



UNLOCKING SPAIN'S AI POTENTIAL 2026

The next wave of AI is here

Spain has emerged as one of Europe's AI adoption leaders. With **61%** of businesses now using AI — seven percentage points ahead of the European average — and cloud adoption rising to **71%**, Spanish businesses are embracing digital transformation at pace. Startups are thriving, and many businesses are already seeing tangible gains in productivity, growth, and innovation.

But this progress comes at a pivotal moment. A new generation of AI technologies, including agentic systems, advanced automation, and physical AI, is rapidly reshaping what is possible and how quickly businesses must move. Innovation cycles are compressing, gaps in adoption are widening, and businesses that move faster are pulling further ahead.

Against this backdrop, Spain's challenge is no longer adoption – it is depth. While uptake is high, most businesses remain focused on basic use cases, such as chatbots and off-the-shelf tools, rather than deploying AI in ways that drive transformation. Only **17%** of businesses have reached the most advanced stage of AI integration, and progress among more experienced adopters is slowing.

This creates a growing risk. As next-generation AI accelerates, businesses that fail to move beyond early-stage adoption risk being locked out of the next wave of productivity gains, innovation, and competitive advantage. Spain's current strength in early AI adoption will only translate into long-term competitiveness if it is matched by progress in advanced use cases that drive innovation and transformation.

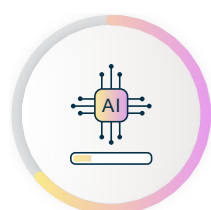
Spain's opportunity is clear: to turn early leadership in AI adoption into broad-based transformation in the era of next-generation AI. This will require not only sustaining adoption, but enabling businesses to scale advanced use cases – supported by the infrastructure, skills, investment, and policy environment needed to compete at speed.

Key findings

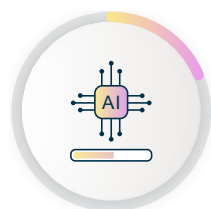
- AI adoption in Spain continues to accelerate. **61%** of businesses have now adopted AI, up from **50%** [last year](#) – a growth rate of **22%**. Spain remains ahead of the European average of **54%**, confirming its position as one of the continent's leading adopters of the technology.
- AI is delivering measurable benefits: Among AI adopters, **81%** report productivity gains from AI, and **89%** say that they expect AI to increase their company's growth in the next year.
- 67%** say AI adoption is a top or high priority, while **71%** say AI plays a critical or important role in their overall business strategy.
- 17%** of AI-adopting businesses are harnessing the technology's most advanced use cases for transformation, down from **20%** last year.
- Next-gen AI technologies are emerging rapidly and compressing innovation timelines: **73%** of AI-adopting businesses report an accelerated innovation timeline, and **76%** anticipate that AI will accelerate their innovation timelines further.
- However, many businesses aren't yet prepared for these tools: Only **16%** of businesses say they feel fully or very ready to adopt next-generation AI technologies such as agentic AI – contrasted by the **74%** of startups who report they are ready.
- Barriers to scaling remain structural: Regulatory fragmentation and compliance costs (**44%** of tech spend), skills shortages (**58%**), and limited financial resources (**31%**) continue to constrain businesses' ability to scale AI beyond early-stage adoption.
- Targeted action is needed to unlock AI's transformative potential: Streamlined regulation, stronger skills pipelines, improved access to finance, and more effective incentives and public procurement will be critical to translate AI adoption into broad-based transformation.

Adoption accelerates, but remains shallow

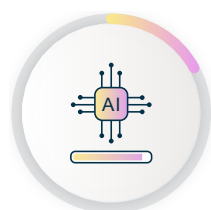
Despite strong headline adoption rates and clear evidence of business impact, a deeper look at how AI is being implemented reveals a more uneven picture. While many businesses are embracing AI, far fewer are deploying it in ways that drive transformation at scale. This suggests that much of Spain's AI progress remains concentrated in early-stage or incremental use cases, rather than fully embedded, strategic adoption.



Basic adoption: 64% of businesses remain focused primarily on more basic uses of AI and incremental gains (e.g. driving efficiencies and streamlining processes), rather than innovation (e.g. developing new products or disrupting industries). These businesses are using publicly available chatbots for routine tasks or purchasing ready-made AI solutions. This matches the **63%** last year.



Intermediate adoption: 19% have advanced to the intermediate stage of AI adoption. These companies are integrating AI across multiple business functions, resulting in efficiency improvements and more innovative customer experiences.



Transformative adoption: 17% of businesses have reached the most transformative stage of AI integration, using advanced AI systems, combining multiple models, creating custom AI systems, or deploying agentic or autonomous AI. This is down from **20%** last year.

For businesses across Spain, progress toward integrating AI's advanced use cases is stalling – growth in AI adoption is not keeping pace with advanced AI uptake. With next-gen AI emerging rapidly and compressing innovation timelines, it is more critical than ever that businesses be empowered to move beyond AI's most basic use cases and harness the technology for transformative innovation.

Case study: Mapfre



[Mapfre](#) is the leading insurer in Spain and the leading multinational in Latin America, with a presence in 37 countries, millions of customers worldwide, and more than 30,000 employees. To accelerate innovation, industrialise data, and enable advanced AI capabilities for the business, Mapfre relies on Atenea, a corporate data platform built on the AWS cloud. It covers the entire data and AI model lifecycle, enabling a scalable, governed, and self-service-oriented approach.

Atenea also provides advanced capabilities for the development, training, deployment, and monitoring of models. Its operation is carried out through cloud-native applications, activating AI capabilities in an agile and secure manner across different business channels and processes.

Mapfre has more than 110 use cases in production in Spain, impacting over 6 million customers and optimising more than 25 million interactions. Among these initiatives, the Voice SuperAssistant stands out—an advanced Voice AI

Agent capable of interacting in real time through conversational AI for claims filing. This assistant already operates at scale, with more than 9 million annual calls impacted and over 360,000 digital sessions per year.

The combination of a modern cloud platform, robust data governance, and advanced AI capabilities positions Mapfre as a benchmark company in digital transformation and innovation applied to the insurance business.

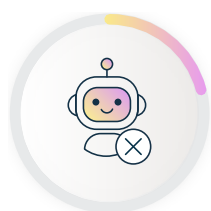
Businesses say they are not yet prepared for the next wave of AI

The persistence of shallow adoption comes at a critical moment. As most businesses remain focused on basic use cases, a new generation of AI technologies is rapidly reshaping what is possible and how quickly companies must move to stay competitive.

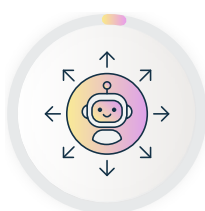
Next-generation AI technologies, including agentic AI, physical AI, and advanced robotics, are emerging at pace and compressing innovation timelines even further. This is already being felt across the economy: **73%** of AI-adopting businesses report an accelerated innovation timeline, and **76%** anticipate that AI will accelerate their innovation timelines further.

In this context, the current lag in moving beyond basic adoption is no longer a temporary phase. It risks becoming a structural disadvantage. Businesses that fail to progress toward more advanced use cases will not simply fall behind incrementally; they risk being locked out of the next wave of productivity gains, innovation, and competitive differentiation.

Awareness of agentic AI is increasing, but the gap between familiarity and deployment remains significant:



Less than a quarter of businesses (**21%**) say they have heard of agentic AI.



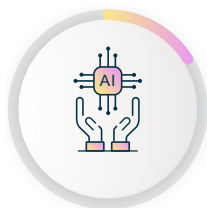
Of those who are familiar with the technology, only **2%** report that they have fully deployed agentic AI, while **8%** are experimenting or piloting the technology.



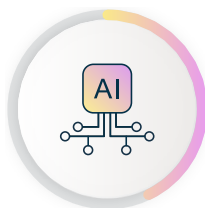
When the technology was explained, a further **61%** say they have plans to use agentic AI or are considering it, while **19%** say they would have no plans to adopt it.

This highlights a growing pipeline of intent without execution – businesses recognise the potential of next-generation AI, but are not yet translating this into real-world deployment.

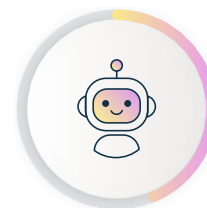
The majority of businesses do not feel ready to adopt these emerging technologies, but startups emerge as a bright spot:



Only **16%** of businesses say they feel fully or very ready to adopt next-generation AI technologies such as agentic AI – contrasted by the **74%** of startups who report they are ready.



43% of all businesses say they are only somewhat ready, and **41%** say they are slightly ready or not ready at all.



Those that have adopted agentic AI are realising benefits across their business: **44%** report faster decision-making and execution, **35%** report increased operational efficiency or productivity, and **24%** report improved scalability of operations.

Businesses point to persistent constraints that prevent them from moving from readiness to real deployment of next-generation AI tools: **41%** cite skills shortages as a barrier to adopting next-generation AI technologies, **32%** cite insufficient internal financial resources, **26%** cite legal uncertainty arising from AI and digital regulation, and a further **21%** cite regulatory complexity operating across borders.

Spain's opportunity is clear: to turn AI adoption leadership into national digital transformation – diffused across regions and sectors – and supported by the skills, funding pathways, and regulatory clarity needed to scale.

Case study: BBVA



[BBVA](#), one of Europe's leading financial institutions operating across seven countries, has collaborated with AWS to evolve its machine learning (ML) capabilities towards a more scalable, reusable, and governed operating model built on Amazon SageMaker. Building on ADA, BBVA's global cloud-native data and AI platform serving more than 1,000 data scientists and over 6,500 users, the bank implemented a modern MLOps framework that integrates reusable workflows, automated CI/CD processes, embedded governance, and centralised model lifecycle management.

Using Amazon SageMaker AI and its full stack, including Amazon SageMaker Pipelines, SageMaker Model Registry, AWS Step Functions, and Amazon EventBridge, BBVA standardised key components of the ML lifecycle while maintaining flexibility for diverse business domains and use cases.

This approach enabled pilot use cases at BBVA to reduce development times by up to **75%** and optimise infrastructure

costs by **40–55%** through reusable templates, ephemeral development workflows, and automated resource management.

This initiative supports BBVA's broader global Data and AI strategy by reinforcing the bank's ability to industrialise AI capabilities at scale. By establishing common foundations and reusable patterns, BBVA is building the operational and technological capabilities required to accelerate the adoption of AI solutions across the organisation and support the evolution towards a more integrated and scalable AI operating model.



Spain risks losing its leaders

As highlighted in [last year's report](#), Spain's AI startup ecosystem is one of its key assets, as startups continue to emerge as leaders in AI adoption and AI-driven transformation. However, the high-potential AI startups that Spain incubates are growing fast, and as they do so, they are running quickly into scaling constraints. The faster a startup moves, the sooner it encounters such barriers that raise the cost of growth. This raises a question about whether these Spain-founded startups can scale at home, or whether they will be forced to look abroad for better growth conditions and incentives.

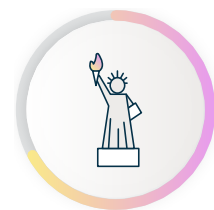
Founder flight is no longer a distant concern, but a real and growing risk. A significant share of startups report that they would consider relocating in pursuit of faster scaling, greater access to capital, and deeper global markets. The priority is therefore to turn Spain into an environment where scaling a business is as straightforward as starting one.



42% of Spanish startups say they would consider leaving Europe to scale their business.



31% say they would not consider leaving, while **27%** are unsure.



Of those who said they would consider leaving Europe, by far the most commonly cited destination is the United States (**67%**).

When asked why they would consider leaving Europe, startups consistently point to their ability to grow and scale. The top five reasons are:

1. Greater availability of funding is the most common driver, cited by **59%**

59%

2. Faster ability to scale internationally is cited by **52%**

52%

3. Better access to global markets is cited by **48%**

48%

4. More favourable or predictable regulation is cited by **38%**

38%

5. Lower operational costs are cited by **32%**

32%

These findings reinforce a central theme of this year's report: in an accelerated innovation cycle, the global race is increasingly shaped by speed – and founders will follow the pathways that reduce friction and shorten time-to-market.

Founder flight is not inevitable. Startups are clear about what would make Europe a more attractive environment for scaling. Among startups that say they are not considering relocating, the following factors are keeping them rooted in Spain and Europe:

1. The availability of venture and growth funding (**62%**)
2. Strong access to European customers and markets (**54%**)
3. Strong ties to local ecosystems (partners, universities, accelerators) (**47%**)
4. A predictable and stable policy environment (**43%**)
5. Favourable or well-understood regulatory environments (**39%**)

62%

54%

47%

43%

39%

These levers align with a broader competitiveness agenda: establishing Spain both as a hub for starting innovative businesses and a hub to scale from.

Case study: The Ministry of Social Welfare, Equality, Youth, Children and Families of the Government of the Canary Islands



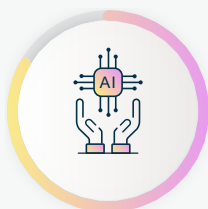
The Ministry of Social Welfare, Equality, Youth, Children and Families of the Government of the Canary Islands is transforming the archipelago's social services through agentic AI built on AWS. Leveraging Amazon Bedrock and Amazon Textract, multiple AI agents process, analyse, and, under human supervision, resolve case files across disability, long-term care dependency, Canary Islands Citizenship Income (Renta Canaria de Ciudadanía), and other social services. This has enabled the reduction of waiting lists across all islands, fully eliminating them on the non-capital islands. In Disability alone, the waiting list has been reduced by over **62%** since 2023, when more than 49,000 people were waiting, accompanied by a **45%** increase in case resolutions in 2026. The Ministry has partnered with AWS to create a social services data space, the first of its kind in Europe, enabling advanced analytics through real-time dashboards and intelligence on case file management.



Businesses value choice and flexibility in the AI and cloud landscape

As Spanish businesses move from early AI adoption to scaling and integration, having a choice of technology providers becomes increasingly critical. To innovate effectively and compete internationally, businesses need the ability to combine best-in-class tools, adapt quickly to technological advances, and scale.

Businesses consistently emphasise the importance of access to global technology providers, particularly as they seek to innovate and scale beyond domestic markets.



84% of businesses say access to global technology companies is important for their AI adoption.

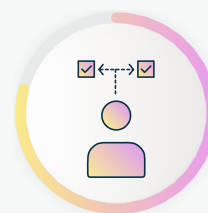


81% say access is important for innovation, and **86%** for scaling quickly.

For businesses, choice is a core capability that enables agility, resilience, and long-term competitiveness in a fast-moving AI landscape.



73% of businesses say they have adequate choice to select and switch between different providers of AI technologies.



79% say having this ability to choose and switch is extremely or very important to supporting their adoption of AI.

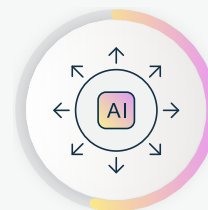
This ability to choose and switch between providers allows businesses to select the tools and partners that best fit their needs, optimise performance and cost, and continuously adopt new technologies as they emerge – all of which are essential in an environment where AI capabilities are evolving rapidly – while sovereignty is rarely the most immediate concern.

Sovereignty should enable competitiveness, not constrain it

Rather than relying exclusively on domestic providers, organisations select technology partners based on capability and performance – rather than where the provider is based – and therefore, harness technologies from providers across regions:



88% report that they currently use a mix of providers from different regions, rather than working primarily with providers from their home country.



For businesses that use technology from providers based outside their home country, the top reasons for this are a wider range of features or product offerings (**54%**), better scalability, performance or integration options (**51%**), and competitive pricing or favourable commercial terms (**46%**).

Data also suggests a limited appetite for sovereignty strategies that increase cost without clear competitiveness outcomes. While public investment in European infrastructure can play an important role, particularly in building research, skills, and strategic capacity, businesses appear cautious about investments that would raise costs without delivering greater capability: Only **15%** agree that public investment in Europe-funded and -based AI and cloud infrastructure should be a priority.



Digital infrastructure investment is powering AI adoption across Spain

Private investment in data centres and cloud infrastructure is accelerating Spain's AI adoption by expanding capacity, enabling innovation, and strengthening its position as a European AI hub.

In practice, Spain is already seeing how investment-led infrastructure is driving AI adoption at scale. Amazon's [€33.7 billion investment in data centre infrastructure is significantly expanding the country's cloud capacity](#), supporting the development and deployment of AI technologies across sectors.

This investment is expected to support thousands of jobs, contribute billions to Spain's GDP, and strengthen the country's digital economy, while enabling businesses to access the advanced computing power required for AI innovation.

By anchoring large-scale infrastructure in Spain, these investments also position the country as a strategic European hub for AI and cloud services, helping businesses scale faster, innovate more effectively, and integrate into global digital value chains.

Spain should prioritise policies that attract and enable continued private investment, ensuring businesses have access to the world-class infrastructure needed to adopt and scale AI.



Barriers continue to limit transformation with AI adoption

While Spain is moving fast, several barriers and structural challenges must be addressed to ensure that momentum translates into broad-based, sustainable growth.

1. Navigating a fragmented regulatory landscape

Businesses report that even where adoption is advancing, scaling AI internationally introduces legal complexity, higher compliance costs, and operational friction, particularly for firms operating across multiple markets and regulatory environments.

This scaling friction is compounded by the broader compliance burden businesses already face as they navigate regulatory fragmentation:

- Businesses estimate that **44%** of their total tech spend goes toward compliance with national and international regulations. This is compared to **42%** last year.
- When asked what makes up this **44%**, **52%** of businesses cite relationship management with supervisors and responsible government authorities, followed by legal consultations or external advisory services (**47%**), and employee training on compliance requirements (**41%**).
- **84%** say compliance costs have increased over the past three years, and **82%** expect these costs to rise further over the next three.

Without meaningful simplification and greater cross-border consistency, a growing share of investment will continue to be diverted away from innovation and toward compliance, limiting businesses' ability to scale AI effectively.

2. Access to a skilled workforce and finance pathways

Skills shortages remain the most commonly cited constraint on adoption and expansion, alongside limitations in internal capacity:

- **58%** cite shortages of AI and digital skills as a barrier to adopting or expanding AI.
- **49%** cite insufficient internal workforce capacity.

These challenges are reflected in businesses' self-assessment of capability. Only a minority report having a strong AI skillset today, while most say their skills need improvement:

- Only **27%** say they currently have a strong AI skillset.
- **51%** say they have some AI skills but need improvement, and **22%** say they are only just beginning to develop AI skills.
- **86%** expect AI skills to be important in their industry over the next five years.

Finance remains an additional structural constraint. Many businesses report that they lack dedicated AI budgets, and those that do often allocate only a small share of IT spend toward AI – limiting their ability to move beyond pilots and narrow use cases:

- **31%** cite insufficient internal financial resources as a barrier to adopting or expanding AI.
- **24%** cite unclear ROI or an unclear business case as a barrier.
- **39%** say they do not have a dedicated AI budget.
- **87%** expect AI to take a larger share of IT spend over the next three years, predicting it to rise to **19%** of their total IT budget.

Unless skills pipelines are strengthened and access to finance improves, many businesses will remain stuck in early-stage adoption, unable to translate interest in AI into sustained, organisation-wide transformation.

3. Innovating without incentives

Businesses report that limited external support and complex procurement processes make it harder to justify the risk and investment required to scale AI across operations or develop new AI-driven products.

- **61%** say government support — such as grants and tax incentives — is crucial or very important in their decision to adopt AI.
- **23%** say a lack of incentives or external support discourages investment in AI.
- **34%** say other business priorities take precedence over AI investment.

Public sector demand can help accelerate diffusion, but procurement remains a consistent barrier:

- **37%** cite complex or slow public procurement processes as a challenge to scaling AI solutions.
- **33%** say opportunities to sell to the government are crucial or very important in their decision to adopt AI.

Stronger incentives and more accessible procurement pathways will be essential to unlock private investment and accelerate the diffusion of AI across the wider economy.

Taken together, these barriers highlight a common challenge: Spain's ability to adopt AI is not in question, but its ability to scale it is. Addressing these constraints will be critical to ensuring that AI-driven growth extends beyond early adopters and delivers broad-based economic transformation.



Recommendations: Unlocking Spain's AI future

To translate initial AI adoption into true transformation, Spain must now focus on scaling what works and removing the barriers that hold businesses back.

1. Scale on Spain's own strengths

Spain is not starting from zero. The country already has many of the foundations required to compete in an accelerated AI era, including an accelerating rate of adoption ahead of the European average, a strong foundation in cloud use, and business adopters that are realising significant gains.

When asked what matters most for supporting growth in their business and industry, Spanish businesses point to:

- Skilled AI talent (**75%**)
- Private investment and venture capital (**65%**)
- Access to the most advanced AI tools and services (**52%**)

68% of all businesses agree that Europe has the infrastructure and ecosystem needed to scale globally, while **57%** rate Europe as highly or somewhat competitive as a global hub for AI and innovation. Spain's startups are a testament to the support given to these innovative businesses. The challenge is now how quickly Spain can scale what already works so that innovation spreads beyond a handful of businesses and into the wider economy.

2. Foster AI-driven innovation across all business sizes through strategic support and incentives

The next phase of the AI era will be led by countries and regions that remove challenges to adoption fastest, scale innovation most effectively, and enable businesses to deploy advanced AI securely and confidently across their entire economy. The following three priority recommendations outline the enabling policies required to accelerate AI adoption:

- Incentivise investment in AI technologies and improve regulatory clarity and access to finance. Provide targeted financial incentives and create frictionless growth capital for AI-scale-ups to encourage risk-taking and experimentation. Reward companies scaling globally from Spain and Europe and simplify and speed access to EU digital and innovation funds.
- Launch AI innovation hubs and sector-specific accelerators to help large firms collaborate with startups, research institutions, and AI specialists to co-develop solutions that go beyond automation and aim at genuine transformation (e.g., new products, business models, or services).
- Boost skills efforts to drive a digitally-skilled workforce. Spain's businesses consistently report that they are held back from increasing their AI adoption by a lack of digital skills. Governments and businesses must work together to close this skills gap and provide citizens with the digital skills they need to succeed - this includes those already in jobs and the workforce of the future.

3. Make the public sector Spain's flagship AI adopter

Spain has shown leadership in AI governance, particularly through the creation of [AESIA](#) (Europe's first AI supervisory agency), but the next step is to translate this into visible, large-scale deployment across public services. A more proactive public sector can act as a catalyst for adoption across the wider economy — creating demand, setting standards, and accelerating innovation.

- To achieve this, Spain should position public administration as an early adopter and lead customer of AI technologies, deploying AI across key services such as healthcare, education, justice, and public administration. This will not only improve service delivery and efficiency, but also provide a clear demand signal to the market, encouraging private sector investment and innovation.
- Enabling this shift will require streamlining public procurement processes to make it faster and easier for businesses to develop, test, and deploy AI solutions within the public sector. Simplifying procurement frameworks, reducing administrative burdens, and enabling more agile, outcome-based contracting models will be critical to accelerating uptake.
- At the same time, investment in digital skills and training for public servants will be essential to ensure that institutions have the capability to adopt, manage, and scale AI effectively. Building internal expertise will help public bodies move from isolated pilots to sustained, organisation-wide transformation.
- By combining deployment, demand, and capability, Spain can position its public sector as a flagship AI adopter — accelerating diffusion across the economy and reinforcing its leadership in the next phase of AI adoption.

The window for AI transformation is narrowing – Spain must act to translate adoption into impact

Spain enters the next phase of AI adoption with clear momentum, but also with a growing need to translate that momentum into deeper and broader-based transformation. Adoption is rising, investment is increasing, and many businesses are already reporting tangible productivity and growth benefits. Yet, progress remains uneven. Advanced AI use is still limited, readiness for next-generation AI technologies is low across much of the business landscape, and too many businesses remain constrained by gaps in skills and finance, while reporting that regulatory fragmentation limits their ability to scale. As innovation cycles compress and AI capabilities continue to evolve, the distinction between basic adoption and transformative use will become increasingly important.

The challenge, therefore, is not simply to increase the number of firms using AI, but to ensure that more businesses are able to deploy it at scale to innovate and disrupt their industry. That will require reducing fragmentation, improving access to skills and funding, supporting businesses as they scale, and ensuring that businesses have the flexibility to choose the technologies that best meet their needs. Without these shifts, AI adoption risks remaining broad but shallow, with the benefits concentrated among a relatively narrow group of firms. With these shifts, Spain will be better placed to ensure that the next wave of AI contributes to productivity, resilience, and innovation across the wider economy.



Appendix

Methodology

The fieldwork for this study was undertaken by Strand Partners' research team for Amazon Web Services. This research has followed the guidance set forth by the UK Market Research Society and ESOMAR. For the purposes of this study, business leaders are defined as founders, CEOs, or members of the C-suite in organisations.

'Citizens' are nationally representative members of the public based on the latest available census.

For inquiries regarding our methodology, please direct your questions to: polling@strandpartners.com.

In Spain:

- We conducted a survey targeting 1,000 nationally representative members of the public, ensuring representation based on age, gender, and NUTS 1 region.
- Additionally, we surveyed 1,000 business leaders, representative by their business size, sector, and NUTS 1 region.

Sampling

Our sampling process used a mix of online panels that are recognised for their validity and reliability. These panels are carefully curated to ensure diverse representation across various demographics. For the business leaders, the panels are selected with a consideration for organisational size, sector, and position within the company. Our objective with the sampling strategy is to achieve an optimal mix that mirrors the actual distribution of our target populations in the respective markets.

Weighting Techniques:

Post-data collection, we applied iterative proportional weight to correct any discrepancies or over-representations in the sample.

Survey:

This study was designed with the objective of delving deep into the digital landscape:

- **Usage Patterns:** This survey gauges the evolving patterns of digital technology usage. We are particularly interested in examining the adoption and implementation levels of technologies, focusing on cloud computing and artificial intelligence.
- **Perceptions and Attitudes:** The survey seeks to unearth the prevailing perceptions and attitudes towards digital technologies, understanding the perceived benefits, challenges, and potential ramifications of both present and emerging tech solutions.
- **Barriers and Opportunities:** The survey scrutinises the predicted challenges and potential avenues that both businesses and individuals anticipate on their digital trajectory. This involves pinpointing challenges, from skill deficits to regulatory complications, and recognising opportunities for growth, innovation, and market development.
- **'Size of the Prize':** The survey shed light on the economic repercussions and growth prospects linked with digital transformation. By elucidating the 'size of the prize', we aspire to stress the importance of digital transformation and foster further investments and technology adoption.