STEP STARTUPs

Public Sector Services and the AI opportunity

Funded by
the European Union

Created by

Barrabés · DEEP Ecosystems · EU-Startups · IRS Leibniz Institute for Research on Society and Space · Startup Europe REGIONS NETWORK

Supported by

ESNA

V3

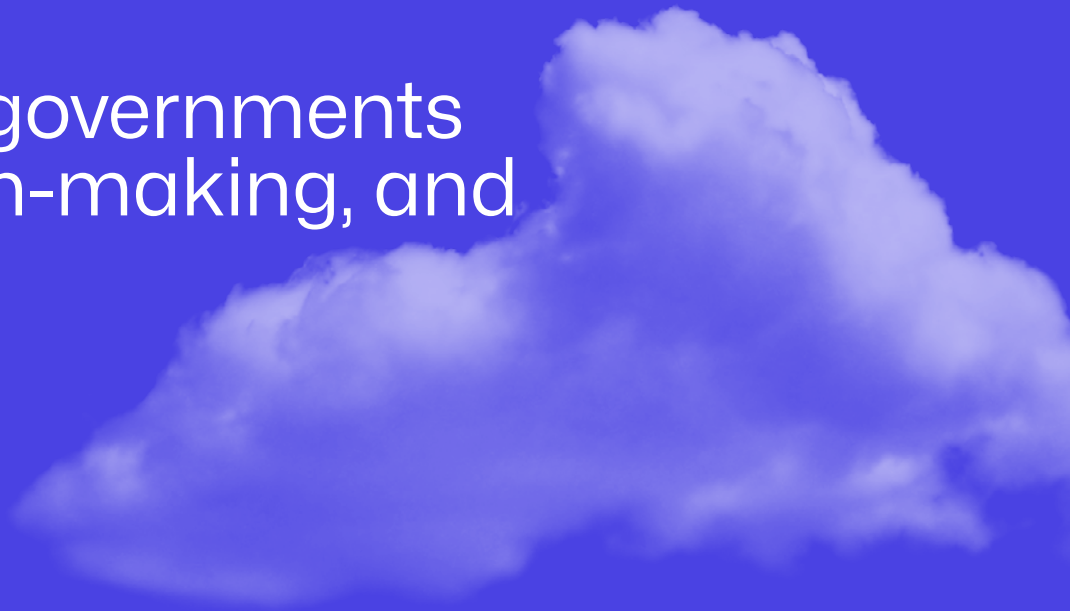
CONTENTS

Public Sector Services and the AI opportunity

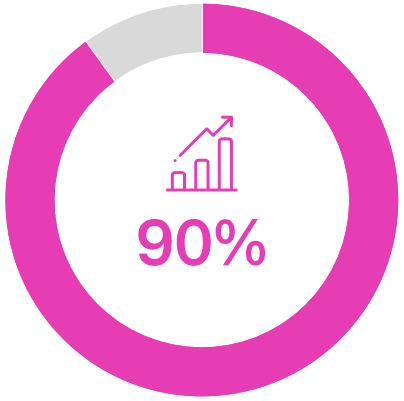
1

How AI can transform Public Administration

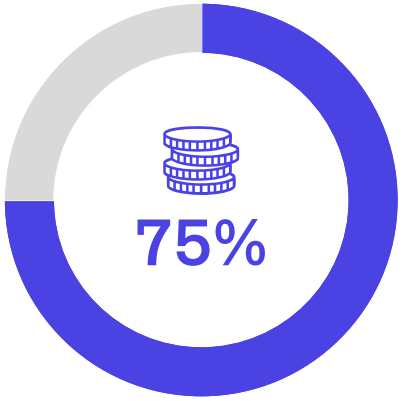
By harnessing the power of AI, governments can improve efficiency, decision-making, and service delivery to citizens



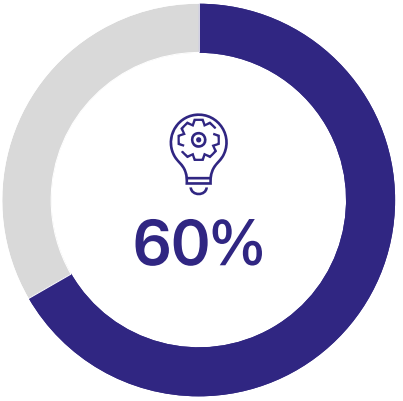
Digitalisation has been the trend over the years in terms of transforming public service delivery



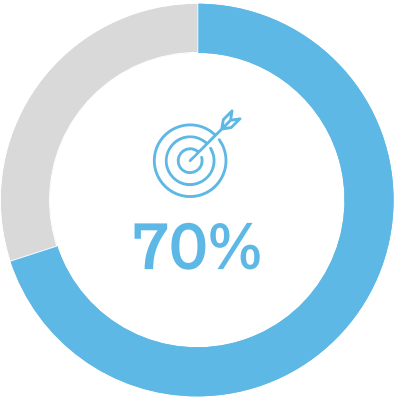
90% of government organisations are either in the process of **scaling digital government** or have already scaled digital across their primary functions.



By 2026, over **75%** of governments will gauge digital transformation success by measuring the enduring **mission impact**, rather than only looking at hours saved, efficiencies or citizen satisfaction.



By 2026, more than **60%** of government organisations will prioritise **investment in business process automation**, up from 35% in 2022.



70% of governments have deployed, or plan to **deploy, generative AI** in the next three years.

Source: Gartner

Main ways and potential use cases of AI reshaping Public Administration

AI in government can be used in three main areas:

Public services to deliver new services and improve existing ones to citizens and businesses.

Internal management to optimise resource allocation, manage funding, detect fraud, and ensure organisational security.

Policy making to identify and develop new policies or improve existing ones.

01 **Enhanced Efficiency and Productivity**
AI can significantly improve efficiency and productivity in decision-making and public service delivery by automating repetitive tasks and accelerating data analysis.

02 **Optimised Resource Allocation and Reduced Costs**
AI enables more efficient use of public resources by identifying areas of need through data analysis and predictive modelling. This can reduce operational costs and allow for the reallocation of human resources to higher-value activities.

03 **Data-Driven Policy and Resource Management**
By analysing large datasets, AI provides valuable insights into public needs and trends. This enables governments to make more informed decisions on policy development and resource allocation, ultimately improving the impact of public policies.

04 **Improved Transparency and Accountability**
AI systems can monitor the implementation of public policies in real-time and provide citizens with access to accurate and up-to-date information on government activities, fostering greater transparency and public trust.

05 **Personalised and Higher Quality Public Services**
AI can adapt public services to citizens' needs through personalised recommendations, chatbots for instant support, and tailored information, leading to enhanced citizen experience and satisfaction.

Main ways and potential use cases of AI reshaping Public Administration

01 Automation of Bureaucratic Processes

Chatbots for Citizen Interaction
AI-driven chatbots can instantly respond to routine citizen inquiries, reducing administrative workload and speeding up communication.

Smart Document Management
Automated systems process, classify, and archive documents efficiently, minimising human error and increasing transparency.

Permits and Authorisations
AI systems streamline approval processes by automating the analysis of applications for licenses, permits, and authorisations.

02 Personalized Citizen Services

Timely Notifications
AI enables governments to send automatic alerts for tax deadlines, public events, and benefit renewals, improving citizen engagement.

Virtual Assistants
Digital assistants help users complete forms and access services quickly, reducing confusion and increasing accessibility.

Predictive Public Services
AI can forecast community needs by analysing trends, allowing administrations to adjust services and budgets proactively.

03 Urban Security and Surveillance

AI Surveillance Systems
Smart cameras analyse video feeds in real-time to detect anomalies or suspicious activities, enhancing urban security.

Data-Driven Crime Prevention
AI models can predict crime hotspots based on historical data, enabling law enforcement to deploy resources efficiently.

Urban Mobility Monitoring
Traffic flow and public transportation systems are optimised with AI, contributing to safer and more responsive cities.

04 Efficiency in Resource Management

Energy Optimization
AI tools monitor and adjust energy usage in public buildings, reducing costs and environmental impact.

Smart Waste Collection
Sensors and algorithms help cities schedule garbage pickups more efficiently, minimising overflow and resource waste.

Predictive Maintenance
AI forecasts infrastructure wear and tear, enabling timely repairs that prevent breakdowns and save funds.

From AI Pilots to Public Impact: 3 Essentials

Building blocks for AI-Enabled public services

AI can make government more responsive, efficient, and effective—but only when designed for real-world public sector challenges. Too often, AI remains stuck in pilots, solving narrow problems but failing to scale.

The issue isn't the technology itself. Governments don't always have a transparent process for matching AI's capabilities to sector needs, ensuring long-term adoption, and embedding AI within digital infrastructure that supports growth.

For AI to work, governments need to focus on three essential elements:

1

Sector-driven AI capability-building

Start by understanding real sector needs. Use industry expertise and proven cases to match AI tools with actual challenges.

2

AI-augmented public services

Design AI that enhances services, fits into workflows, and supports staff. Focus on high-impact, targeted use cases.

3

AI-ready digital public infrastructure

Scalable AI requires strong digital foundations. Build secure, interoperable systems with strong governance to support scalable and sustainable AI integration.

Source: Nortal, AI in GovTech: what works, what fails, and why

"AI's growing capabilities mean it can move beyond improving the way governments operate – enhancing the efficiency of service delivery – to changing how governments think about designing more user-centric services that are more tailored to people's needs."

Carlos Santiso
Head of Digital, Innovative, and Open Government
OECD
France

2

AI Govtech ecosystem in the EU

AI is gaining traction fast in the EU Govtech ecosystem

The investment landscape shows AI's emerging potential in government services

The rise of AI in Govtech

The data on VC investments in EU reveals a dramatic surge in funding for Govtech startups over the past decade, with total assets reaching unprecedented heights between 2021 and 2023.

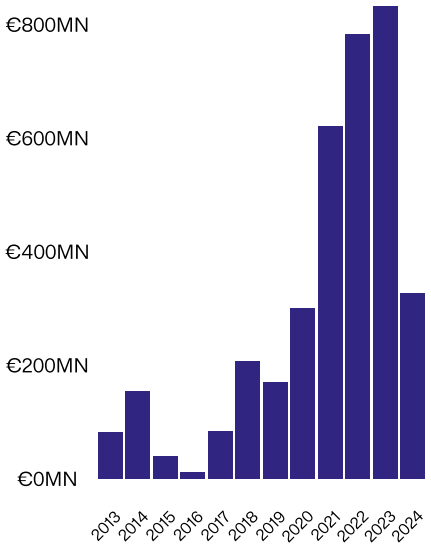
While overall Govtech funding has grown substantially, the proportion dedicated specifically to AI-driven Govtech solutions has grown. After fluctuating through the mid-2010s, AI-first Govtech startups experienced renewed investor interest starting after 2019.

By 2023-2024, AI-powered Govtech startups captured approximately 30% of sector funding, increasing recognition of AI's transformative potential in public services. This trend aligns with broader technological shifts as governments seek innovative solutions to enhance efficiency, transparency, and citizen engagement worldwide.

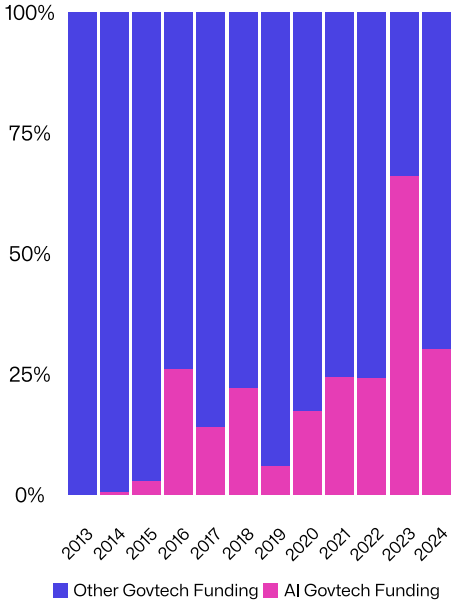
The substantial growth in overall Govtech investment and AI's strengthening position within the sector suggests an emerging ecosystem poised to reshape public administration across Europe and beyond.

VC investments in AI-first Govtech startups in EU

Govtech VC funding by year



Govtech VC funding by year



Source: PitchBook

The investment landscape shows AI's emerging potential in government services

Growing prominence of AI in Govtech deal activity

The data on VC deals illustrates a remarkable evolution of Govtech venture capital deals since the early 2010s, with both volume and composition shifting significantly.

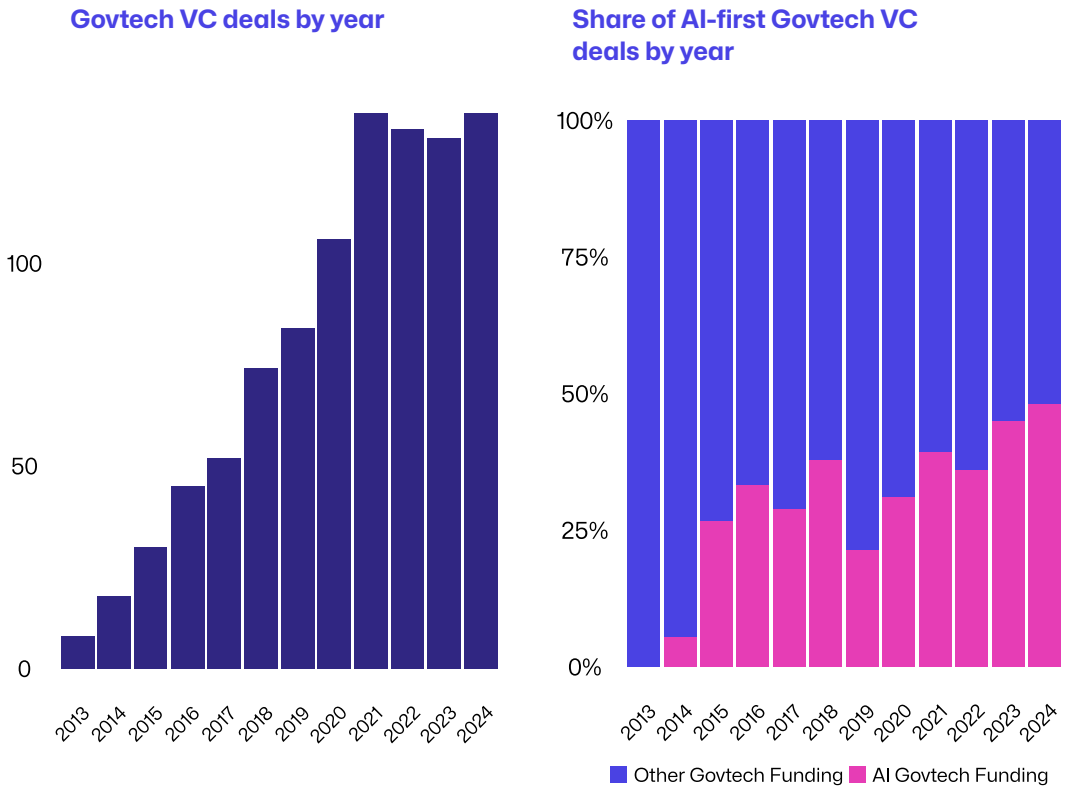
Since 2020, Total Govtech deals have grown exponentially to over 100 annual deals in EU countries, reflecting the sector's maturation and broader market recognition.

Notably, the proportion of AI-focused Govtech deals has steadily increased to nearly 50% by 2024. This dramatic increase indicates investors' growing confidence in AI's potential to transform public service delivery.

While overall deal volume plateaued after 2020, the share of AI-driven transactions continued its upward trajectory, suggesting a qualitative transformation in how investors perceive value creation in the Govtech space.

This trend aligns with public administrations' increasing embrace of advanced technologies to address complex challenges, pointing toward an AI-centric future for government digital transformation across Europe.

VC investments in AI-first Govtech startups



Source: PitchBook

AI is gaining traction fast among new Govtech startups

The emerging paradigm shift: AI dominance in European Govtech Startups

A transformative evolution is underway in the EU Govtech startup ecosystem, marked by exponential growth and increasing AI orientation.

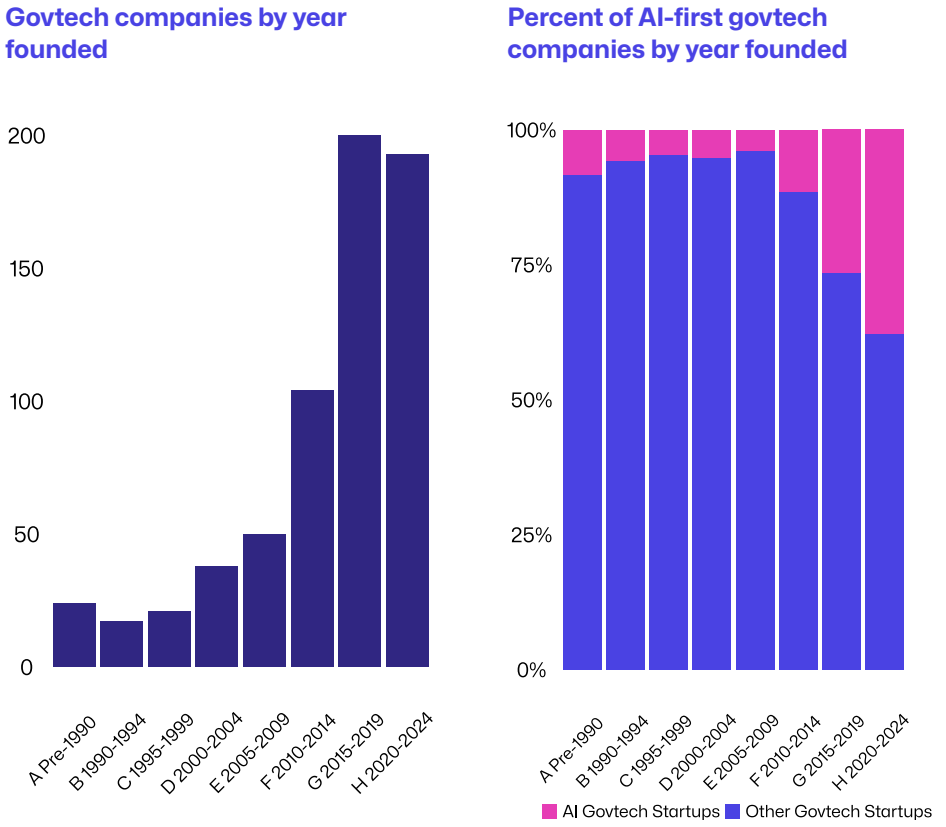
The left chart reveals the sector's dramatic expansion, with new Govtech company formations increasing nearly tenfold from pre-1990 to the 2015-2019 period, followed by a slight moderation in 2020-2024.

More striking is the composition shift shown in the right-side chart.
While AI-focused Govtech startups represented merely 10% of older Govtech companies, they account for nearly 75% of all Govtech startups founded between 2020 and 2024.

"GovTech startups are playing a pivotal role in driving public sector innovation. These companies are not only creating solutions that modernize government services but are also attracting significant investment."

Jaime Codagnone
AI Governance Consultant at EY Italy
Contributor to Interoperable Europe

Share of AI-first Govtech startups over time in EU



Source: PitchBook

Startups already use AI in various fields of business services

VC Ownership drives AI in the EU Govtech ecosystem

The pattern in the ownership structure of Govtech companies across EU countries shows notable variations in AI adoption between different ownership contexts.

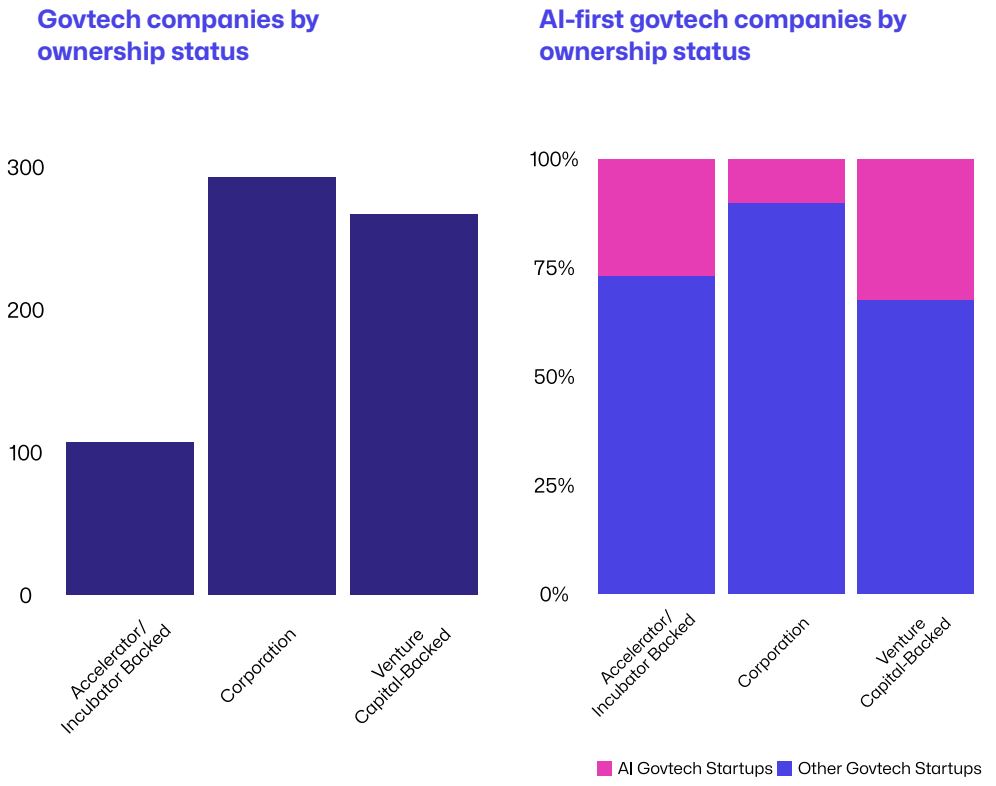
Corporate ownership dominates the landscape with approximately 300 Govtech companies, followed closely by venture capital-backed enterprises (around 270), while accelerator/incubator-supported ventures represent a smaller segment (about [100]).

AI integration differs substantially across ownership categories. VC-backed Govtech companies and those backed by accelerators/incubators demonstrate the strongest AI orientation. AI-first solutions comprise nearly 35% of their portfolio, suggesting investors' strategic preference for AI's transformative potential in public administration.

Conversely, corporations maintain the lowest AI proportion at approximately 10%, potentially reflecting more conservative innovation approaches or legacy system constraints.

These patterns highlight how different ownership structures influence technological priorities within the Govtech ecosystem. Independent venture-backed companies are leading the AI-driven transformation of European public services.

Govtech companies by ownership status in EU



Source: PitchBook

AI Integration in Govtech: A Sectoral Snapshot

Dominant Verticals in the AI Govtech Ecosystem

This tree-map visualisation reveals the diverse landscape of AI-powered Govtech startups across various vertical sectors, highlighting where AI innovation is most concentrated in the public service domain.

Business/Productivity Software emerges as the dominant vertical, occupying nearly a quarter of the AI Govtech ecosystem. This reflects the significant opportunity for efficiency gains in core government operations.

IT Consulting and Outsourcing represents the second-largest segment, underscoring the ongoing importance of implementation expertise in public sector digital transformation.

Financial Software, Media and Information Services, and Network Management Software also claim substantial market share, indicating AI's growing role in fiscal management and public communications.

Smaller but notable niches include specialised domains like Environmental Services, Automation/Workflow Software, and Aerospace and Defence applications.

This sectoral distribution demonstrates how AI reshapes government technology across multiple functional areas, particularly core administrative operations and citizen-facing service delivery platforms.

AI Govtech verticals

Source: PitchBook

2

AI Govtech ecosystem in the EU

Singapore leads the way globally in AI-first Govtech funding. Nevertheless, the EU holds a strong position with Germany, France and Estonia as its leaders

Global AI Govtech funding allocation

Global variations in AI Govtech investment priorities

From a global perspective, there are substantial differences in Govtech VC allocation between countries and regions. This reveals distinct regional approaches to AI adoption in government technology.

Singapore emerges as the global leader in prioritising AI-driven Govtech solutions. Approximately 50% of its total funding is directed toward AI startups, significantly higher than in other major markets.

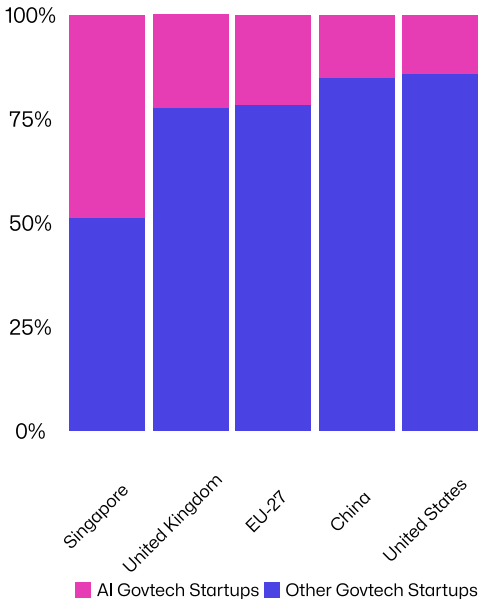
The EU and the UK demonstrate moderate AI integration, allocating roughly 20-25% of Govtech funding to AI-focused ventures.

Interestingly, while China and the US command substantial overall Govtech investment volumes, they show more conservative AI proportions at around 15% in funding allocation. The pattern is even more pronounced when examining deal counts, where Singapore and the UK lead with approximately 30% of transactions involving AI Govtech startups. The US shows the lowest AI deal proportion at about 20%.

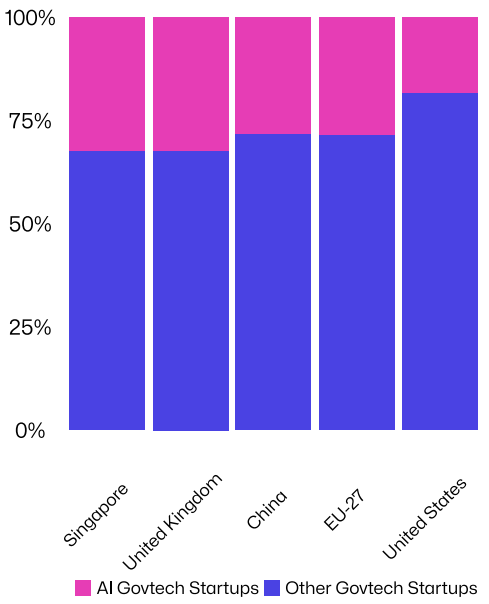
These divergences highlight varying strategic emphases in public sector digital transformation, potentially reflecting different regulatory environments, innovation ecosystems, and government modernisation priorities across global regions.

Govtech VC in global comparison

Govtech VC funding in global comparison



Govtech VC deals in global comparison



Strategic Divergence: AI Investment Patterns in the European Ecosystem

European Govtech investment: regional leaders and AI adoption

The geographic distribution of Govtech investments across Europe reveals significant disparities in funding volumes and AI adoption rates.

Germany is the clear frontrunner, attracting approximately €900 million in Govtech VC since 2012, of which an impressive two-thirds are dedicated to AI-powered solutions.

While Belgium and Finland secure substantial overall funding, they show lower AI penetration in their Govtech sectors. France demonstrates a notable commitment to AI Govtech, with AI solutions representing over half of its total funding despite ranking fourth in absolute terms.

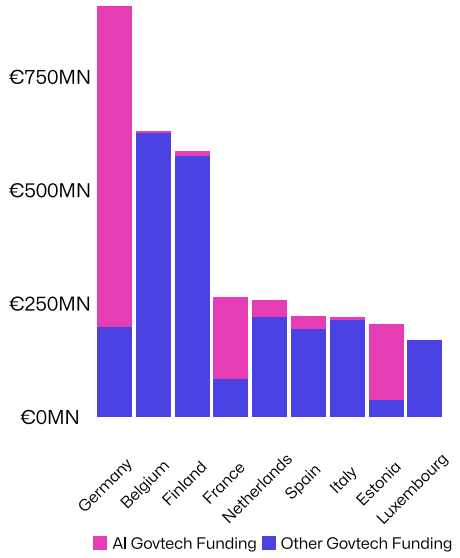
The deal count distribution largely mirrors funding patterns, with Germany leading both in total deals and AI-specific transactions, followed closely by France.

Interestingly, countries like Estonia and Italy maintain proportionally strong AI representation in their Govtech ecosystems despite more modest overall investment figures.

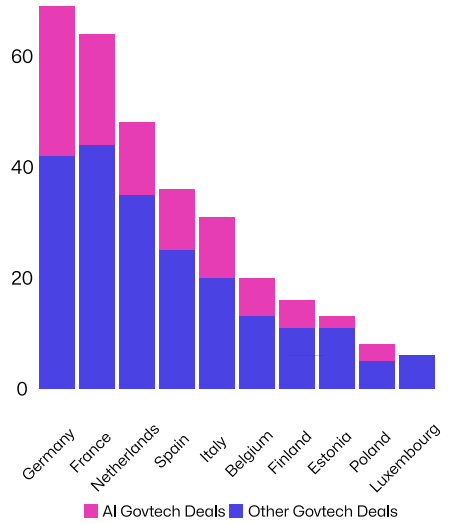
These patterns highlight national strategic priorities regarding digital government transformation and suggest opportunities for cross-border knowledge sharing to strengthen Europe's collective Govtech landscape.

VC investments in AI-first Govtech startups

Govtech VC funding by country



Govtech VC deals by country



Source: PitchBook

3

AI in action: implementation levels in the EU in public services and potential barriers

EU readiness for AI in public services is improving in terms of regulatory and strategic alignment. Deployment of new projects is surpassing the US and the UK

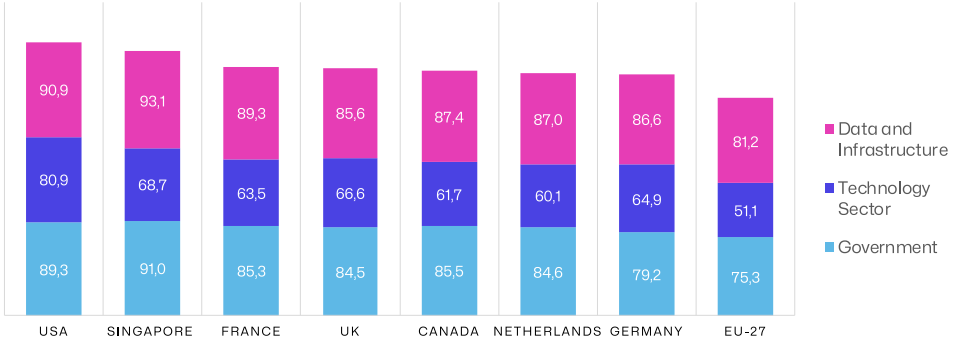
EU holds a prominent position among the top-ranking AI-ready countries, exhibiting well-rounded capabilities, though the USA currently leads the group.

The EU's high rank in AI Governance

The USA's primary advantage lies in its much larger and more mature market. Its advantage across the other pillars is less stark. Singapore is the global leader in the Government, Data, and Infrastructure pillars.

France leads in the European regional ranking with a score of 79.4, narrowly ahead of the UK (78.9). The region dominates the global top 10, with the Netherlands (77.2), Germany (76.9), Finland (76.5), Sweden (75.4) and Denmark (74.7) joining France and the UK, giving Europe the most significant regional presence in the upper tier.

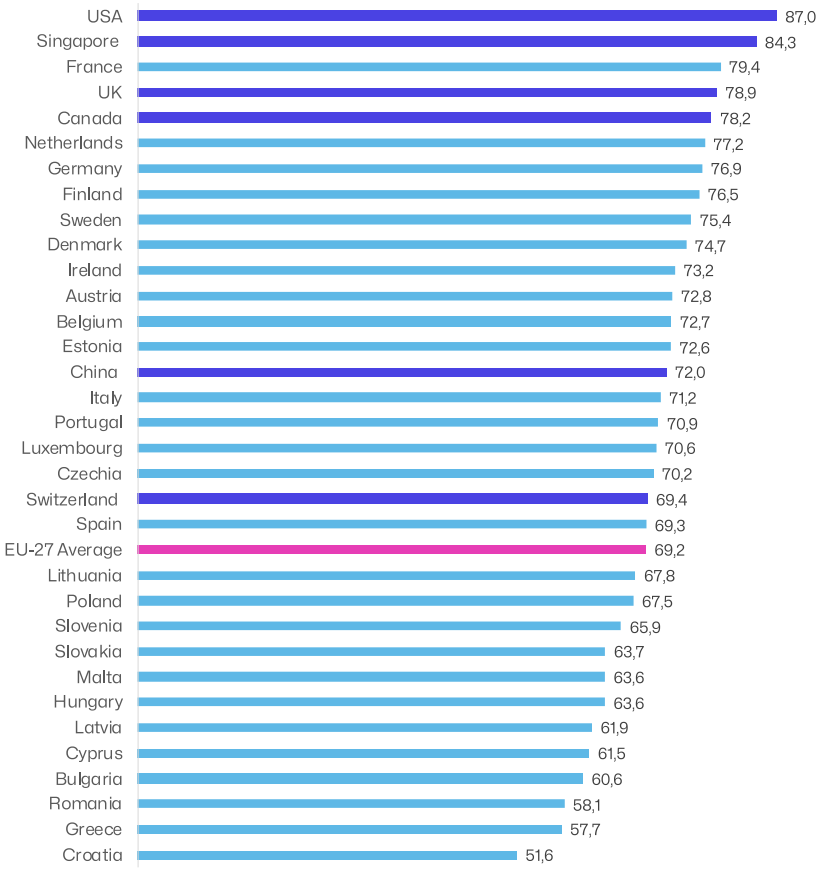
Government AI Readiness Index: Scores by Pillar* (2024)



*Government pillar dimensions: Vision; Governance & Ethics; Digital Capacity; adaptability
Technology sector pillar dimensions: Human capital; Innovation capacity; Maturity
Data and Infrastructure: Data representativeness; data availability; infrastructure

Source: Oxford Insights, Government AI Readiness Index 2024

Government AI Readiness Index in EU vs. others



CASE STUDY:

Case study: Singapore, the AI-Driven Citizen experience

Singapore shines as a reference in the digitalisation of public services and the integration of AI solutions, both in terms of its share of the AI First Govtech investment and the AI Readiness Index. It way has gone through some key elements, including strategic planning and policy support, and its implementation model.

Strategic planning & policy support

- The so-called AI Citizen Experience began in 2014 with the Smart Nation Initiative, a digital transformation plan to improve citizens' lives and build an inclusive digital society. The Digital Government Blueprint (DGB) sets the vision for a public sector that is "digital to the core and serving with heart."
- Singapore launched its National AI Strategy in 2019 to accelerate AI adoption and aims to become a global AI leader by 2030. The strategy focuses on five key areas: transport and logistics, smart cities, healthcare, education, and safety and security. It also introduced the Model AI Governance Framework (first issued in 2019) to ensure ethical and responsible AI deployment.

Implementation

- The implementation model is key to success, blending centralised coordination with agile, innovative teams. The government's Technology Agency (Govtech Singapore) plays a pivotal role in building digital platforms and solutions for the whole government.
- Rather than each ministry working in isolation, Govtech provides common infrastructure (like digital identity, data exchange platforms, and cloud services) that everyone uses, ensuring interoperability and economies of scale.

Impact

- Experimental units like Open Government Products (OGP) have been created to develop and deploy new AI tools rapidly. Since 2023, the OGP team has launched the Pair suite—a set of general-purpose AI solutions to boost productivity for public officers. These include AI assistants for automating routine tasks and powerful search tools using natural language processing.
- The "Moments of Life" initiative exemplifies this approach by creating one-stop digital services for key life events (e.g., childbirth). Through a single app, citizens can register a newborn, apply for baby bonuses, and schedule health check-ups, with AI-driven vaccination reminders.

Source: vic.ai

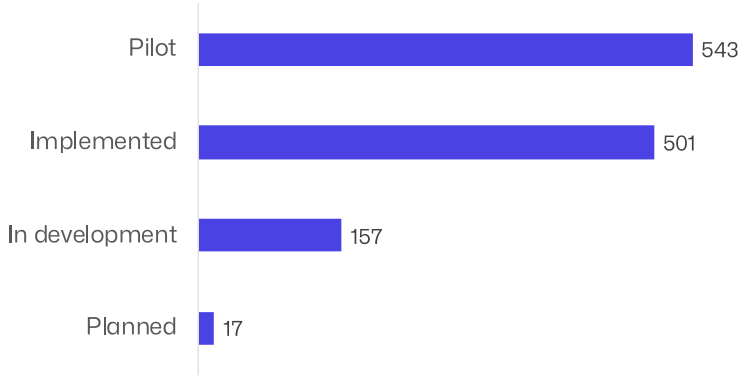
AI implementation in the EU public sector is active and expanding, surpassing that of the U.S. (with over 700 federal use cases) and the UK (74 use cases reported in 2023).

From pilots to implemented projects

Nearly half of AI initiatives in the EU public sector are still in pilot stages, indicating early adoption.

However, the significant number of implemented projects (41%) shows that AI is already reshaping public services, with governments moving beyond experimentation into real-world applications.

AI use cases in the European public sector by implementation stage (EU)

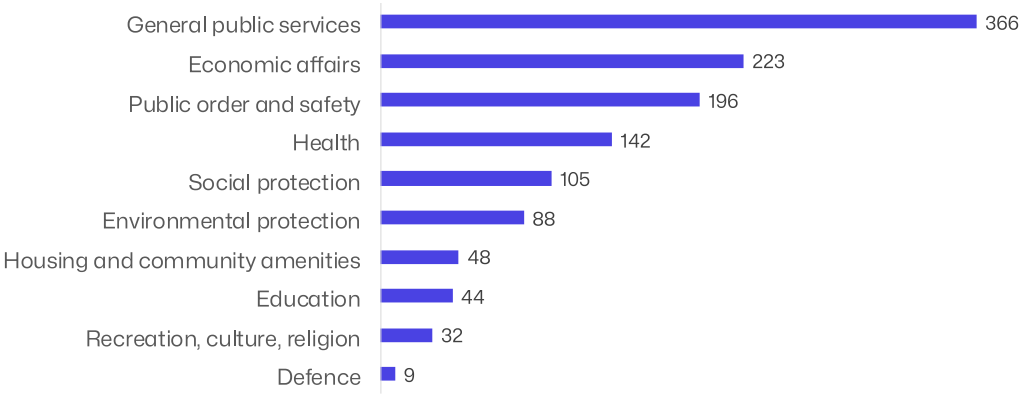


AI Adoption in Public Administration: Priorities in Services, Economy, and Safety

The highest number of AI use cases is in "general public services," followed by "economic affairs" and "Public order and safety.“ This suggests that AI is prioritised in areas with broad applications and a strong impact on citizens and the economy.

While sectors like Health and Social Protection also show a notable number of use cases, others, like Defence, Recreation, Culture, and Religion, have considerably fewer, indicating uneven adoption across policy domains.

AI use cases in the European public sector by policy domain (EU)



Source: European Commisison, Public Sector Tech Watch

EU is getting ready with the development of key AI Developments that provide certainty and stable frameworks to potential innovators

Regulatory Enforcement

- In January 2024, the EU announced the establishment of an **AI office** to oversee the implementation of the AI Act.
- In 2024 the **Spanish Agency for the Supervision of Artificial Intelligence (AESIA)** started operating. It is tasked with creating an innovation ecosystem and attracting talent in AI development and supervision.
- France has established a high-level government role focused on AI–its first-ever Secretary of State for AI and Digitalisation. This marks a clear political commitment to advancing AI and integrating it into digital public services.

Investment in AI Infrastructure

- France, Germany, and Poland have launched a “Weimar Triangle” political alliance to align their national AI investment plans with EU policy. The broader aim is to catalyse deeper European cooperation on AI.
- EU's €1.5 billion investment through **EuroHPC** for 7 AI factories: The EU is putting significant funding into creating "AI factories," centres with the computing power and expertise needed to develop AI.
- **Poland**'s commitment of €232 million to fund domestic AI models, including a large language model, shows a desire to have its own capabilities and potentially its own AI industry.

Strategic Visions

- In January 2024, the Netherlands released its **national vision for Generative AI**, and in July 2024, Italy updated its **AI Strategy 2024-2026**.
- In July 2024, Romania released its national **AI strategy**. Romania’s strategy highlights AI’s role in boosting economic competitiveness, modernising the public sector, and ensuring ethical deployment.
- The Slovenian organisation Danes Je Nov Dan (Today is a New Day) launched the **Public Sector AI Registry**. This tool provides citizens with insight into how AI systems are being used by Slovenia’s public institutions.

Source: Oxford Insights, Government AI Readiness Index 2024

“AESIA will be fundamental in Spain’s AI regulation, with three strategic pillars: market supervision, application certification, and an innovation sandbox. These will be aligned with the EU’s AI Act, ensuring safe, ethical deployment.”

Ignasi Belda
Director of AESIA
Spain

aesia

“Generative AI offers plenty of opportunities to tackle social issues and improve government services. Simplifying administrative processes, strengthening data analysis and improving communication.”

Zsolt Szabó, State Secretary for Digitalisation and Kingdom Relations Netherlands:

EU Member States embrace AI in public services, but the approaches, the strategic maturity and the implementation vary widely

All EU countries have addressed AI, but levels of maturity vary significantly

- All Member States have a national AI strategy or an equivalent policy framework. However, there is variation in the depth, specificity, and focus of these documents:
- Countries such as France, Germany, Spain, Italy, and Ireland have advanced strategies that include measures, funding, and ongoing pilot projects.
- Others, such as Croatia and Greece, have not yet published a fully-fledged AI strategy, though work is underway.

The public sector is increasingly recognised as a strategic priority

- More than 20 Member States have explicitly identified the public sector as a key area for AI deployment.
- Several strategies include dedicated chapters or strategic pillars focused on public administration (e.g. Ireland, Hungary, Italy, Malta, Spain).
- In other cases, public sector applications are integrated into broader digital transformation or data policy agendas.

Most strategies combine innovation with responsibility

A majority of countries are pursuing a balanced approach, incorporating actions to:

- Improve access to and quality of public data (open data, interoperability).
- Build internal capacity through civil servant training and the creation of specialised roles.
- Promote pilots and regulatory sandboxes to test AI
- Ensure ethical AI use through advisory committees, guidelines, or alignment with EU frameworks.

Dedicated public funding for AI in government remains limited

- While many countries support pilots and experimentation, not all have allocated specific funding for AI adoption in public services.
- Countries like France, Spain, Italy, Ireland, and Portugal have established dedicated budgets or leveraged EU recovery funds for public sector AI initiatives.
- Others rely primarily on cross-sectoral funding schemes or public-private partnerships.

Cybersecurity and data interoperability remain underdeveloped in many strategies

- Only a minority of national strategies include cybersecurity as a dedicated dimension in the context of AI deployment in government.
- Despite progress in open data, there is still no unified vision for interoperable public data ecosystems across the EU.

Strong alignment with the EU AI policy framework and the AI Act

- Most national strategies are being updated to align with the Artificial Intelligence Act and the European Data Strategy.
- This signals an increasing regulatory convergence among Member States, which enhances trust, cross-border collaboration, and interoperability in public sector AI applications at the European level.

3

AI in action: implementation levels in the EU in public services and potential barriers

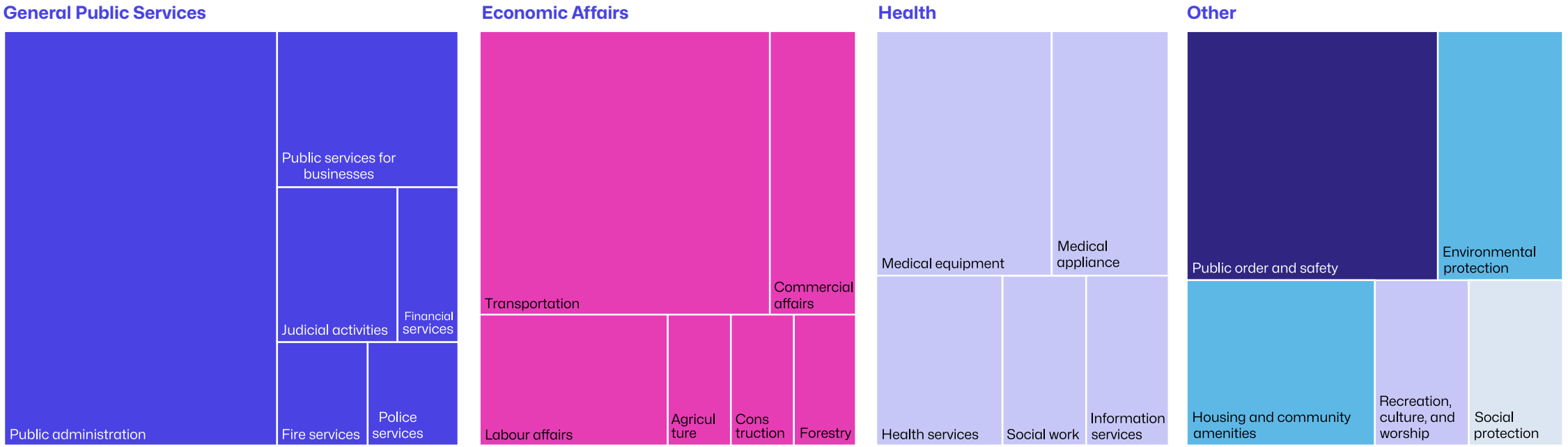
Although the use cases are arising across the EU, barriers to their development still remain

Prioritising AI in Public Services: Insights from the AI Adopt Study

General Public Services, Economic affairs and Health are the most implemented AI policy areas

- The European Commission's "AI Adopt" Study (2024) mapped AI implementation in the EU public sector by classifying projects into different public sector areas based on their deployment focus
- It found that General Public Services, Economic Affairs, and Health are the top priority areas in EU AI public sector initiatives–together accounting for approximately 75% of projects. The remaining areas are Public Order and Safety, Environmental Protection, Housing and Community Amenities, Recreation, Culture and Worship, and Social Protection.

Classification of public sector areas of deployed AI projects



Source: Adopt AI Study, European Commission (2024).

Tailoring AI Technologies to Policy Areas

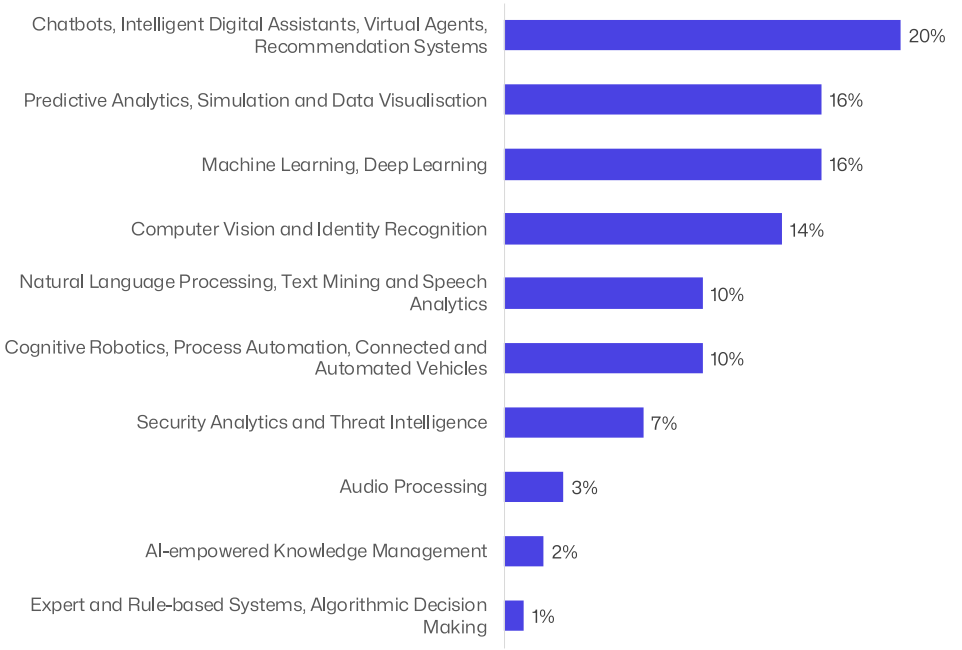
How different policy areas leverage specific AI Technologies

Based on the AI Watch typology, chatbots and assistants, machine learning, predictive analytics, and computer vision are the four most common AI technologies used in the public sector across Member States, accounting for approximately [65]0% of projects.

Depending on the policy area and particular use, certain technologies can be more relevant than others:

- AI projects in the **Public services** category include technologies that support digitalised services for citizens, such as chatbots, virtual assistants, and recommendation systems.
- In **Transportation**, AI solutions like predictive analytics are used to improve traffic flow and enhance mobility.
- In the **Health sector**, medical equipment projects integrate AI for diagnostics, including predictive analytics tools.
- For **Police services**, AI projects often involve computer vision and security analytics that help enforce regulations, such as detecting mobile phone use while driving or identifying fraud.

AI project typologies in the EU public sector (2024)



Source: Adopt AI Study, European Commission (2024).

In the EU, Smart Cities across Europe are pioneering the use of AI for public services

General Public Services

Denmark: Introduced chatbots to answer citizens' questions about municipal services.

- Muni is a friendly chatbot implemented by 37 Danish municipalities to help residents easily access digital public services.
- It will soon be able to do so orally, engaging in spoken dialogue with those who have a consultation for the city.

Economic Affairs/ Transportation

Verona tests AI sensor system to improve traffic congestion and road safety.

- Verona is trialling smart sensor technology at the busy Porta Nuova intersection to tackle traffic congestion and enhance road safety.
- This system gathers and sends traffic data to a local operations centre. Choosing Porta Nuova, a key junction near the train station connecting to major routes like the highways to Milan and Venice, allows the city to collect significant data on urban mobility and gain new insights into traffic patterns.

Health

Sotebotti Hester-City of Helsinki AI Register for health and social services.

- Sotebot Hester is a chatbot for the social services, health care, and rescue services divisions. Hester contains different knowledge databases that are combined into one chatbot.
- The same answer can be used in many other conversations, and this prevents overlapping answers to the same question, for example, between maternity and child care clinics and health stations. The customer can also move from Hester Chatbot to live chat.

"The same chatbot seamlessly operates across various health and social service pages, eliminating the need for clients to navigate to specific pages for specific inquiries.

A lot of attention is paid to user-friendliness and continuous development."

Janne Kantsila Senior Planning Officer - Robotics, CDO Office
City of Helsinki
Finland

Helsinki

How EU Member States are structuring AI public procurement strategies

According to the Adopt AI study, EU Member States can follow three main approaches to AI procurement:

1. Internal development:

- In Estonia, public-sector civil servants have access to guidelines and tools to understand better and carry out procurements that may involve AI.
- These include a verification questionnaire, instructional material, guidance material for data annotation, a data protection impact assessment, and an explanation of technological concepts, among other things.

2. R&D-driven:

- Hungary's AI strategy has set up a dedicated R&D and innovation procurement fund through the Artificial Intelligence National Laboratory for the various policy sectors it prioritises (manufacturing, healthcare, agriculture, public administration, transportation, logistics, and energy).
- In Slovenia, AI R&D and innovation projects have been funded in priority policy areas (health, industry 4.0, language technologies, and public administration).

3. Private-sector stimulation:

- In Wallonia (Belgium), public funds have been available to start AI projects since 2021. Thanks to the Start Ia12/tremplin IA13 plans, some projects supported public organisations in their digital transformation into AI.
- In Ireland, the government aims to drive growth in AI by purchasing and developing ethical and trustworthy AI applications, and by using public procurement policies to stimulate and encourage the industry to provide AI-based products and services to the government.

Source: Adopt AI Study, European Commission (2024).

AI procurement national approaches

Internal development

Estonia: Offers guidelines and tools for public procurement of AI.

R&D

- Hungary: Supports AI R&D and innovation.
- Slovenia: Funds projects in priority AI areas.
- France: Focuses on AI R&D.
- Spain: Promotes scientific research in AI.

Private-sector stimulation

- Belgium (Wallonia): Provides funding for AI projects.
- Ireland: Stimulates industry to supply AI technology.

Estonia: Kratt – National AI-Powered Virtual Assistants Framework

Estonia's Kratt System is a national framework for AI-powered virtual assistants that connect citizens to public services. Rather than a single chatbot, it uses an interoperability architecture linking multiple assistants across government agencies.

Built on Estonia's X-Road data layer and a central AI infrastructure, Kratt supports multilingual services and automates tasks like FAQs, document handling, and user guidance. Named after a mythical helper, it reflects Estonia's focus on service-oriented AI. At its core, the system includes **Bürokratt**, the flagship virtual assistant that embodies this framework by offering citizens a single conversational entry point to navigate and access public services seamlessly.

How it was sourced & developed

- Kratt was designed by the Ministry of Economic Affairs and Communications as a national framework, using open standards and Estonia's X-Road for secure data exchange.
- Bürokratt, the flagship implementation, was developed through targeted calls to AI experts and modular mini-tenders, using Pre-Commercial Procurement (PCP) to test and deploy solutions iteratively

How it works

- Uses a centralised AI architecture with templates and shared training data
- Individual agencies deploy chatbots to serve specific domains
- Users access services through websites, portals, and embedded assistants

Impact & Recognition

- Over 120 public institutions have adopted or initiated chatbot solutions using the Kratt framework
- The most-used Kratt assistant handled over 500,000 interactions in its first year
- 90% of tasks were resolved without human intervention
- Manual workload in frontline services was reduced by 30–50%
- Bürokratt received the European Public Sector Award (EPSA) 2023 in the "Cross-border and Cross-level Cooperation" category

"We take great pride in knowing that our AI-led public services have significantly improved the lives of many of our population, transforming the citizen user experience for the better.

Bürokratt has saved users time and effort by enabling them to communicate with the government through one single point,"

Andres Sutt
Minister of Entrepreneurship and IT 2021-2022
Estonia

bürokratt

Ireland: GovTech Delivery Board and AI in Public Service Reform

Since 2021, Ireland has taken a structured and citizen-centred approach to adopting artificial intelligence in the public sector, guided by its National AI Strategy–AI: Here for Good.

At the heart of this effort is the **GovTech Delivery Board**, a permanent, interdepartmental governance body jointly overseen by the Department of Public Expenditure, NDP Delivery and Reform and the Department of Enterprise, Trade and Employment.

The Board coordinates strategic priorities, ensures regulatory compliance (including GDPR and the forthcoming EU AI Act), and supports cross-government collaboration and capability-building.

How it works

- Establishes transparent governance and ethical frameworks for AI use in public services
- Supports pilot projects and helps scale successful use cases
- Facilitates innovation in public procurement, including pre-commercial procurement for AI solutions
- Identifies high-impact sectors (healthcare, transport, justice) for early adoption
- Aligns with national strategies for digital transformation and skills development

Impact & Recognition

- Over 30 public bodies have launched AI pilots or automation projects
- Cross-departmental collaboration has accelerated adoption speed and coherence
- Projects include fraud detection in social protection and automated decision support in planning services

Example of key outcomes:

- Local authorities in Dublin and Cork have introduced AI-assisted tools to support urban planning decisions and streamline permit processing.
- These systems analyse zoning laws, land use, and past permit data to give planners data-driven recommendations and flag potential issues.
- Pilot programs show a 25–30% reduction in processing times and more consistent evaluations of complex cases.

"Artificial Intelligence presents Government with opportunities to improve public services.

By making it easier for public servants to deploy AI solutions, we can address old problems, generate value for the public, and deliver better public services."

Jack Chambers,
Minister for Public Expenditure,
Infrastructure, Public Service Reform and
Digitalisation
Ireland

Barriers/challenges to AI-Enabled GovTech solutions in the EU

AI adoption in the public sector faces a mix of legal, technical and organisational barriers

- There's a number of key barriers to AI adoption in the public sector, including complex procurement, data challenges, regulatory uncertainty, and ethical concerns like algorithmic bias.
- These obstacles vary across Member States, reflecting differences in legal frameworks, infrastructure, skills, and national responses.

Legal and Regulatory

- Navigating the legal and regulatory landscape is one of the foremost challenges for AI in the public sector.
- Governments operate within strict legal frameworks that sometimes conflict with AI systems' agile, data-intensive nature.

Technical: Infrastructure and Data

- Even with political will and legal permission, public administrations often face technical challenges in developing and deploying AI.
- AI systems require robust digital infrastructure and high-quality data, which many governments–especially smaller or less digitally advanced states–are still working to achieve.

Organisational

- Transforming government through AI is not just a technical endeavour – it requires organisational change.
- Many barriers to AI adoption in GovTech stem from the people, processes, and structures within public administrations. These include limited skills, resistant cultures, and fragmentation across departments.

Financial and Procurement

- Deploying AI in government requires investment–not only in technology but also in skills, change management, and ongoing maintenance.
- Financial constraints often limit the scale and sustainability of GovTech AI projects, while existing procurement models make it hard to harness innovative solutions cost-effectively.

Ethical and Social

- Ethical and societal challenges around AI in GovTech are essential. Deploying AI in public services is not only a technical implementation; it also requires public acceptance, trust, and legitimacy.
- Governments must contend with concerns about bias, fairness, transparency, and inclusion when introducing AI into decisions that affect people's lives.

4

Innovation Public Procurement as a tool to fostering AI public services

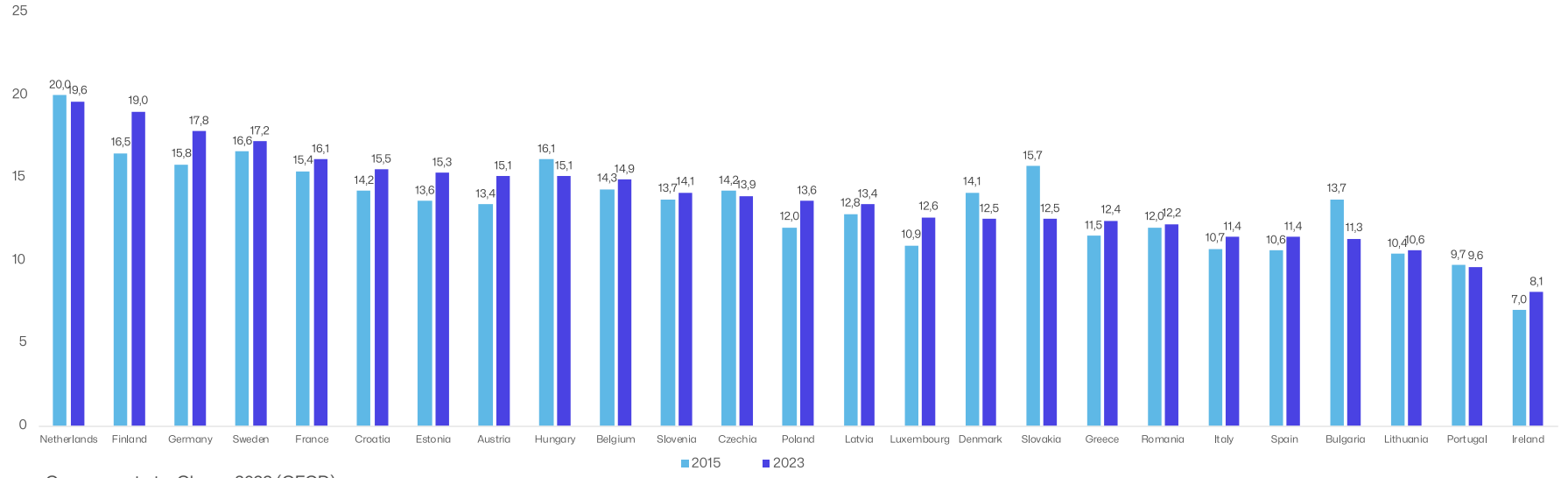
Public procurement is a tool that has potential to accelerate the AI transformation of public services and drive growth for the EU's AI GovTech ecosystem

Public procurement across the EU economies is a powerful instrument for fostering innovation and enhancing the delivery of public services

Each year in the EU, over 250.000 public authorities spend approximately €2 trillion (almost 14% of GDP) on procuring services, works and supplies. Innovation-oriented public procurement is a key instrument for driving innovation in public services, particularly through the adoption of AI-enabled solutions

In 2023, public procurement as a share of GDP varied widely across EU member states, ranging from 8.0% in Ireland to 19.6% in the Netherlands. Between 2015 and 2023, the EU average increased slightly from 13.4% to 13.8% of GDP.

Government procurement spending as share of GDP in the EU, 2015 - 2023



Source: Government at a Glance 2023 (OECD).

Setting the stage to increase the participation of innovative technologies and AI in the delivery of public services

Innovation in public procurement refers to the systematic introduction of novel approaches, processes, technologies, or solutions within the procurement function of government entities

The European Commission defines innovation procurement as "*any procurement that buys the process of innovation –research and development services – with (partial) outcomes or buys the outcomes of innovation*".

It allows the public sector to use its purchasing power to act as an **early adopter of innovative solutions** that are not yet available on a large scale commercially. Both categories (the buying process of innovation and the buying of innovation outcomes) can be done using different procurement procedures or methods.

Innovation Public Procurement can be regarded as the 'sleeping giant' of innovation policy because it has the potential to furnish a powerful **demand-side impetus to innovation and growth**. Its impact can be even further amplified when this approach is combined with innovation policies on the supply side, which need to be aligned with national and regional strategic approaches.

AI can potentially improve and transform public service delivery and, therefore, have a relevant impact on citizens' lives. Public entities are **progressively trying to incorporate AI and algorithmic decision-making systems into their operations** as they offer significant potential to enhance public services and optimise operational efficiency.

When purchasing AI systems from the market, fit-for-purpose public procurement mechanisms can enable agile, trustworthy, and cost-effective access to AI systems developed by third parties, ranging from large companies to start-ups and entrepreneurs

"Innovation Procurement can be used as a strategic instrument to develop and implement Innovation in Europe.

The varied tools that it provides enable Public Buyers (at national or EU level or through joint cross border procurement which has the added value of showcasing a great demand) to "derisk" the inherent risk of a technology that is currently under development fostering its wide uptake.

Stephan Corvers
Founder, Owner & CEO at Corvers Procurement Services
Netherlands

Accelerating AI adoption through strategic innovation procurement

Innovation Public Procurement can be essential for the future of public services in the EU

Procurement is used in all the different spending functions, covering the whole spectrum from health to environmental protection, public order, and economic affairs:

Shape markets and create new markets

Foster the market uptake of innovative products, services and works

Increase the quality of public services

Support access to markets for businesses, especially small and medium-sized enterprises (SMEs)

Boost economic growth, innovation and smart investment

Have a positive impact on mobility, health, education, etc. due to the high volume of public spending

Accelerating AI adoption through strategic innovation procurement:

- Innovation Public Procurement provides an opportunity to integrate AI into public services through its structured, step-by-step approach: PCP supports R&D and testing of AI solutions still under development, while PPI facilitates market entry of more mature AI technologies.
- By embedding AI considerations into each phase—from challenge definition and solution design to evaluation—governments can de-risk cutting-edge AI adoption, fostering innovative solutions that are aligned with the public sector's real-world needs.

AI procurement national approaches

Pre-Commercial Procurement (PCP) can be used when there are no near-to-the-market solutions, and new research and development are needed. PCP can then compare the pros and cons of competing solutions. This will enable de-risking the most promising innovations step-by-step through solution design, prototyping, development, and first-product testing. PCP does not entail the procurement of the innovative solution itself by a contracting authority, it only supports the procurement of the R&I service.

Public Procurement of Innovative solutions (PPI) is used when challenges can be addressed by innovative solutions that are not yet available on the market and are near to be market ready. It needs close collaboration between contracting authority and supplier in early stage.

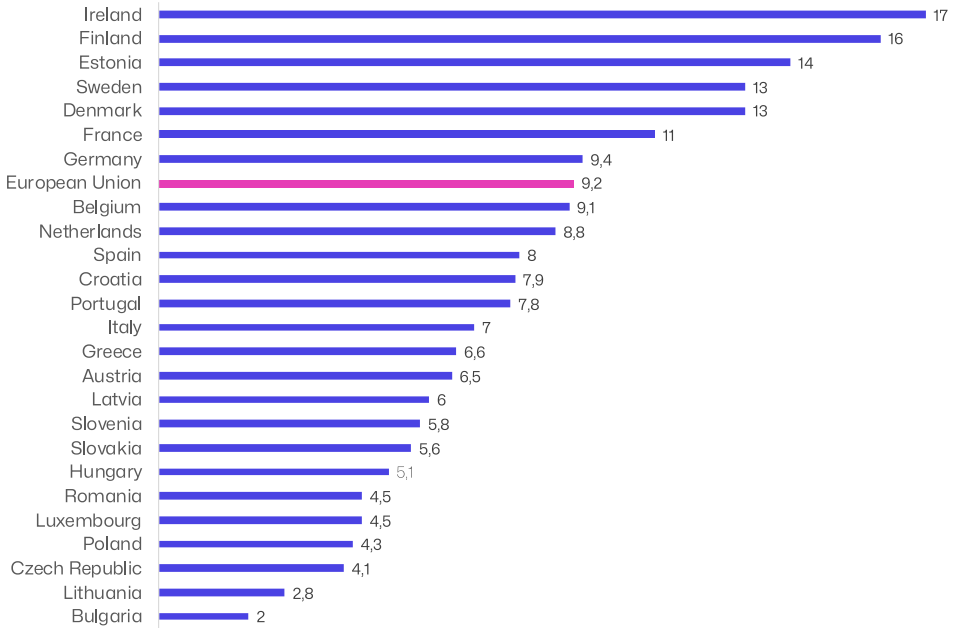
Innovation Partnership (IP)
A combined R&D and procurement procedure – the public buyer procures both the development and, if successful, the purchase of the final solution in one procedure.
It creates a long-term partnership between the buyer and supplier(s), with phased development, testing, and eventual purchase of the innovation.

Innovation procurement levels across the EU

Ireland and Finland lead on innovation procurement volume (as a share of total public procurement)

- Innovation procurement represents 9.2% of total public procurement across the EU, though levels vary significantly between countries.
- Ireland and Finland stand out with notably higher shares, both exceeding 15%.

Innovation procurement as a share (%) of total public procurement (2022)



Source: European Commission - European Innovation Scoreboard 2024

"Government will lead the way and drive growth in AI by purchasing and developing ethical and trustworthy AI applications, and by using public procurement policies to stimulate and encourage industry to provide AI based products and services to government.

We want Ireland's public service to become a showcase of AI adoption and reference site for industry solutions. By doing so, this will help to build public trust in AI."

"AI - Here for Good"
A National Artificial Intelligence Strategy for Ireland, 2021

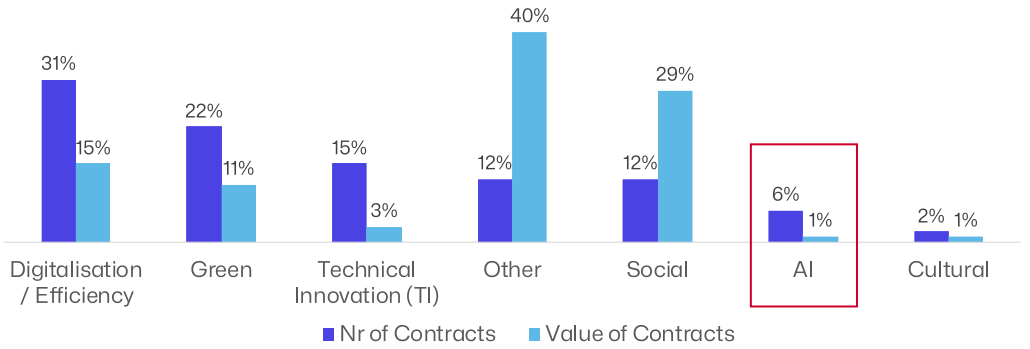
Rialtas na hÉireann
Government of Ireland

AI in EU Innovation Partnership Contracts

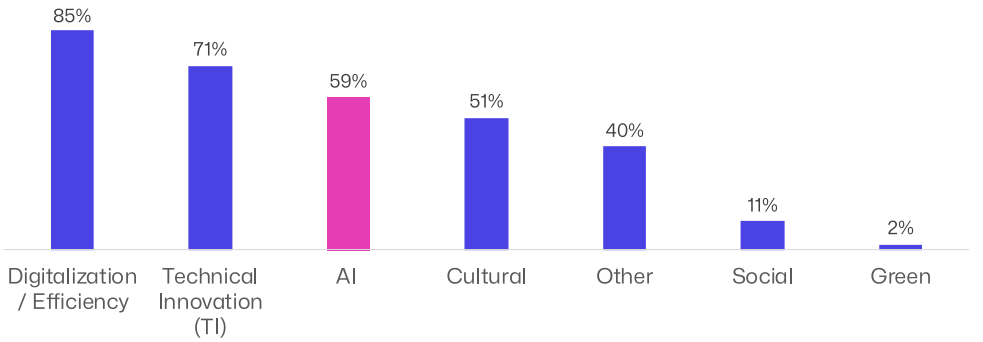
Innovation Partnerships offer clear potential for AI development, yet uptake remains limited in practice

- Innovation Partnerships are ideal for public procurement of AI solutions that need custom development, such as predictive tools or language models. They allow public buyers to co-design and scale them with startups.
- The European Commission recognises Innovation Partnerships as a key tool to procure trustworthy, tailored AI in areas where off-the-shelf solutions don't yet exist.
- Over half of all contracts support the EU's twin transition agenda, with 31% focused on digitalisation and 25% on green objectives.
- However, contracts with AI at their core still represent a small share of total Innovation Partnership awards—particularly in terms of value, accounting for just 1% over the period 2016–2022.
- Within these AI-related contracts, SMEs and startups accounted for 60% of the total contract value.

Innovation Partnerships by Policy Objective- Nr of contracts Vs Value of contracts (2016-22)



Innovation Partnerships by Policy Objective % of SME participation (2016-22)



Source: European Commission 2023 - Innovation Partnerships (IP) Overview of TED Data 2016-2022

The state of Innovation Public Procurement in the EU shows significant room for improvement.

Europe shows a modest overall level of advancement in Innovation Public Procurement, with significant variation across countries

The benchmark on Innovation Public Procurement, based on 10 key indicators, ranks countries by the extent to which they have developed and implemented an innovation procurement policy framework. The European average stands at 33%.

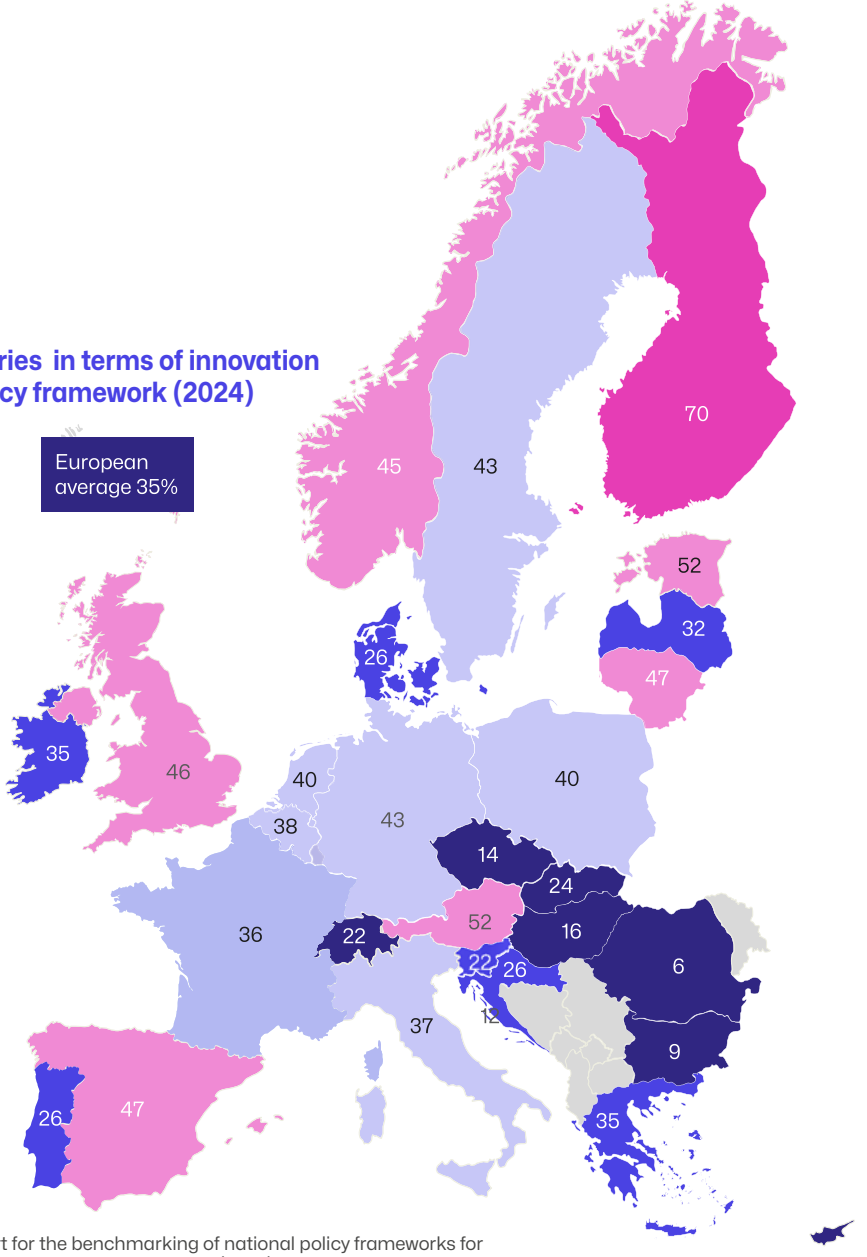
Finland ranks first and is the only solid performer among the 30 countries analysed.
It has adopted a comprehensive framework, activating all elements of a structured innovation policy, with an intensity of 70.2%. Finland is the only country with an Action Plan featuring concrete measures to mainstream innovation procurement. This includes a spending target, KPIs for all public buyers, and a national competence centre with regional satellite offices.

A group of **moderate performers** demonstrates political commitment to innovation procurement but lacks fully developed capacity-building systems, spending targets, and monitoring mechanisms.

Modest performers—including Germany, France, and Italy, the EU's three largest economies—show early progress but still lack key elements needed for full mainstreaming.

At the lower end, many countries operate with frameworks covering less than one-third of their potential and limited commitment. The weakest performers, scoring below 25%, face fragmented systems and require foundational improvements.

Clusters of countries in terms of innovation procurement policy framework (2024)



Higher

Solid	≥65%
Moderate	45%-64%
Modest	36%-44%
Low	24%-35%
Lowest	0%-24%

Lower

Source: Synthesis report for the benchmarking of national policy frameworks for innovation procurement. European Commission (2024).

Low uptake across key areas of innovation procurement

Key weaknesses and improvement priorities across Europe's innovation procurement policy frameworks

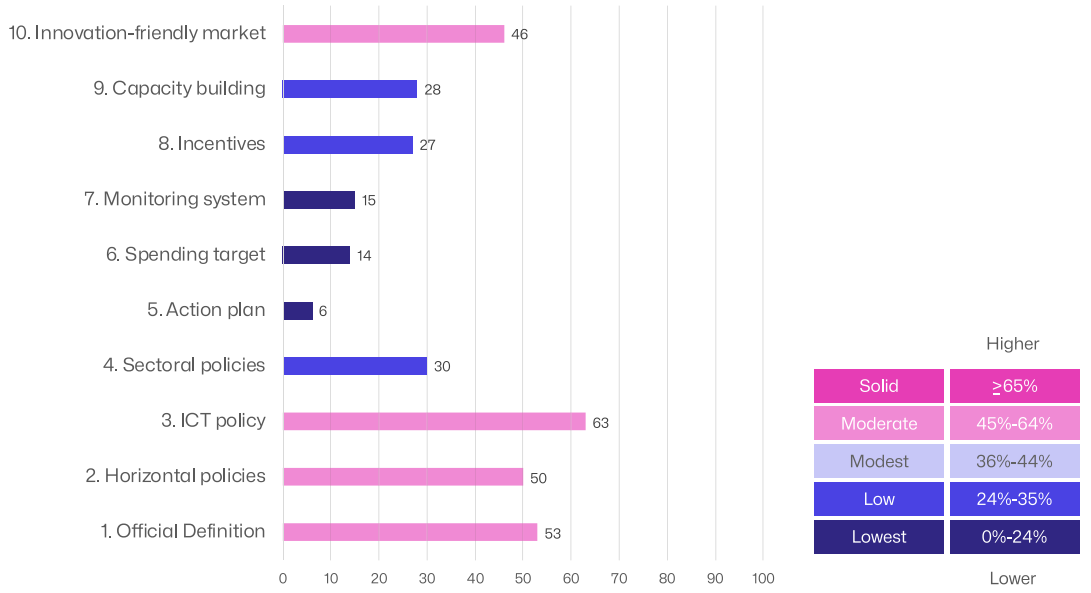
According to the EC's benchmark on Innovation Public Procurement 2024, the most underdeveloped areas of Europe's policy frameworks–**where urgent action is most needed–are those related to implementation tools such as sectoral strategies, action plans, funding targets, monitoring, incentives, and capacity building.**

Average scores across these areas remain below 35%. These gaps reflect a common failure to translate political ambition into operational commitment, leaving strategies under-resourced and untracked.

Sectoral policies, buyer incentives, and capacity-building measures are slightly higher, though still weak. These suffer from limited inter-ministerial coordination and a lack of practical tools to support public buyers, often reduced to general awareness rather than robust capability.

Wider improvement is also needed: no area of the policy framework scores above 65%, meaning no dimension currently demonstrates solid or consistent performance across Europe. Moderate results are seen in regions like official definitions, horizontal policies, and innovation-friendly markets, while ICT policies show the highest, though still uneven, performance.

European average performance per indicator of the 2024 policy framework benchmarking



Source: Synthesis report for the benchmarking of national policy frameworks for innovation procurement. European Commission (2024).

CASE STUDY:

Austria's AI Strategy through innovation procurement

Key strengths of Austria's innovation procurement system

Austria ranks among the top three performers in the European Commission's 2024 benchmarking. Its success lies in a well-integrated national framework, strong political backing, and a robust public and private actors ecosystem.

Innovation procurement is actively used to support strategic goals—including the uptake of trustworthy AI—and is coordinated through dedicated institutions and funding instruments.

Strategic alignment with national and sectoral goals

- Innovation procurement is explicitly embedded in Austria's **R&D, digital, sustainability**, and **AI** strategies
- **AI Mission Austria 2030** positions innovation-oriented public procurement as a key lever to deploy AI in the public sector, particularly through the use of pilot projects and real-life labs ('Reallabore').
- **Sectoral policies** (health, mobility, energy, environment, culture) also reference innovation procurement tools.

Operational infrastructure and support mechanisms

- The **PPPI Service Centre** is Austria's central coordination hub, funded by two federal ministries.
- Agencies like **FFG** and **AWS** provide financial and technical support for innovation projects, including AI-related pilots.
- Tools and templates are made available to public buyers to support implementation.

Support for SMEs and technology adoption

- Funding instruments and advisory services help **startups and SMEs** access public sector opportunities.
- Cross-sector pilots promote AI **and other emerging technologies** through demand-driven procurement.

Challenges to address

- No national target or tracking system for innovation procurement spending.
- Limited use of innovation-friendly tools like market consultations and value-based criteria.

AIM AT 2030
Artificial Intelligence Mission Austria

"The potential of innovation-oriented public procurement to create markets for new AI products and services will be increasingly leveraged.

The public sector should become more strongly positioned as a demanding customer of innovative AI solutions and as a driver of AI diffusion.

In doing so, public procurement processes and practices will be reviewed and further developed, and procurement competence in public administration will be strengthened."

Artificial Intelligence Mission Austria 2030 (AIM AT 2030)
Strategy document, 2021

Source: symphony-solutions.com

CASE STUDY:

Ireland uses Innovation Public Procurement to enhancing the Irish language's presence and usability in Generative AI models preserving the natural diversity of the EU

Towards Irish Language Capability in Generative AI Innovation Partnership

The regional authority responsible for the economic, social and cultural development of the Gaeltacht - "Údarás na Gaeltachta"- aims to enhance the Irish language's presence and usability in Generative AI models.

The initiative is part of a broader strategy to integrate Irish language resources into **cutting-edge AI** applications, ensuring that the language can be used effectively in digital platforms and applications from public services, such as real-time speech processing, intelligent query responses, translation, and cultural context preservation.

Open Market Consultation

To fulfil this goal, an Open Market Consultation conducted by the regional authority provides information about a potential future Public Procurement of innovative solutions (PPI) concerning the utilisation of the capabilities of Generative Artificial Intelligence (AI), Natural Language Processing (NLP) and Large Language Models (LLM) to enhance the Irish language's presence and usability in Generative AI models overall, in collaboration with other public entities in Ireland.

The Open Market Consultation is the first step in implementing innovation in public procurement. It is an open dialogue between procurers and the market in which the procurers ask for the market's view to identify its ability to meet the procurer's needs.

It will reveal whether the need is met by a readily available commercial solution or whether R&D (PCP) or close-to-market innovation (PPI) is needed. When the solution to the need is not readily available, the open market consultation will help the public procurer choose the correct form of innovation procurement.

Údarás na Gaeltachta

"Irish is unique as a minority language because of its constitutional status as the State's national language and its recognition as an official language of the European Union.

Our view is, therefore, that this Plan will serve as a model for the future development and strengthening of other minority languages."

Catherine Martin TD
Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media.
Jack Chambers TD
Government Chief Whip and Minister of State for the Gaeltacht and Sport

Source: symphony-solutions.com

CASE STUDY:

Innovation Procurement in the Flanders region

Flanders Programme for Innovation Procurement (PIO)

The PIO is the main instrument through which the Flemish Government promotes the strategic use of public procurement to foster innovation. It is managed by VLAIO, the region's innovation agency.
PIO offers a structured framework to support Flemish public authorities in procuring innovative solutions to complex policy challenges.

By prioritising digitalisation projects, PIO supports the development and adoption of technologies such as data analytics, decision-support tools, and AI-powered mobility solutions.

Positioning
It acts as a regional competence centre and reference point for all procurers–from municipalities to hospitals and universities–and is closely aligned with Flanders' broader innovation strategy, making it one of the EU's most mature regional models.

Objectives:
- Improve the efficiency and quality of public services through innovation
- Stimulate innovation uptake by SMEs and other suppliers
- Support solutions to significant societal challenges in areas such as health, mobility, climate, and digital transformation

Support provided:
- Tailored guidance on legal, technical, and procedural aspects of innovation procurement
- Training and access to practical tools, templates, and good practice examples
- Co-financing of projects: Up to 50% of eligible procurement costs. Up to €1 million per project for implementation. Up to €40,000 for preparatory work, such as expert advice and market consultation

Among all innovation procurement projects supported by PIO in Flanders, Digitalisation is the most common topic, with 65 projects. It is followed by Circular Economy and Energy, highlighting a strong focus on technological and sustainable transformation.

Example: 1700 info-line supported by Artificial Intelligence

To improve efficiency and responsiveness, the Flemish Infoline ('1700') is integrating AI into its existing citizen enquiry system.

The project focuses on using Natural Language Processing, Machine Learning, and Speech Technologies to streamline how questions are understood, routed, and answered.

Instead of building a new system, AI modules are embedded into current workflows to help identify user queries faster and deliver standardised answers through the right operator–reducing response times and improving service quality.

Source: VLAIO, Flemish Agency for Innovation and Entrepreneurship.

CASE STUDY:

Waterschapsbedrilf has transformed the way in which 17 wastewater treatment plants and 150 sewage pumping stations are managed.

Integrating AI and big data in wastewater management

Within a full-blown procurement project approach tackling innovation and circularity (Artificial Intelligence models for the water sewage system of Het Waterschapbedrijf Limburg), WBL is implementing Machine Learning applications on a Big Data platform to monitor the performance of all WBL sewage pumping stations and detect abnormal behaviour at an early stage.

The water authority manages a digital twin, a virtual copy of the entire wastewater treatment system. The system's performance continuously improves by using machine learning and artificial intelligence.

A PCP-led response to complex public infrastructure needs

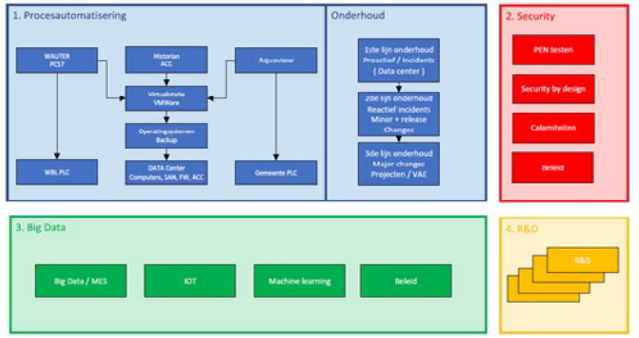
The full-blown innovation procurement project combined three lots (Process Automation, Security, and Big Data) with a precommercial procurement (PCP) that builds on and supports the three lots.

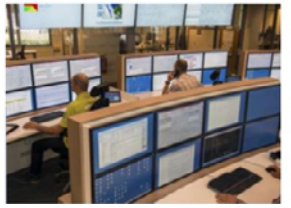
Thanks to a first Open Market Consultation (OMC), it was clear that no technology was available that combined the Internet of Things (IoT), Data Analytics, Artificial Intelligence (AI), and deep knowledge about the transportation of wastewater and wastewater treatment plants to meet the needs of WBL. This pointed to PCP as the best procurement procedure.

The PCP results are integrated into the Big Data PPI to support process automation and security.

waterschapsbedrijf limburg

WBL's Integrated Architecture for Smart Wastewater Management





Source: VLAIO, Flemish Agency for Innovation and Entrepreneurship.

4

Innovation Public Procurement as a tool to fostering AI public services

Participation of startups in innovation procurement remains below potential. In some key policy areas - such as GovTech or Transport & Mobility - local AI startup presence is limited

Why public procurement matters for AI startups

Public procurement offers AI Startups early access, funding reliability, and strategic impact

Public procurement is evolving—and is increasingly startup-friendly:

1. Public buyers can be early adopters of AI, offering startups a pathway to deploy, test and refine solutions in real-world, high-impact environments (e.g. health, transport, justice, climate).
2. Governments across the EU are actively seeking AI-powered solutions to accelerate the digital transition—think predictive analytics, language models for public services, fraud detection, intelligent traffic systems, or personalised education platforms.
3. Procurement is competitive and transparent, which means that a startup with the best solution—regardless of size—can win.
4. Public buyers must pay within 30 days (60 in some limited cases), providing reliable cash flow, often critical for early-stage AI ventures.
5. All opportunities are publicly accessible online, and tender platforms are increasingly AI-tagged or searchable by technology focus.
6. Innovation-friendly procedures like the Innovation Partnership are designed specifically for solutions that don't yet exist on the market—perfect for cutting-edge AI.
7. Even if the call looks too big, startups can bid for just one lot, join a consortium (e.g. with a systems integrator), or participate as a subcontractor, supplying an AI module within a broader solution.
8. Contracts are not awarded solely based on price. Public buyers consider quality, functionality, scalability, and, increasingly, ethical AI principles (explainability, fairness, data protection).

"The real fuel for GovTech startups is not venture capital investment but public procurement.

To drive sustainable growth, we must move beyond subsidies and towards structured contracts and procurement processes."

Nicolas Brien
Former President of the European Startup Network & Founder of WASTETIDE
France

Source: adapted from "Scale up with The public sector", Innovation Procurement for startups brochure 2023

SME and startup participation in public procurement/ innovation procurement

Participation of SMEs in general public procurement remains below potential:

- According to the Single Market Scoreboard, SMEs receive around 29% of public contract value and 50–60% by number of contracts, varying by country.
- Despite targeted policy efforts, these figures have remained broadly stable since 2017, with no consistent upward trend.

Innovation procurement is more SME-friendly and delivers results:

- According to European Commission studies, in EU-funded Pre-Commercial Procurement (PCP) initiatives, 71.5% of the total contract value has been awarded to SMEs (rising to ~86% when including consortia with SME partners).
- 86% of companies completing PCP Phase 3 successfully commercialised their solutions, showing stronger results than traditional R&D programmes.

Startups have strong success rates–if they participate:

- A 2021 European Commission study showed that only 29.1% of startups and young companies had attempted to access public procurement.
- Yet, among those that did, 91.3% succeeded in winning at least one contract.
- 71.4% of startups expressed interest in participating, showing high latent demand if conditions improve.

While innovation procurement mechanisms are more favourable to SMEs and startups, overall awareness, access and participation remain limited.

Source: European Commission: Impacts of EU funded Pre-Commercial Procurements"; SME Needs Analysis in Public Procurement

"We need to integrate public procurement in the regional ecosystems and teach public procurers how to buy innovation.

Now, a very low amount of the public procurement goes to startups. The actual KPIs required aren't designed for startups.

Finally, we must teach startups how to get procurements."

Vassilis Tsanidis
Senior Innovation Procurement Advisor
European Innovation Council

European Innovation Council

"There has been a significant shift in recent years with increased involvement from the European Commission in GovTech.

Despite this progress, startups still face challenges navigating national government regulations."

Johnny Hugill
Co-Managing Director
PUBLIC, UK

PUBLIC

Barriers preventing SMEs/Startups from accessing innovation procurement and the actions needed to remove them

- The 2021 European Commission report "SME Needs Analysis in Public Procurement" identified key barriers preventing small businesses and startups from accessing innovation procurement, and outlined targeted actions to improve their participation, ranging from simplified procedures to better visibility and support mechanisms.

- Since then, the EU and several Member States have taken steps to implement these recommendations—such as promoting innovation-friendly procedures and establishing national competence centres—but overall SME/Startup participation remains below potential.

Main Barriers Identified	Key Actions Proposed
1. Excessive administrative burden Complex documentation, rigid formats, and excessive requirements can deter smaller firms.	**Simplify procedures** Standardise forms, use electronic submissions, and reduce unnecessary bureaucracy.
2. Eligibility criteria are too strict Turnover thresholds, experience conditions, insurance requirements can exclude newer firms.	**Adapt selection criteria** Allow alternative forms of proof (e.g. innovation capacity, track record in R&D) and reduce thresholds.
3. Tenders hard to find and poorly labelled Startups often don't know where to look for innovation opportunities, or are not clearly marked.	**Improve visibility and labelling** Add innovation-related tags or filters in platforms like TED; engage startup ecosystems to share opportunities.
4. Contract sizes too large for SMEs Many innovation tenders are designed for large incumbents or integrators.	**Encourage lot division and SME-friendly design** Split contracts into smaller lots; allow joint bids and subcontracting models.
5. Short preparation timelines Limited timeframes prevent SMEs from preparing high-quality bids, especially without dedicated procurement staff.	**Extend bidding deadlines where possible** Allow more time for complex or innovative tenders to attract wider participation.
6. Perception of high risk and low win rate Many SMEs believe they cannot win, especially in innovation procurement where risks and uncertainties are high.	**Use SME-targeted procedures** Promote Innovation Partnerships, PCP and simplified competitive dialogue for innovation.
7. Lack of support and guidance Many SMEs lack the know-how to navigate public procurement processes, especially for cross-border tenders.	**Provide hands-on support** Set up national innovation procurement competence centres; offer training, coaching and legal templates.

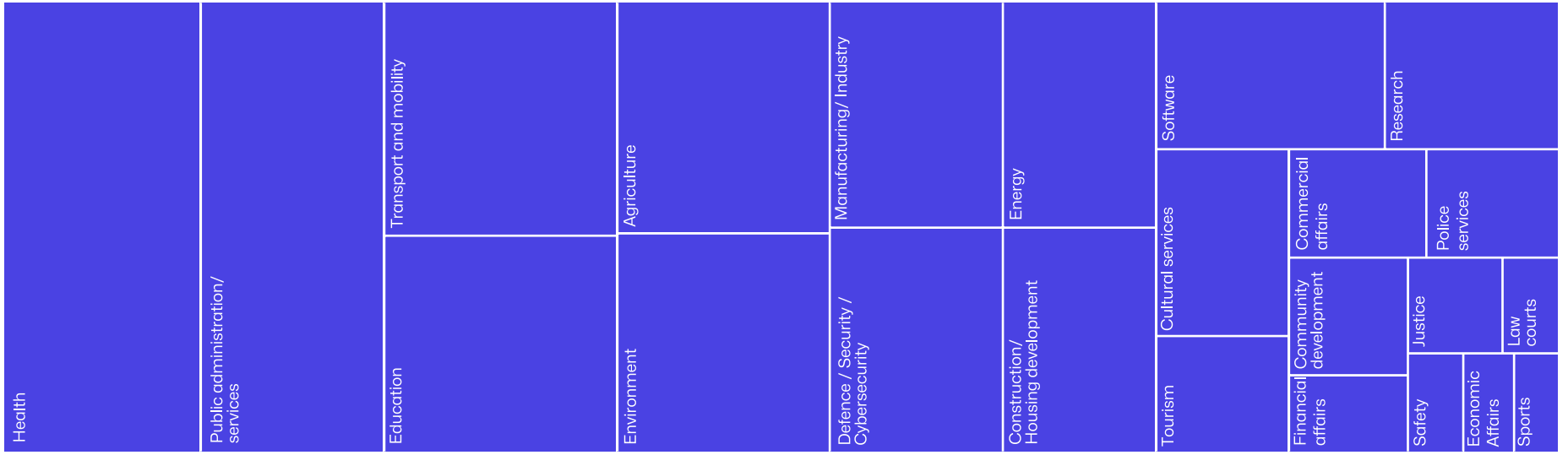
Source: SME Needs Analysis in Public Procurement (2021)

AI policy priorities in the public sector across the EU

Strategic focus areas highlight where AI use in the public sector is set to grow, especially in Health and Public Administration/Services

- The European Commission's Adopt AI study (2024) offers an overview of priority areas identified in **national AI strategies**, based on a quantitative analysis of AI-focused initiatives and their stated objectives. The size of each box reflects how frequently each policy sector is mentioned across national AI programmes.
- This classification reflects **policy priorities**, not actual AI project deployments (covered in earlier chapters of this report). It serves as a proxy for potential future demand for AI solutions in the public sector, based on how often these domains are referenced in official strategies.
- According to this analysis, the top public sector focus areas for AI are **Health** (12.8%), **Public Administration/Services** (GovTech) (12.1%), **Transport and mobility** (8.0%), and **Education** (7.4%), reflecting a strong emphasis on essential services and societal infrastructure.

Classification of public sector AI priority areas according to national AI strategies (EU countries with defined strategies, 2024)



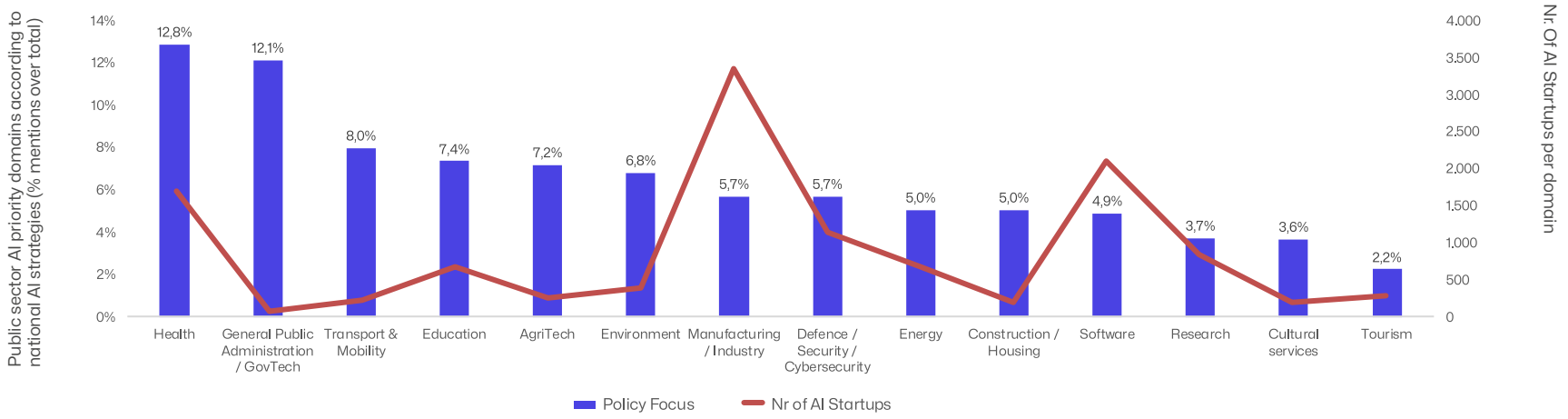
Source: Adopt AI Study, European Commission (2024).

Alignment between AI policy priorities and startup presence across key domains

Domains like GovTech and Transport & Mobility show strong policy interest, but currently have comparatively limited AI startup activity across the EU

- When comparing the number of startups in the 14 policy domains most prioritised by national AI strategies—together accounting for 90% of overall strategic focus—the most significant gaps appear in **General Public Administration/GovTech**, followed by **Transport & mobility, Agri-tech, Environment**, and Construction/housing development. These domains show high policy interest in AI but a relatively low number of AI startups across the EU, highlighting a potential ecosystem gap.
- One way for the EU to address this gap is to use innovation procurement tools more extensively to encourage AI startup activity.
- Areas such as Health, Energy, or Defence/Security appear more balanced regarding AI startup presence vs. potential policy demand. At the same time, Manufacturing/Industry and Software show a higher concentration of local AI startups, suggesting greater maturity and better public sector access to innovation in these fields.

Classification of public sector AI priority domains according to national AI strategies (Top 14) Vs Nr. Of AI Startups in each domain



Source: AI priority domains: Adopt AI Study, European Commission (2024); Nr of startups: Dealroom. AI Startups in the EU, founded since 2005 y EU (HQ region)

5

Recommendations

Key findings and recommendations

Key Findings

Technology is a powerful tool, and Artificial Intelligence (AI) holds immense potential to transform almost any way we interact as a society. Public services are no exception. Some examples of AI's potential impact are improving efficiency, personalising citizen experiences, and enabling data-driven policymaking.

Some sectors could immediately benefit from measures oriented to improve the implementation of AI solutions in the public sector. There are some barriers that could limit this development, including issues such as complex procurement processes and data management difficulties.

Additionally, the EU AI-first GovTech ecosystem (startups and innovators creating AI solutions for government) requires reinforcement to meet public sector needs, current levels of AI implementation in EU public services remain modest, and innovation-focused procurement is underutilised as a lever for AI-driven transformation.

Taking this as the spirit of this report, it is possible to highlight three key findings that the recommendations ahead will try to address:

Finding 1	Finding 2	Finding 3
The AI First Govtech ecosystem in the EU needs to be reinforced to develop a more mature ecosystem that could address the needs of the public sector.	Implementing AI for the provisioning of public services, addressing certain barriers, can be improved.	EU public procurement is a massive tool for transforming the delivery of public services by introducing innovative services and deriving resources to develop the AI-first Govtech ecosystem.

Finding 1:

The AI First Govtech ecosystem in the EU needs to be reinforced to develop a more mature ecosystem that could address the needs of the public sector

↓

The ecosystem of Govtech, including startups, SMEs, government IT bodies, innovation hubs, accelerators and funds, needs to be strengthened with measures oriented towards getting an AI-first focus and developing the maturity of the whole ecosystem.

Adoption and Implementation Issues

- Many European governments cannot single-handedly develop and deploy advanced AI solutions; they rely on private-sector innovation and public-private collaboration.
- Europe's GovTech market remains fragmented and under-supported, with few AI-focused GovTech startups able to scale across the EU.
- Lack of coordination and collaboration leads to duplicated AI efforts within and between governments, and outdated legacy systems and data silos impede the smooth integration of new AI tools

Recommendations

Finding 1:
Key actions

Enhance Data Sharing and Technical Infrastructure:

- European Commission, in alignment with National Authorities, should establish the foundations for a common framework of technical infrastructure and data sharing, ensuring that the AI-first ecosystem knows the standard rules and requirements, making it easier to integrate AI technologies, which depend heavily on data and compute resources. This should be aligned with the European Data Strategy and the future Cloud and AI Development Act. This includes developing standard interoperable data formats and APIs for public services. At the same time, the European Commission should create a specific program oriented toward AI-First Govtech startups to access the high-performance computing infrastructure that GovTech startups and governments can use.

Reinforce capacity within Governments to absorb innovation:

- European Commission, National and Regional Authorities need to strengthen their ability to deal with innovation. Even the best startups need receptive government partners. EU and national authorities should establish dedicated innovation teams within public administrations to scout, pilot, and integrate AI solutions. Training programs should upskill civil servants in emerging technologies, agile project management, and data science. This capacity building will help public sector organisations become "AI-ready" and be able to experiment with new GovTech solutions and adapt internal processes to integrate them. It also strengthens the "demand side" of the GovTech ecosystem by creating knowledgeable clients who can effectively procure and manage AI projects.

Launch a GovTech growth fund and accelerator program:

- The European Investment Fund and European Innovation Council should create programmes that support GovTech startups that are delivering AI-enabled services. They should combine them with sandboxes to test solutions in real environments and plans to scale the deployment of the solutions. The programs should be focused on GovTech startups that develop AI solutions for public services, tackling public-sector challenges.

Finding 2:

Implementing AI for the provisioning of public services, addressing certain barriers, can be improved

↓

Across the EU's 27 Member States, the implementation of AI in public services is still in its early stages, with considerable room for improvement. There is a high degree of heterogeneity, and pilots are the primary vehicle for experimentation.

Adoption and Implementation Issues

- A Joint Research Centre mapping study found an ever-piloting problem with numerous small-scale AI pilots or proofs of concept, but little sustained integration of AI into mainstream government operations.
- Public administrations often lack the skills and institutional frameworks to deploy AI at scale. In a European government IT leaders' survey, 63% reported completing only 5–10 AI projects in the past year, despite believing 100–200 AI use cases would be needed to achieve real transformative impact.
- Skill shortages exacerbate the challenge, with nearly one-third of public organisations saying they lack the necessary AI talent to scale up projects

Finding 2:
Key actions

Invest in Public Sector AI skills and literacy:

- European Commission, National and Regional Authorities should dramatically expand training programs to address the AI talent and AI literacy gap in the public sector. This includes upskilling civil servants in data science, machine learning, AI project management, and hiring or contracting specialist AI talent into the public sector.

Embed ethical and human-centric AI use:

- Trust is essential for adopting AI and even more in public services. To improve adoption, citizens and civil servants must trust AI systems. Enforcement of the AI Act by the European Commission, along with National Authorities, will help build such trust in AI systems. Governments could reinforce this trust by establishing a common framework for reviewing processes for algorithmic decision-making in public services to check for bias or discrimination and ensure transparency in AI-driven decisions.

Transition program from pilot to full-scale implementation:

- Encourage a “beyond pilots” approach by providing funding and guidance to turn successful AI pilot projects into operational services. The European Commission and Member States should identify AI pilot projects that demonstrate clear public value. Resources should be mobilised to roll them out more broadly (across additional departments or regions).

Facilitate Best Practice exchange and benchmarks:

- The European Commission should launch an "AI in Government Observatory" (as part of the AI Office's upcoming AI Observatory) to track adoption of AI in the public sector and share case studies.

Finding 3:

EU public procurement is a massive tool for transforming the delivery of public services by introducing innovative services and deriving resources to develop the AI-first Govtech ecosystem

↓

Traditional European public procurement practices are often ill-suited to acquiring cutting-edge AI solutions. Lengthy, prescriptive tender processes and a bias toward well-established vendors mean that innovative AI startups and SMEs struggle to compete, and public buyers may opt for "safe" choices over novel approaches.

Adoption and Implementation Issues

- A 2024 EU report highlighted complex public procurement processes as a significant barrier preventing the uptake of AI in the public sector.
- Procurement rules focus on the lowest cost or detailed specifications, rather than allowing room for experimentation and co-development of new technology.
- The concept of Innovation Public Procurement–which includes mechanisms like Pre-Commercial Procurement (PCP), Public Procurement of Innovative Solutions (PPI), and innovation partnerships–is underutilised. The evidence suggests that more widespread use of these approaches is crucial to fostering transformation through AI.

Finding 3:
Key actions

Integrate "AI-First" criteria and a "buy European AI" approach into public procurement policies:

- European and national-level policymakers should update national procurement guidelines to embed an "AI-first" approach for relevant digitalisation projects. When a government seeks a solution (e.g., traffic management, customer service, or healthcare analytics), it should explicitly consider AI-based innovations and not default to legacy technologies. Ministries of finance or procurement authorities should issue guidance that tenders include criteria rewarding innovation, such as AI or data-driven features that improve outcomes. Public procurers are strongly encouraged to pursue a 'buy European AI' approach, as advocated in the European Commission's Apply AI strategy.

Simplify access for SMEs and startups:

- Many GovTech and AI startups find government procurement daunting. The European Commission and National Authorities should streamline procedures to lower barriers to entry. This includes using agile procurement methods as precursors to formal procurement (where a winning prototype can fast-track into a contract), reducing administrative burdens (e.g. simplified documentation for small agreements), and allowing consortia or intermediaries to help small firms participate.

Train and incentivise procurement officers:

- National Authorities should address a major bottleneck regarding the mindset and skills of those handling public procurement. Governments should invest in training procurement officials to design innovation-friendly tenders, evaluate AI solutions, and manage risks associated with emerging tech.

Expand the use of Pre-Commercial Procurement (PCP) and Innovation Partnerships:

- Rather than specifying a ready-made product, public agencies should define the problem and invite companies to propose R&D efforts to solve it (this is the essence of PCP). The European Commission and National Authorities can co-fund more PCP projects focused on AI. The Innovation Partnership procedure (allowed under EU procurement law) lets a government work closely with one or more companies to develop and later purchase a new solution.

References

AI Watch – European Commission (2023). Public Sector Dimension of AI Strategies – Finland. Retrieved from https://ai-watch.ec.europa.eu/finland-public-sector-dimension-ai-strategy_en

CMSWire (2024). Is Singapore's AI-Driven Citizen Experience the Future of Public Services? Retrieved from https://www.cmswire.com/customer-experience/is-singapores-ai-driven-citizen-experience-the-future-of-public-services/

City of Helsinki AI Register (2024). Social services, Health Care and Rescue Services Division. Sotebotti Hester. Retrieved from https://ai.hel.fi/en/sotebotti-hester-en/

Department of Enterprise, Trade and Employment (2021). AI – Here for Good: Ireland's National AI Strategy. Retrieved from https://enterprise.gov.ie/en/publications/publication-files/national-artificial-intelligence-strategy.pdf

e-Estonia Briefing Centre (2022). Factsheet: AI Strategy & Kratt. Retrieved from https://e-estonia.com/wp-content/uploads/factsheet-ai-strategy.pdf

Estonian Ministry of Economic Affairs and Communications (2022). Kratt Strategy. Retrieved from https://www.kratid.ee

Eurocities (2023). Accessing Danish digital public services with Muni. Retrieved from https://eurocities.eu/latest/accessing-danish-digital-public-services-with-muni/

Eurogeographics (2023). AI in the public sector Mastering the Governance "of, with and by" AI!. Retrieved from https://eurogeographics.org/app/uploads/2023/07/2023_09_27_EURO_Geographics_AI-PS_Misuraca_final.pdf#:~:text=1,and%20replicate%20%2F%20scale%20out

Euronews (2024). Verona tests AI sensor system to improve traffic congestion and road safety. Retrieved from https://www.euronews.com/next/2024/10/10/verona-tests-ai-sensor-system-to-improve-traffic-congestion-and-road-safety

European Commission (2025). Public Sector Tech Watch. Retrieved from https://interoperable-europe.ec.europa.eu/collection/public-sector-tech-watch/cases-viewer-statistics

European Commission (2024). EU study calls for strategic AI adoption to transform public sector services. Retrieved from https://digital-strategy.ec.europa.eu/en/library/eu-study-calls-strategic-ai-adoption-transform-public-sector-services#:~:text=However%2C%20the%20study%20also%20outlines,industry%20and%20public%20sector%20expectations

European Commission (2023). Public Procurement of Innovation. Retrieved from https://single-market-economy.ec.europa.eu/single-market/public-procurement/strategic-procurement/public-procurement-innovation_en

0Finnish Ministry of Finance (2022). AuroraAI Programme Overview. Retrieved from https://vm.fi/en/auroraai

European Commission (2024).. Synthesis report for the benchmarking of national policy frameworks for innovation procurement. Retrieved from https://research-and-innovation.ec.europa.eu/document/download/042cc514-04f9-4b2e-9827-91ff3b23883f_en?filename=ec_rtd_synthesis-report-policy-benchmarking.pdf

European Commission (2023). Big Data for the Water Chain - Waterschapsbedrijf Limburg (WBL). Retrieved from https://projects.research-and-innovation.ec.europa.eu/en/strategy/support-policy-making/shaping-eu-research-and-innovation-policy/new-european-innovation-agenda/innovation-procurement/eafip/big-data-water-chain-waterschapsbedrijf-limburg-wbl

Government of Finland (2021). Ethical AI in AuroraAI: Guidelines and Evaluation Framework. Retrieved from https://www.frontiersin.org/journals/artificial-intelligence/articles/10.3389/frai.2022.836557/full

References

Government of Ireland (2022). Harnessing Digital – The Digital Ireland Framework. Retrieved from https://www.gov.ie/ga/roinn-an-taoisigh/preaseisiuinti/publication-of-harnessing-digital-2022-progress-report/

Government of Ireland (2022). Digital Plan for the Irish Language Speech and Language Technologies 2023-2027. Retrieved from https://assets.gov.ie/static/documents/digital-plan-for-the-irish-language-45a4ece7-40fb-471f-841f-3e6d7e49a518.pdf

Hickok, M. ()2024). Public procurement of artificial intelligence systems: new risks and future proofing. AI & Soc 39, 1213–1227. Retrieved from https://link.springer.com/article/10.1007/s00146-022-01572-2#citeas

Nationthailand Business (2023). Governments moving into post-digital era: Gartner says. Retrieved from https://www.nationthailand.com/business/tech/40031797

Nortal (2024). AI in GovTech: what works, what fails, and why. Retrieved from https://info.nortal.com/hubfs/AI_in_GovTech_WP_v8%20(1).pdf

OECD (2024). Governing with Artificial Intelligence: Are governements ready? Retrieved from https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/06/governing-with-artificial-intelligence_f0e316f5/26324bc2-en.pdf

OECD (2017). Public Procurement in Innovation. Retrieved from https://www.oecd.org/en/publications/public-procurement-for-innovation_9789264265820-en.html

OECD Observatory of Public Sector Innovation (2021). AuroraAI Case Study.- Retrieved from https://oecd-opsi.org/innovations/auroraai/

OECD (2023). The Digital Transformation of Public Procurement in Ireland. Retrieved from https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/10/the-digital-transformation-of-public-procurement-in-ireland_1b1531bb/87912457-en.pdf

Our World in Data (2025). Government procurement spending as share of GDP. Retrieved from https://ourworldindata.org/grapher/government-procurement-share-gdp?tab=table&time=2023&showSelectionOnlyInTable=1&country=AUT~BEL~BGR~HRV~CZE~DNK~EST~FIN~FRA~DEU~GRC~HUN~IRL~ITA~LVA~LTU~LUX~NLD~POL~PRT~ROU~SVK~SVN~SWE~ESP

Oxford Insights (2024). Government AI Readiness Index 2024. Retrieved from https://oxfordinsights.com/wp-content/uploads/2024/12/2024-Government-AI-Readiness-Index-2.pdf

Prodigy Innovation Evolution (2025). Artificial Intelligence, How it will transform public administration. Retrieved from https://www.itsprodigy.com/en/news/2025-04-28-artificial-intelligence-how-it-will-transform-public-administration/

Public Sector Network (2023). AI Implementation Case Study: Government of Estonia. Retrieved from https://publicsectornetwork.com/insight/case-study-ai-implementation-in-the-government-of-estonia

The Business Research Company (2025). Business Support Services Global Market Report 2025. Retrieved from https://www.thebusinessresearchcompany.com/report/business-support-services-global-market-report

The Parliament (2017). A GovTech Ecosystem approach is needed to reap the Benefits of AI. Retrieved from https://www.theparliamentmagazine.eu/partner/article/a-govtech-ecosystem-approach-is-needed-to-reap-the-benefits-of-ai#:~:text=Leadership%20is%20a%20critical%20component,a%20lack%20of%20internal%20collaboration

UNDP (2024). Pairing with AI for Public Sector Impact in Singapore. Retrieved from https://www.undp.org/policy-centre/singapore/blog/pairing-ai-public-sector-impact-singapore#:~:text=Since%20mid,and%20raising%20public%20sector%20productivity

Uyarra, E., Edler, J., Garcia-Estevez, J, Geroghiou, L. and Yeow, J (2014). Barriers to innovation through public procurement: A supplier perspective. Technovation, Vol. 34, Issue, 10, Pages 631-645. Retrieved from https://www.sciencedirect.com/science/article/pii/S0166497214000388?via%3Dihub

Acknowledgment page

Anna Stryga
Junior Researcher, Leibniz Institute for Research on Society and Space

Arián Rosales
Service and experience designer, Barrabés.biz

Aritz Hernani
Research and data analyst, Barrabés.biz

Egoitz Zarallo Aurtenetxe
Project Manager, Barrabés.biz

Dr. Andreas Kuebart
Researcher, Leibniz Institute for Research on Society and Space

Guillermo Vetter
Research analyst at Barrabes.biz

Javier Anatole Pallás
Senior Researcher, Barrabés.biz

José Manuel González
Graphic Designer, Barrabés.biz

Luis Rodríguez
Research Director, Barrabés.biz

Pablo Rodicio
Brand & Design Manager, Barrabés.biz

Sandra Saiz Rodríguez
Project Manager, Barrabés.biz

Takhmina Lolakova
Project Manager, DEEP Ecosystems

Thomas Kösters
Co-Founder and Managing Director, DEEP Ecosystems

By the European Commission, Directorate-General of Communications Networks, Content & Technology.

STEP STARTUPs

Funded by
the European Union