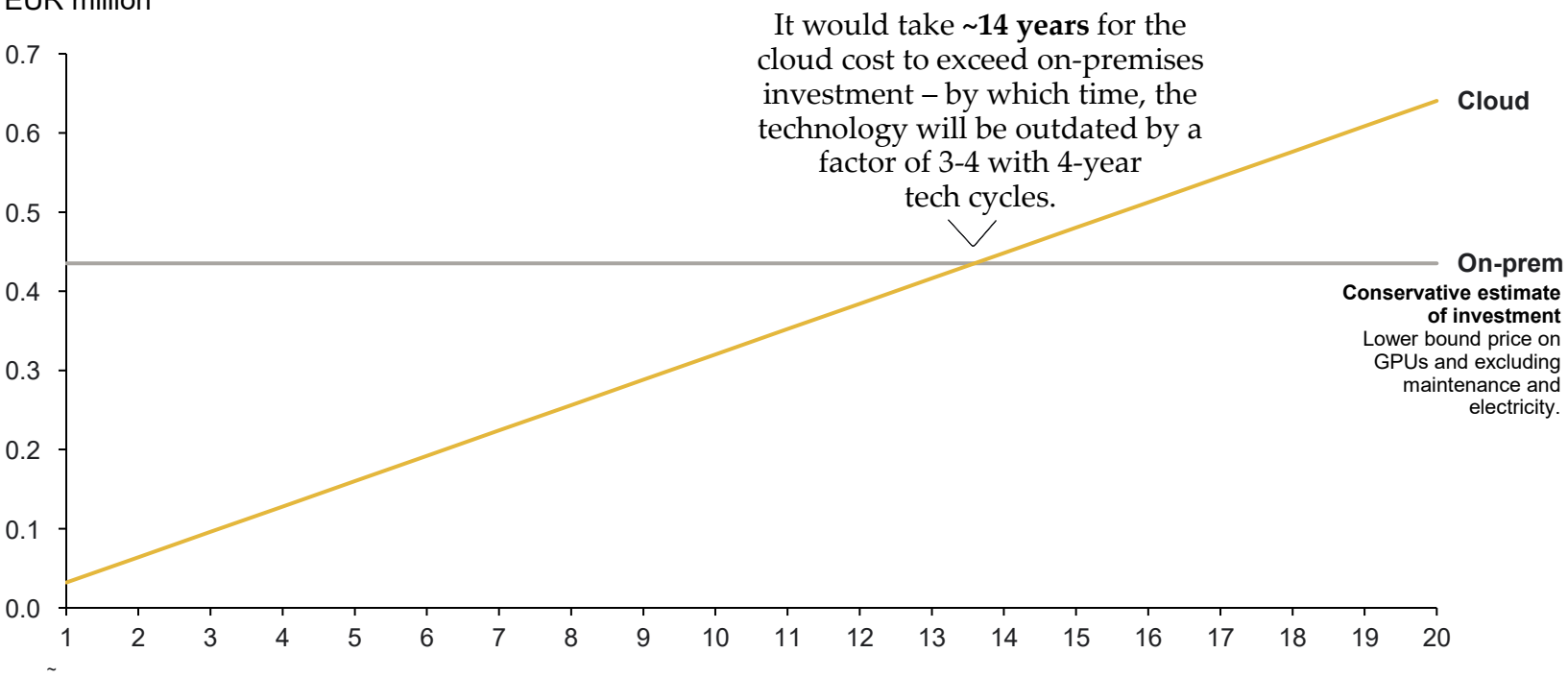
Computer performance has improved by 160% in around two years, and AI is a fast-evolving technology that will require constant updates to compute capacity.

Example Belgian Tax Chatbot

~4 million citizen inquiries assumed handled by the Belgian Tax Authority each year. These could be automated by an AI-based chatbot, either in the cloud or on-premise.

~45 GPUs are needed to handle the average flow of requests, with costs around EUR 435,000 for on-prem investment, compared to an average annual cost of EUR ~32,000 for a cloud service.

Accumulated costs for chatbot implementation (illustrative)
EUR million



Note: We assume 320 inquiries per 1,000 persons. Inquiries are assumed to be evenly distributed across 16 hours a day and every day of the year, resulting in a constant load throughout the year. Each inquiry is estimated to average 750 words, with approximately two tokens per word, leading to a total of approximately 5.7 billion tokens per year based on an annual volume of 3.8 million inquiries. For cloud-based deployment, the cost is estimated at EUR 32,000 per year, derived from token processing and computational resource usage. For an on-premises setup, it is assumed that 3.8 million inquiries per year translate to an average of around 11 active conversations per minute, assuming an even distribution 16 hours a day every week. Each active conversation requires four GPUs, and the estimated cost per high-end GPU, including VRAM and hardware, is EUR 10,000. This brings the total on-premises cost to approximately EUR 435,000. Achieving adequate performance for Belgian-languages processing would require a large language model, such as Llama70B, which demands 123 GB of VRAM per GPU for effective operation.
Source: Implement Economics based on OpenAI and Llama.

Cloud provides the essential flexibility to scale with fluctuating demands

The demand for public AI applications varies significantly throughout the day and year. During peak periods, a high volume of tasks must be handled simultaneously, placing substantial pressure on AI infrastructure.

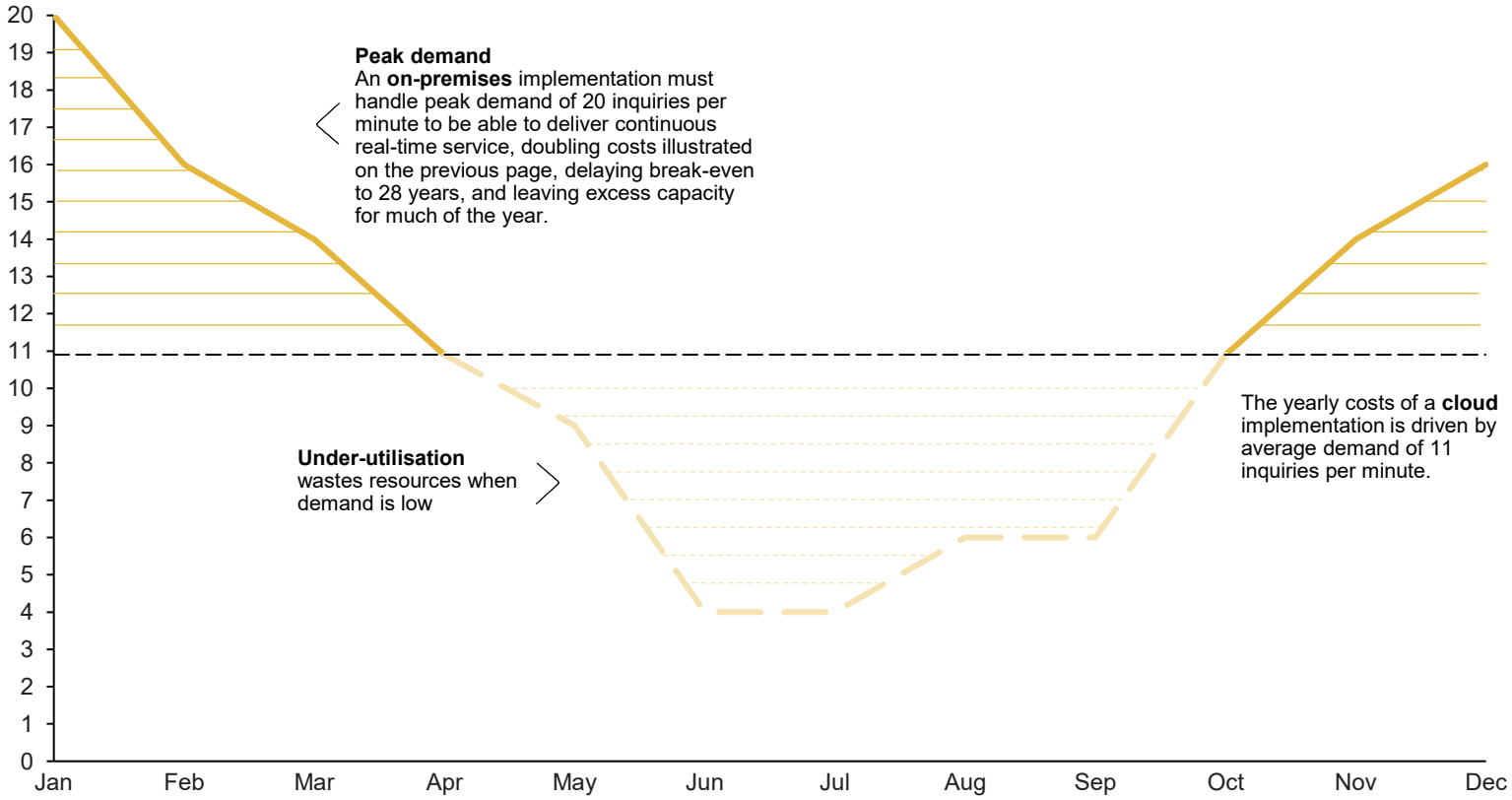
Cloud solutions offer flexible scalability, with costs tied to actual usage.

In contrast, an on-premises setup requires investment not only for average demand but also for peak capacity to avoid bottlenecks.

> Depending on how AI projects evolve, the infrastructure will need to offer different levels of capacity and flexibility to support potentially hundreds of thousands of users.
>
> **Belgian Federal Public Service Policy and Support (BOSA)** in National convergence plan for the development of AI

Example Belgian Tax Chatbot

Inquiries per month (illustrative)
Average inquiries per minute



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

The Belgian National AI Strategy proposes to improve access to cloud services by combining offerings from selected providers through a consolidated framework agreement on information and knowledge sharing. The Belgian government should establish a clear framework for secure and legally compliant cloud adoption, enhancing coordination across the sector and enabling public actors to innovate while ensuring digital sovereignty, business continuation, and data protection.

Implement a centralised cloud strategy. Adopt a cohesive nationwide cloud policy applied consistently across all government levels, including local and decentralised entities. Centralised procurement guidance will ensure that security and compliance standards are universally applied.

Strengthen oversight and transparency. Clarify regulations, such as Belgium's Public Access to Information and Secrecy Act (OSL), to eliminate legal uncertainties and ensure public actors can adopt cloud services effectively and securely. Furthermore, transparent reporting practices should be established to provide a clear overview of cloud usage across public administrations without increasing oversight burdens.

Safeguard digital sovereignty and resilience. Governments should prioritise digital sovereignty by enforcing interoperability and planning exit strategies. Collective action ensures data localisation and safeguards critical public services from external risks.

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.

Source: Implement Economics based on Algemene Rekenkamer (2025) and BOSA (2022)

PART II

Make smart procurement choices

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

The issue of potential vendor lock-in resonates strongly with our members.
Danielle Jacobs, CEO at Beltug

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 such as 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 licenses 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%

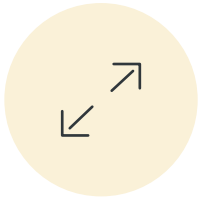
of surveyed IT decision makers in the public sector cited licensing restrictions as a key barrier to switching.

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 meet 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 and transparency, and mitigate risks such as 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 Belgian government should…

Create cloud clarity

Harmonise department policies and mitigate risks through government-wide risk assessments.

Consider factors such as sovereignty, service continuity, data protection, cost, innovation and required skills.

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 Belgian government

Set ambitious targets and make an actionable strategy with clear milestones

The Belgian National convergence plan for the development of AI from 2022 sets the ambition of exploiting the opportunities of AI to the fullest. To guide the implementation of this national plan a Steering Committee under FPS BOSA and FPS Economy has been created.

The Steering Committee should act as a bridge between policymakers, government office staff and other relevant private/public partners working on concrete AI issues and implementation projects.

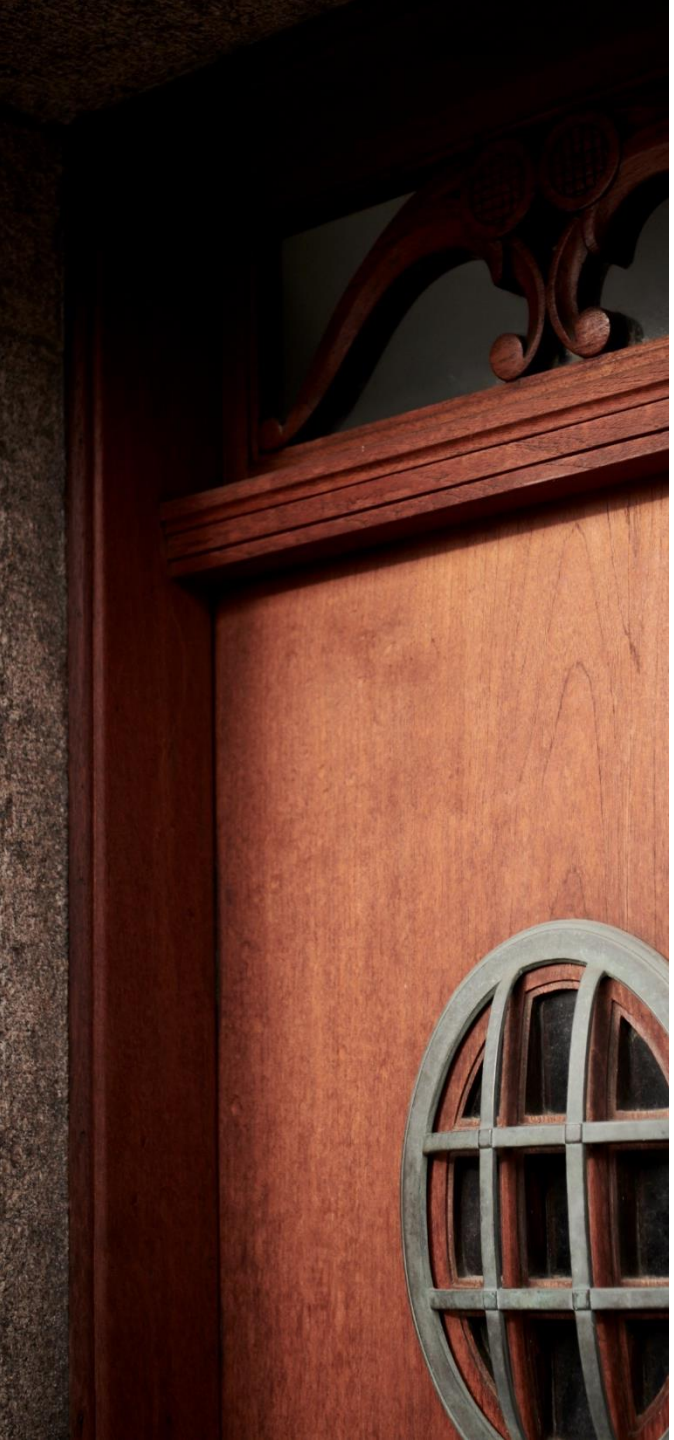
In addition, the FPS BOSA is following the development of AI closely in the AI4BELGIUM, which coordinates and brings stakeholders together.

Implement suggest that Belgium develops an updated AI strategy that applies risk and impact measures to address key barriers and harness the scalability of successful AI applications.

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

01	02	03
Establish an AI task force and address the five key barriers	Use risk and impact measures to prioritise	Scale successful applications
1-2 years	3-5 years	7-10 years
• Adopt a task-based framework for, 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.	• 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. • Evaluate successful applications.	• 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 The National convergence plan for the development of artificial intelligence (2022) and OECD (2021).



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 Belgium 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 Belgium 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 aforementioned calculated potential is distributed across cross-cutting tasks within public administration by mapping detailed work activities to a 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 granular employment data on Belgium and a 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

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