

Artificial
intelligence
report

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AI Minister Niamh Smyth TD: Ireland can be an international leader in AI

As the first Minister of State designated with a specific portfolio concerning Artificial Intelligence, I am proud to share my vision that Ireland becomes an international leader in AI to the benefit of our enterprises, public services and most importantly our people, through a human-centred, ethical approach to AI development, adoption, and use, writes Minister of State for Trade Promotion, Artificial Intelligence and Digital Transformation, Niamh Smyth TD.

My appointment reflects the Government's recognition that AI requires dedicated focus – not just as an economic opportunity but as a societal transformation that must be managed thoughtfully.

The new Programme for Government contains key digital commitments including:

- updating the National Digital Strategy to bring together digital policy and regulatory responsibilities;
- transforming our public services by applying the latest technologies and maximising the potential benefits of AI to better plan for and deliver services, through the establishment of a single digital unit; empowering

people to access public services easily, whether online or in person;

- ensuring the integration of digital services across departments as an alternative user access channel, including through the life events approach and Digital Wallet;
- specific sectoral commitments, in particular in health (including an AI in Health Strategy), and justice/Courts Service reform;
- strengthening cybersecurity; and
- commitments on online safety, in particular in relation to children and young people.

It is clear that AI has become a major part of the national conversation. It has captured headlines and sparked real

public debate. I have been meeting various stakeholders, listening to businesses – big and small, entrepreneurs, educators, and civil society. I must also mention the invaluable insight and expertise of the AI Advisory Council. The Council's report with high-level recommendations to the Government is very timely and is currently being considered.

In my short time as minister, I have learned that AI is a transformative force that has the potential to reshape our economy, society, and daily lives. There are fantastic opportunities for efficiency and productivity improvements. I have been impressed that there is so much already being progressed across the public sector for example on the MyGovID platform, the immigration

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Minister of State for Trade Promotion, Artificial Intelligence and Digital Transformation, Niamh Smyth TD

services website, the Companies Registration Office, to name but a few.

The pace of development has been breathtaking and there is now a global race to harness AI capabilities. We are in a good position because Ireland has had a National AI Strategy in place since 2021, even before the increase in awareness of AI and the major developments in ground-breaking large language models. This strategy was refreshed in 2024 to reflect these developments and to also take account of the regulation now in force, namely the EU AI Act.

The new strategy is a roadmap for the future. It sets out a whole-of-government approach to putting the necessary enablers in place to underpin AI adoption in enterprise and public services, including a supportive innovation ecosystem, a secure data and connectivity infrastructure, and policies to ensure that the workforce is prepared for the impact of AI.

I am determined that AI benefits all enterprises, and my priority is to drive AI adoption, particularly in small and medium-sized businesses, with targeted supports through our agencies. One of the biggest opportunities around AI deployment is driving productivity gains and competitiveness in our indigenous SMEs. Our ambition is that 75 per cent of all enterprises will be using cloud, AI and big data by 2030.

The benefits are clear. AI is a powerful tool that can future-proof business, help enterprises to remain competitive, transform business processes and improve productivity. Simply put, AI can save business owners time and money and give them the freedom to focus on growth. I want every business to get a fair shot at using AI to grow, compete, and thrive.

Every technological shift alters the types of skills we need and AI is no different.

Ireland’s workforce is our best asset. We want to ensure that we have the talent and skills necessary to reap the benefits of AI. Enterprises will need to be proactive in upskilling their workforce to develop the AI skills and knowledge necessary to leverage the technology. This is not just an investment in people, it is an investment in competitiveness and in the future of a business.

I am acutely aware of the fear out there that AI has the potential to undermine Irish jobs. While that is understandable, our ambition is that the use of AI will empower workers but not replace them. Of course there will be changes, but we are agile, and we can adapt.

Ireland is implementing the EU AI Act, the first comprehensive legal framework for AI anywhere in the world. It is designed to provide a high level of protection to people’s health, safety, and fundamental rights and to simultaneously promote the adoption of human-centric, trustworthy AI.

I am confident we can create a future where innovation and integrity go hand in hand. But it is critical we work together – government, industry, the research community, and civil society – to harness the opportunities of AI for societal and economic good in Ireland.

We are at a pivotal juncture to solidify our position as a significant player in the global AI ecosystem. We can do this by leveraging our established technology infrastructure, favourable business environment, highly educated workforce, strategic investments, and our commitment to responsible AI governance which is anchored in EU frameworks.

Supporting AI innovation through policies, funding and incentives is my priority. As we navigate this transformation, we must remember that technology will not determine our future – our choices do.



Driving energy efficiency: Fexco's 15-year innovative partnership with SEAI

Martin Ryan, Director of Fexco's Managed & Advisory Services, takes a closer look at how continuous innovation in customer delivery has further strengthened and enhanced this enduring and successful partnership.

For more than 15 years, Fexco and the Sustainable Energy Authority of Ireland (SEAI) have forged a successful partnership that serves as an excellent example of how collaboration between the public and private sectors can contribute significantly to the betterment of society. This partnership has played a pivotal role in advancing the national energy efficiency, innovation, and sustainability agenda. The collaboration, which initially began in 2009, has not only enhanced customer engagement but also remains essential to Ireland's ongoing commitment to implementing sustainable energy solutions across the country.

The recent renewal of this partnership is a strong testament to our continued dedication to supporting homeowners, businesses, and public institutions in making well-informed decisions about energy usage and sustainability. With nearly 200,000 customer interactions on an annual basis, Fexco's deep expertise in customer management has been instrumental in assisting the SEAI in promoting energy efficiency and encouraging the widespread adoption of renewable energy solutions throughout Ireland. This ongoing collaboration represents a critical step in driving Ireland's energy transformation and ensuring a sustainable future for generations to come.

A partnership rooted in innovation and excellence

At its core, the longstanding relationship between Fexco and the Sustainable Energy Authority of Ireland (SEAI) is founded on the principles of open communication, continuous innovation, and a mutual commitment to a shared vision for long-term sustainability. This strong foundation has enabled both organisations to work seamlessly together in pursuit of common goals that benefit both individuals and communities across Ireland.

Over the years, our collaboration with the SEAI has steadily evolved, grown stronger, and expanded in both scope and impact. This ongoing evolution has been marked by the seamless integration of cutting-edge technologies, forward-thinking strategies, and innovative service delivery models designed to meet the needs of today's energy-conscious society. These advancements have played a crucial role



Martin Ryan, Managing Director, Fexco.

in enhancing overall customer experiences, strengthening engagement across all user groups, and streamlining the implementation and management of key energy efficiency programmes nationwide.

By consistently embracing innovation and proactively adapting to the evolving, dynamic, and ever-changing needs, behaviours, and expectations of energy users across the country, our partnership continues to set a high benchmark for excellence in the energy and sustainability sectors. This forward-thinking approach enables us to remain agile and responsive, ensuring that our services and strategies remain relevant, effective, and future-ready in a rapidly shifting landscape.

We remain firmly positioned at the forefront of driving meaningful, measurable, and impactful change within the broader sustainability space; helping to shape a future that is not only more energy-efficient and technologically advanced but also more environmentally responsible and socially conscious. Together, we are contributing to the creation of a greener, smarter Ireland and making a positive impact that reaches well beyond national borders.

Customer management and advisory services

For Fexco, one of the most important, impactful, and enduring aspects of our long-standing partnership with the SEAI lies in our vital and multifaceted role in managing the SEAI's customer interactions on a daily basis.

This responsibility serves as the backbone of how we provide support to individuals, businesses, and communities across the country who are actively seeking clear, accurate, and timely energy-related information, advice, and guidance.

Our dedicated team delivers comprehensive, end-to-end, omnichannel customer management services, ensuring that people can easily access support and information; ▶



whether through phone calls, emails, online platforms, live chat, or other preferred communication channels.

This strong, customer-focused approach includes the delivery of SEAI’s Energy Advisor Services, which offer expert, personalised guidance specifically tailored to the unique needs of homeowners, small businesses, and larger organisations as they navigate the path toward improved energy efficiency and more sustainable practices.

In addition to these advisory services, we also provide critical administrative support for a wide range of key national programmes and initiatives, such as the Building Energy Rating (BER) scheme. This particular scheme plays an essential role in assessing, benchmarking, and communicating the energy performance of residential and commercial buildings. It empowers property owners and occupants to better understand their energy consumption patterns and identify practical opportunities for improvement.

Through these combined services and our collaborative efforts, Fexco helps ensure that SEAI’s energy programmes remain accessible, effective, and responsive to the evolving needs of Irish society. Together, we are working to support a greener, more energy-aware nation that is firmly aligned with Ireland’s broader sustainability objectives and climate action goals.

Harnessing innovation for energy efficiency with AI

Fexco has been a driving force behind several transformative innovations in its work with the SEAI. One of the most notable advancements is the deployment of Fexco’s proprietary SmartAssist Platform within Fexco’s SEAI operation, Fexco SmartAssist at its core is an AI-driven platform that provides personalised energy advice by tailoring recommendations at the appropriate balance between customer information and energy efficiency measures, empowering homeowners and businesses to make informed decisions about energy conservation and renewable energy adoption.

Moreover, Fexco has coupled SmartAssist with its omnichannel customer management platform, integrating phone, email, chat, and self-service options to enhance accessibility for the SEAI customers. The system streamlines grant applications and energy efficiency assessments by leveraging AI and automation, reducing wait times and improving the overall experience.

These innovations have not gone unnoticed. In December 2024, the partnership received the ‘Outsource Partnership of the Year’ award at the CCMA Irish Customer Contact and Shared Services Awards, a testament to

their dedication to excellence in service delivery.

A spokesperson from the SEAI commented on the impact of the collaboration: “Working with Fexco has significantly enhanced how we engage with the public on energy efficiency and renewable energy initiatives. Their expertise in customer service and technological innovation has been instrumental in making our programmes more accessible and efficient. Together, we are ensuring more people can take advantage of SEAI’s support to reduce their energy costs and carbon footprint.”

Collaboration for a greener future

Our collaboration with the SEAI is more than just a business arrangement – it is a model of public-private sector cooperation that drives real change. Their partnership actively supports the Irish government’s climate action goals, helping to reduce the nation’s carbon footprint through targeted energy-saving initiatives.

Through our collaborative work with the SEAI, Fexco plays a vital and proactive role in advancing Ireland’s national energy-saving obligations. Our efforts help ensure that public sector organisations, private enterprises, and businesses of all sizes align with the

country's broader environmental and sustainability targets. By providing essential support, resources, and expertise, we assist in driving progress toward a greener, more energy-efficient future.

This strong and effective partnership has already enabled thousands of individuals, households, and businesses to successfully transition to more energy-efficient solutions, demonstrating the real, measurable impact that strategic collaboration can have in the fight against climate change. It highlights how coordinated efforts between the public and private sectors can deliver meaningful outcomes, contributing not only to national policy goals but also to the everyday lives of people and communities across Ireland.

Job creation and economic impact

By continuously investing in both talent and advanced technology, we ensure that our collaboration with the SEAI remains at the forefront of innovation and excellence. This ongoing commitment not only strengthens the effectiveness of our joint initiatives but also plays a key role in supporting meaningful employment opportunities within Ireland's growing green economy. Through this investment, we are actively fostering a skilled workforce equipped to meet the evolving demands of the sustainability sector.

This important aspect of the partnership goes beyond environmental impact, highlighting the wider economic and societal benefits that stem from well-executed sustainability initiatives. It demonstrates how climate action can serve as a catalyst for job creation, innovation, and long-term resilience; ultimately creating new opportunities for individuals and businesses alike while simultaneously addressing the urgent challenges posed by climate change.

Creating a better future together

As Ireland continues its ambitious and far-reaching journey toward transitioning to a greener, more energy-efficient, and environmentally sustainable economy, partnerships like the one between Fexco and the SEAI will play an increasingly vital and strategic role. These types of collaborative efforts are essential not



only for scaling up national energy efficiency programmes and initiatives but also for ensuring that Ireland's long-term environmental goals and broader sustainability targets are successfully met, maintained, and continuously improved upon.

By harnessing the collective strengths, capabilities, and resources of both the public and private sectors, such partnerships can significantly help accelerate meaningful, lasting progress in the face of mounting climate-related challenges.

Our enduring, dynamic, and ever-evolving relationship with the SEAI stands as a proven and effective blueprint for how impactful and mutually beneficial public-private partnerships can operate. It demonstrates that when organisations come together with a shared vision, embrace technological innovation, and prioritise a customer-centric approach to service delivery, they can collectively drive transformative change. The positive effects of this collaboration extend well beyond the energy sector alone; reaching into many critical areas of Irish society, including housing, financial stability, road safety, community development, Social Inclusion, and numerous other interconnected domains that influence quality of life and long-term resilience.

In today's global landscape, where

climate action has become not just a priority but a defining and urgent necessity, the partnership between Fexco and the SEAI serves as a compelling example of how strategic collaboration can empower local communities, stimulate continuous innovation, and accelerate the broader national and international transition to a low-carbon economy. This ongoing alliance has become a reliable and trusted source of guidance, expertise, and practical support for individuals, homeowners, public institutions, and businesses across the country who are actively working to enhance their energy efficiency and reduce their environmental impact.

By maintaining a clear and unwavering focus on sustainable development, long-term environmental stewardship, and increased energy awareness, this partnership continues to pave the way for a cleaner, more resilient, and environmentally conscious Ireland; bringing tangible benefits not only to current generations but also to those of the future.

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AI Advisory Council: Recommendations to secure Ireland's position in the AI ecosystem

Published in February 2025, the AI Advisory Council's *Helping to Shape Ireland's AI Future* outlines opportunities for government to accelerate AI adoption and "reinforce Ireland's role in the global AI ecosystem".

Asserting that current economic models and forecasts may potentially underestimate the growth trajectory of AI, the AI Advisory Council's argues that by acting decisively now, Ireland can strengthen its leadership position in AI.

Simultaneously, the council emphasises the need to ensure that the labour market and wider economy are optimally positioned to capture the opportunities and mitigate the challenges ahead.

The recommendations are organised into six key categories:

1. AI and the future of skills/work;
2. AI ecosystem;
3. AI literacy and education;
4. AI sovereignty and infrastructure;
5. Biometrics and the public service; and
6. AI and the creative sector.

Future of skills/work

Aimed at enhancing understanding of the transformative impact of AI on the labour market.

The AI Advisory Council calls on government to:

- "Directly invest in the development of a real-time, publicly available 'AI Observatory'", to deliver data insights across several metrics, enabling policymakers, educators, and individuals to "better navigate the changes ahead."

Ecosystem

Aimed at supporting start-ups and SMEs to accelerate funding and leveraging, while expanding testbed initiatives.

The AI Advisory Council proposes:

- Establishing a "high-visibility innovation campus" with a specific AI focus to provide startups with access to hardware, research labs, resources, and engagement with policymakers.
- Creating "AI expert panels", similar to Innovate UK, to bring together independent experts to evaluate/guide funding decisions.
- Rolling out an AI regulatory sandbox.
- Creating a "dedicated Irish AI Office" to help align stakeholders around a single AI vision for Ireland.

Literacy and education

Aimed at emphasising the significance of AI literacy training for educators and ensuring equitable access to tools for students.

AI Advisory Council's recommendations include:

- Government establishing and publishing guidelines for the use of AI in the form of a live document.
- Government taking leadership of the development and implementation of AI literacy training for educators.
- Government creating of "a system to ensure equitable access to generative AI tools" in education.
- Government facilitating a "national conversation" between education stakeholders to "create a more stable and directed approach to leveraging AI in education".

Sovereignty and infrastructure

Aimed at ensuring recognition of the value of sovereign data and highlighting centrality of enhanced energy infrastructure as an enabler of participation in the AI economy.

AI Advisory Council suggests that:

- Government must "fully integrate AI into its operations" to enhanced public services, with an emphasis on "Irish AI" to incentivise local innovation.
- Government should establish an "AI Energy Council" to recommend policies to accelerate electricity grid development and cultivate "public conversation on whether and how safe nuclear energy can be adopted in Ireland".
- Ireland contributes to AI innovation by "making available key public data resources" while maintaining privacy and security and proposing updates to the EU Open Data Directive.

Biometrics and the public sector

Aimed at providing recommendations for the responsible use of AI-powered facial recognition technology in public services.

The AI Advisory Council recommends that:

- Any decision to legislate for the use of FRT by An Garda Síochána must be accompanied by a clear legal rationale for use cases and establish legal parameters.
- A bespoke procurement framework for FRT systems should be adopted and implemented.
- Prior to procurement/deployment of FRT, an independent evaluation should be undertaken in real-world conditions.
- Regular independent auditing of FRT be provided for.

Creative sector

Aimed at determining the transformation impact of AI on the sector while protecting creators.

The AI Advisory Council suggests that:

- Government evaluates copyright laws and licencing regimes for preparedness amid AI disruption.
- Government introduces a specific law to prohibit the creation of digital deepfakes of individuals without consent.
- Government explores policy initiatives to "protect and promote Irish and European culture in the age of AI".

Summarising, the AI Advisory Council regards its recommendations as "key opportunities to strengthen Ireland's AI ecosystem". Emphasising the balance between economic competitiveness and ethical oversight, the recommendations are intended to build on existing AI initiatives and "provide an initial focus that will evolve in step with advances in AI".

Speaking after the release of the report, AI Advisory Council chair, Patricia Scanlon said: "This report lays out actionable recommendations to ensure Ireland remains competitive in

the global AI arena while fostering an inclusive, ethical, and sustainable future.

Writing in *eolas Magazine*, Minister of State for Trade Promotion, AI and Digital Transformation, Niamh Smyth TD praised the work of the AI Advisory Council for its "invaluable insight and expertise" and indicated that "the Council's report with high-level recommendations to the Government is very timely and is currently being considered".

Are we entering the unlimited age of digital labour?



Following recent spending cuts in the UK and similar initiatives by the US Department of Government Efficiency (DOGE), Ireland may face fiscal constraints in the coming year. Historically, austerity measures have been met with resistance in Ireland.

Unlike traditional AI models that merely generate responses and require constant human intervention, Agents function as autonomous digital workers. Think of them as new hires or apprentices. Trained on your organisation's data, they work within clearly defined boundaries to streamline processes, retrieve critical information, and automate routine tasks. This not only drives operational efficiency but also underpins a model of "smart austerity" by delivering cost savings without the collateral damage typical of traditional spending cuts.

This distinction is vital. Many current AI implementations are either too limited in scope or suffer from a lack of robust governance. For example, embedded Agents – systems confined within a single application – are restricted in their capacity to effect meaningful

transformation. Conversely, large language models (LLMs) operating in isolation often resemble independent contractors, disconnected from an organisation's secure knowledge base and broader operational framework.

The key to unlocking AI's full potential in the public sector lies in deploying secure, controlled Agents that integrate seamlessly into existing workflows, thereby providing a sustainable path to efficiency and fiscal prudence.

Walking the AI tightrope

Public sector leaders find themselves on a tightrope where bold ambition to embrace AI collides with the real fears of fiscal tightening and service disruption. In this delicate balancing act, three key pitfalls emerge:

- 1. AI paralysis:** Organisations often hesitate to move forward due to perceived risks – even though some employees are likely already using AI informally. The true danger lies not in AI itself, but in the absence of a strategic, confident approach. Without a clear vision, opportunities for transformative change can be lost.
- 2. AI by familiarity:** Some agencies adopt AI tools that are easy to access but not purpose-built for their needs. Adopting AI should not mean settling for half measures. Just because it is included or was a faster approval does not make it right. AI needs to be by design, which means, like a good Guinness, do not rush it!
- 3. AI anarchy:** Without robust governance, AI deployments can become fragmented and uncoordinated, resembling a free-for-all where departments act independently without a shared strategy. This can lead to inconsistent outcomes, escalating costs, and a lack of accountability. The solution is a centralised governance framework that involves a wide range of stakeholders across the organisation, ensuring that every AI initiative aligns with overarching public sector goals.

Navigating these challenges is not about stalling progress, it is about strategically aligning ambition with caution. By establishing a comprehensive governance framework that includes input from all relevant areas, governments can harness the power of Agents to deliver significant efficiency gains while avoiding the pitfalls of traditional austerity.

The value of agents in government

Adopting AI is not solely about boosting efficiency; it is about realigning public sector operations to deliver essential services without the harsh trade-offs of traditional austerity. Agents contribute to this objective in three significant ways:

Increase operational efficiency with proactive agents and automation.

Learn more



- **Productivity gains:** Automating repetitive tasks allows civil servants to focus on high-value work.
- **Cost savings:** Agents streamline processes across departments, trimming overheads while preserving service quality. This “smart austerity” approach enables governments to achieve substantial savings without the typical collateral damage of past spending cuts.
- **Knowledge building:** Rather than losing vital institutional know-how, Agents help organisations build internal knowledge. They capture operational insights, foster continuous learning, and provide a reliable resource for training – instilling confidence in AI adoption and empowering staff to make well-informed decisions.

Not everyone wants a Big Bang AI. Many agencies are taking a measured approach by starting with internal AI deployments, for example, using Agents within IT helpdesks, HR functions, and developer teams to automate document retrieval, respond to routine queries, and support software development. One of the most untapped opportunities is empowering tech and development teams with AI, allowing them to focus on innovation rather than repetitive tasks. This low-risk approach not only delivers tangible cost savings and efficiency gains but also lays the groundwork for broader, citizen-facing implementations in the future.

Real-world success stories

The potential of Agents is already being demonstrated in the real world. Consider the experience of Capita, a UK-based outsourcing firm, which used Agents to

overhaul its recruitment process, cutting hiring times from months to days. By automating candidate screening and communication, Capita improved efficiency while maintaining a high-quality candidate experience.

Similarly, Salesforce transformed its global help salesforce website, replacing traditional search with a fully agentic experience. The results were staggering: the Agent resolved 80 per cent of queries without human intervention and was twice as effective as a traditional chatbot. This shift showcases how AI-driven experiences can provide instant, accurate support at scale, freeing up human teams for more complex queries.

These examples illustrate that agents can be a powerful tool for realising “smart austerity” – ensuring that governments and organisations can trim costs and enhance service delivery simultaneously.

AI as an integrated partner

Public sector organisations will increasingly rely on multi-modal AI, which is a blend of specialised AI tools and models rather than a one-size-fits-all approach. The best AI model today may not be the best tomorrow, so flexibility is essential.

Salesforce has embraced this AI-agnostic approach, allowing organisations to bring their own models and reasoning engines. This ensures cost control, adaptability, and alignment with organisational objectives and flexibility to pivot as innovation is released across the AI space.

For AI to succeed in the public sector, it must be trusted, controlled, and

purpose-driven. Governments that embrace Agents in a structured way will gain not only efficiency but also resilience, ensuring knowledge is retained, employees are empowered, and citizens receive seamless, responsive services. AI is not replacing human workers; it is scaling and enhancing their impact.

The best way to understand an Agent is to build one. Salesforce Trailhead offers free tools to explore how agents work, enabling organisations to experiment, learn, and implement AI-driven transformation in a risk-free environment.

The key message? Do not DIY your AI. Govern it wisely, integrate it strategically, and unlock its true value for public service transformation.

Interested to learn more? Download the copy of our new AI Handbook that is designed to guide you through the journey of integrating AI agents into your organisation, from identifying the right use cases to delivering measurable results, while continuing to safeguard citizen data and maintain public trust.



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Halfway through the Digital Decade

Barry Lowry, the Government's Chief Information Officer, tells *eolas Magazine* that Ireland has built a "solid foundation" on Digital Decade delivery, but that the work ahead demands "ambition, innovation, and relentless delivery".

The Digital Decade was formally launched in 2021 by European Commission President Ursula von der Leyen, setting out a vision for Europe's digital transformation by 2030. The initiative outlines four key dimensions: digital skills, digital infrastructure, digital business, and digital public services. Progress in these areas is closely tied to funding through the EU Recovery and Resilience Facility and accompanied by regulatory developments at both EU and national levels.

Lowry begins by framing Ireland's position within this European context. "We are halfway through the Digital Decade, and the European Commission is closely monitoring how each country is progressing," he says. "It is essential that Ireland continues to align with the targets while also addressing our own national needs and priorities."

Strong foundations for digital government

Lowry outlined how digital government capability directly influences wider economic performance. Citing international examples such as Denmark, Singapore, and Estonia, he argues that countries with robust digital public services tend to lead in digital business competitiveness. "Ireland is a positive example of how digital government can attract foreign direct investment, support indigenous enterprise, and contribute to wider economic growth," he states.

Ireland's digital economy is currently valued at approximately €50 billion, representing 13 per cent of national GDP. The Irish ICT market is worth €19 billion and continues to expand. Over 1,000 companies operate in the sector, including a mix of foreign multinationals and Irish-owned SMEs.

“If Ireland is to remain at the forefront of digital innovation in Europe, we must continue to invest in talent, infrastructure, and the systems that support digital governance.”

This growth, Lowry notes, has underpinned strong corporate tax revenues, enabling increased government investment in public services. “A significant portion of the €28 billion in corporate tax collected last year can be attributed to the strength of the tech sector,” he says.

Skills, AI, and regional balance

Despite this progress, Lowry highlights several areas of concern. Growth in artificial intelligence capabilities in Ireland has been modest, with only a 0.6 per cent year-on-year increase on 2023. “This level of growth will not position Ireland to benefit fully from the AI-driven opportunities emerging globally,” he cautions.

Digital skills remain a key area for development. The proportion of ICT specialists in the workforce declined by 1.6 per cent in the most recent data, against an EU target of 10 per cent by 2030. Moreover, participation in ICT-related third-level education is not increasing at the necessary pace, and gender imbalances persist. “We are not yet making digital careers sufficiently attractive or accessible, particularly to young women,” Lowry notes.

Geographic disparities also present a challenge. While Dublin exceeds the EU’s 2030 target of 10 per cent of its workforce employed in ICT roles, many other regions fall significantly behind. “Despite the National Broadband Plan and increased investment, the digital economy remains heavily concentrated in the capital,” Lowry says.

Programme for Government

In assessing Ireland’s preparedness to meet future digital demands, Lowry pointed to several structural strengths. Ireland has been positively rated by the OECD for its progress in digital government, ranking eighth in the organisation’s most recent assessment.

“We have embraced digital by design, prioritised user-driven services, and

increasingly adopted open-source solutions,” he says.

The current Programme for Government, Lowry asserts, reflects a strong understanding of the digital agenda. “The Minister [Jack Chambers] is engaged with the issues and has demonstrated commitment to scaling our digital capabilities,” he notes.

Key priorities include supporting the growth of data centres powered by renewable energy, expanding digital skills, and ensuring inclusive participation in the digital economy.

However, Lowry also emphasised the need for legal and regulatory frameworks to keep pace with technical progress. “We developed a new digital wallet that was technically ready for launch, but legislative delays meant it could not proceed,” he said. “If we do not align our legal frameworks with our digital ambitions, we risk stalling progress.”

Future priorities

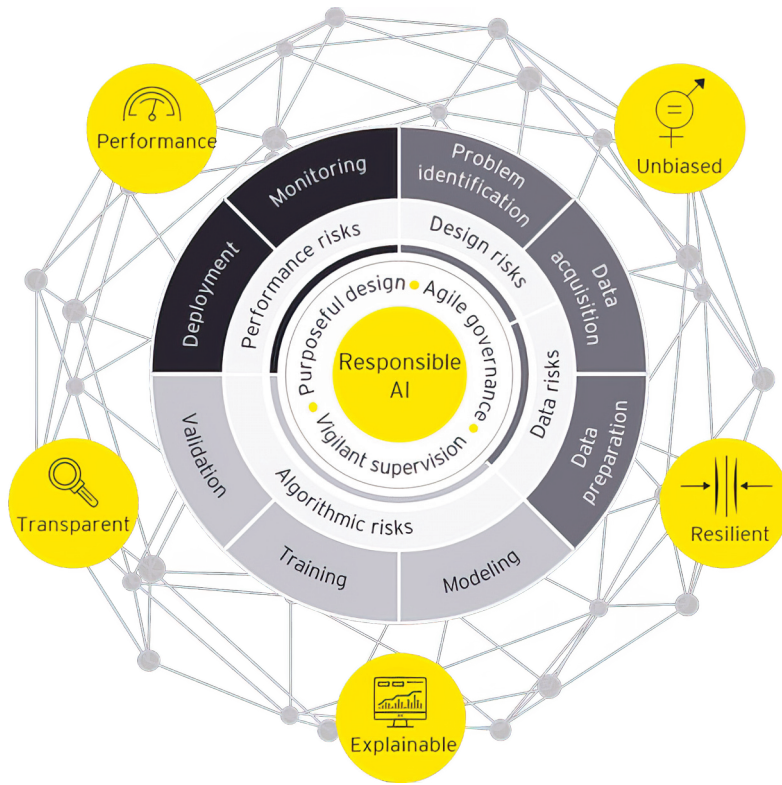
Looking ahead, Lowry reinforced the importance of maintaining momentum and translating strategy into delivery. He highlighted the economic significance of AI, the need to scale infrastructure sustainably, and the role of public sector digital services in reinforcing Ireland’s international competitiveness.

“The next three to five years will be critical,” he says. “If Ireland is to remain at the forefront of digital innovation in Europe, we must continue to invest in talent, infrastructure, and the systems that support digital governance.”

Lowry concludes with a call to action. “The Programme for Government provides a strong vision, but delivery is where success will ultimately be measured.

“Our collective responsibility is to ensure that this vision is realised in a way that benefits the economy, the public service, and society as a whole.”

Ensuring responsible AI in the public sector



As governments worldwide integrate AI into decision-making, the question is no longer whether to use AI, but how to do so responsibly.

From predictive analytics in law enforcement to chatbots for citizen engagement, we have seen how AI can reshape the way governments interact with citizens and manage resources. Additionally, EY has supported government to consider the use of AI-driven tools for fraud detection, resource allocation, and crisis management, enabling governments to respond more effectively to challenges.

As AI continues to evolve, its integration into the public sector brings opportunity and risk. In February 2024 the Irish Government published *Interim Guidelines for the Use of AI in the Public Service* – these guidelines are currently being reviewed and updated, and further guidance is expected to be published soon.

The 2024 Guidelines focused on seven key requirements for the responsible use of AI in the public service and these areas are likely to remain central to the updated guidelines. Government has made a commitment that AI tools used in the civil and public service will comply with seven key requirements:

- human agency and oversight;
- technical robustness and safety;
- privacy and data governance;
- transparency;
- diversity, non-discrimination and fairness;
- societal and environmental well-being; and
- accountability.

While AI tools can assist human capabilities, the Government guidelines are very clear that they should never replace human oversight. All AI tools used in the public service must be part of a process that has human oversight built into the process.

There are a number of important steps that should be followed to support the responsible use of AI in the Irish Government sector. These include:

1. **Develop a responsible AI governance framework:** To ensure that AI usage complies with the guidelines, it is essential that an initial risk assessment is completed to consider the legal, moral and societal impact of the proposed development. This assessment should be the first step in the development process and align to a documented "Responsible Governance Framework" that includes each of the seven areas set out in the guidelines. The risk assessment should also address any challenges around AI and set out how the development demonstrates individual and societal benefits.

The absence of a Responsible Governance Framework can give rise to a lack of accountability, increases the risk of a bias in the data of AI models and may undermine the prospect of AI uses for good. The Responsible Governance Framework should recognise ethical, moral, legal, cultural, and socioeconomic implications and drive a human centred, trusted, accountable, and interpretable AI system.

2. **Establish ongoing oversight and accountability:** The development of AI-based systems should include regular and ongoing processes to monitor accountability and oversight. It is not sufficient to consider the guiding principles of accountability and oversight at the start of any project. There should be consistent performance monitoring and regular audits of the

decision-making process against pre-defined metrics – thereby making certain that the performance of the system is consistent and maintains accountability. A key element of the monitoring process should ensure that appropriate steps are taken to test for accuracy and bias. Robust monitoring is necessary to confirm that data sets represents the diversity of potential end users in real world conditions.

3. **Ensure legal and regulatory compliance:** Key requirements include the GDPR and the EU AI Act. It is important to ensure that any data used in an AI model complies with GDPR requirements. Under GDPR, permission must be sought to use personally identifiable information. This includes facial images and voice. The EU AI Act began a phased implementation in August 2024 and requires any AI development to be categorised by risk (unacceptable, high, limited, and minimal) and imposes stricter requirements for higher-risk applications. The development of high-risk AI must ensure transparency, robustness, and traceability, conduct risk assessments, and maintain human oversight. The Act also mandates regular monitoring and reporting of AI systems' performance and security.

EY's Responsible AI framework

Recognising the importance of developing AI in a responsible and compliant way, EY has developed a Responsible AI framework that can help to evaluate AI risk and build controls across trust attributes, risk categories and governance domains.

The framework is designed to ensure the following:

- **Performance:** That AI's outcomes are aligned with stakeholder expectations and perform at a desired level of precision and consistency.
- **Unbiased:** Inherent biases arising from the development team composition, data and training methods are identified and



Gary Comiskey is Partner and leads EY's Government and Infrastructure Consulting practice. He has more than 20 years' experience supporting Government clients with some of the largest and most complex transformation projects.



Ciaran Hickey is a Partner in EY's Data and Analytics practice and leads the Wavespace AI Lab. Ciaran has led a range of innovative AI projects across the public sector in Ireland and Europe.

addressed through the AI design. The AI system is designed with consideration for the needs of impacted stakeholders and to promote a positive societal impact.

- **Transparent:** When interacting with AI, an end user is given appropriate notification and an opportunity to select their level of interaction. User consent is obtained, as required for data captured and used.
- **Resilient:** The data used by the AI system components and the algorithm itself is secured from unauthorised access, corruption and/or adversarial attack.
- **Expandable:** The AI's training methods and decision criteria can be understood, are ethical, documented and readily available for human operator challenge and validation.

Conclusion

There is no doubt that AI can bring enormous opportunity for the public sector, improved citizen experience, greater access to services, personalised citizen solutions increased productivity and increased levels of data driven policy making to name but a few. However, as we are reminded by the old Dutch saying "trust arrives on foot and leaves on horseback", trust takes time to build, but is quickly lost, effort is required to build AI solutions in a responsible and trusted way.

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Shape the future with confidence

Government survey: How Ireland's government departments are using AI

eolas Magazine surveys Ireland's government departments for their use of artificial intelligence.

artificial intelligence report

Across the State's government departments, there is a clear and cautious approach to the use of ChatGPT and other artificial intelligence (AI) tools. While nearly all departments have discussed AI and its implications, very few are actively using generative AI like ChatGPT in conducting official business.

The overall trend suggests that while there is growing interest in AI's potential to enhance efficiency, productivity, and public

service delivery, departments remain wary of the risks. Common challenges include data protection, misinformation, and ethical governance.

Any AI usage is typically subject to risk assessment and compliance with cybersecurity guidelines. Departments like Enterprise, Social Protection, and Health are among the most proactive, either trialling generative AI or implementing supportive infrastructure and training.



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

Department of Agriculture, Food and the Marine.

The Department of Agriculture, Food and the Marine (DAFM) has discussed the potential use of ChatGPT; however, the Department is not using ChatGPT or any other generative AI applications to conduct business. In addition, the department has an AI policy in place which has been communicated to all staff through an AI awareness campaign.

The following predictive AI models have been employed within the Department, largely for research and analysis purposes:

- predicting the likelihood of TB outbreaks;
- image analysis of crop claimed under CAP schemes;
- image analysis for identifying species susceptible to H5N1 (bird flu);
- customer segmentation analysis for developing agri-food policies;
- analysis for identifying risk factors for microbial food safety; and
- smart text analysis to prevent and contain data breaches.

All current and future use cases are subject to human review, data protection and governance measures. The Department is committed to ensuring that any use of AI is informed by a risk assessment in line with our AI policy of any potential human rights and equality implications, with a need for careful management in accordance with privacy and broader ethical and legal frameworks.



An Roinn Leanaí, Comhionannais,
Míchumais, Lánpháirtíochta agus Óige
Department of Children, Equality,
Disability, Integration and Youth

The Department of Children, Equality, Disability, Integration and Youth

The Department of Children, Equality, Disability, Integration and Youth (DCEDIY) has discussed ChatGPT and/or other AI applications and provided familiarisation sessions to officials on its potential uses.

DCEDIY is guided by the Interim Guidelines for Use of AI in the Public Service published by the Public Service Transformation Delivery Unit in the Department of Public Expenditure, NDP Delivery and Reform, the Office of the Government Chief Information Officer and by the National Cyber Security Centre on ICT policy and for decision making security matters.

DCEDIY does not use publicly available large language models including ChatGPT to conduct business.

Beyond this, DCEDIY is currently developing a specific policy on the use of AI to guide officials in the use and development of AI, including large language models.



An Roinn Cosanta
Department of Defence

Department of Defence

The Department of Defence's core IT infrastructure is delivered by the Office of the Government Chief Information Officer (OGCIO) under the 'Build to Share Managed Desktop' shared service.

In line with advice issued from the National Cyber Security Centre (NCSC), OGCIO do not allow AI tools to be accessed by default on official devices. The use of AI, as with all enabling technologies, is considered on a solution-by-solution basis. Any such considerations are discussed and a risk assessment conducted as appropriate.'



An Roinn Oideachais
Department of Education

Department of Education

The Department continues to review and follow guidance issued by the National Cyber Security Centre, Office of the Government Chief Information Officer, and the Department of Public Expenditure NDP Delivery and Reform on the use of artificial intelligence.

A limited trial is underway by the communications unit within the department to assess the opportunity for productivity gains of AI services which includes the transcription of public audio recordings to text, grammar and spelling assistance, translation of public information, and editing text in plain English. All text is reviewed and verified by a human.

A proof of concept to examine if AI technologies could support Departmental staff in responding to customer queries was completed. The proof of concept focused on the potential for using AI technologies to analyse large volumes of publicly available information. An external service provider assisted with this at no cost to the Department.

The Department has no AI systems in place that processes citizens information.

The Department will continue to assess the suitability of AI on a solution-by-solution basis.



An Roinn Fiontar,
Trádála agus Fostaíochta
Department of Enterprise,
Trade and Employment

Department of Enterprise, Trade and Employment

The Department of Enterprise, Trade and Employment first issued a policy document on the use of Generative AI to all staff in July 2023. That policy highlighted some of the potential areas where Generative AI could deliver efficiencies but also set out the risks of using such technologies and the mitigations that staff in the Department must adopt to avoid those risks. This was based on guidance received from the National Cyber Security Centre (NCSC). The Department's original generative AI Policy has recently been reviewed, and an updated version has been issued to all staff which encourages and fosters greater use of Generative AI. The new policy mandates Microsoft Copilot Chat as the preferred Generative AI chat tool to be used by staff in the Department. Copilot Chat was chosen based on its built in Enterprise Data Protection which ensures that the Departments data is kept secure and private and is not used to train foundation models. Other AI applications may be used if a risk assessment is carried out and it confirms that similar levels of enterprise data protection can be guaranteed.

The Department does not record exactly what individual staff might be using generative AI tools for, but the new policy encourages staff to use it to find information, answer questions, and generate content and ideas. The policy makes staff aware that AI can make mistakes, and third-party content on the internet may not always be accurate or reliable and that they should always check the sources before making decisions or taking actions based on AI generated content. Department staff remain 100 per cent responsible for all outputs regardless of whether AI assistance was involved or not. Where appropriate, content approval processes are put in place and staff must notify anyone receiving the document to review/approve that they have used Generative AI and that they have checked the sources for accuracy. These internal assurance processes align with the European Commission's High-Level Expert Group on AI which presented Ethics Guidelines for Trustworthy Artificial Intelligence. These guidelines are focused on ensuring that there is ultimately a human in command to ensure the accuracy of materials which may have been generated with the help of generative AI tools.

In the wider context of AI, one of the Department's Offices, the Companies Registration Office (CRO), uses machine learning to scan digitised annual returns to check whether they are signed in the appropriate places. This technology has proven to be very effective in delivering processing efficiencies for the CRO. The CRO received over 240,000 Annual Returns in 2022, all of which were processed using this signature recognition facility. The Department and the CRO also collaborated on an artificial intelligence project to scan CRO annual returns and extract company financial data. Work on data analysis from this project and in planning the further scaling out of this project is currently ongoing.

When considering the use of any new technologies, the Department assesses the risks and benefits of appropriate technologies, including AI, on a case by case basis. Some of the rationales considered are enhanced efficiency and productivity, improved decision-making and cost savings through the automation of tasks and the optimisation of processes. Convenience, accessibility and ease of use for the end user will also be considerations in the development and selection of public facing new technologies in the future which may include elements of AI capability. The Department led the development of the National Artificial Intelligence Strategy, *AI: Here for Good*. As part of this Strategy, the Department of Public Expenditure, National Development Plan Delivery and Reform and the National Cyber Security Centre (NCSC) play a key role in providing advice and guidance on the deployment of AI tools across the public sector. The National AI Strategy and this cross-government engagement will continue to inform the Department's future approach in seeking to leverage AI in relation to the work and functions of the Department.

Government audit: How Ireland's government departments are using AI



An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications

Department of the Environment, Climate and Communications

The Department of the Environment, Climate and Communications did not respond to *eolas Magazine*.



An Roinn Airgeadais
Department of Finance

Department of Finance

The Department of Finance declined to comment.



An Roinn Breisoidreachais agus Ardoideachais,
Taighde, Nuálaíochta agus Éolaíochta
Department of Further and Higher Education,
Research, Innovation and Science

Department of Further and Higher Education, Research, Innovation and Science

The Department is currently considering potential use cases for the adoption of AI in its work, not specifically ChatGPT, and a working group has been established to progress this. Limited circumstances in which AI is currently used include summarising text and workshop structuring. All text is reviewed and verified by a human. There are no AI systems in place that processes citizens' information. The working group have a draft terms of reference which include identifying potential training needs and to create guidelines to consider the use of AI within the Department.

The Department continues to review and follow guidance issued by the National Cyber Security Centre, the Office of the Government Chief Information Officer, and the Department of Public Expenditure NDP Delivery and Reform on the use of artificial intelligence.



An Roinn Sláinte
Department of Health

Department of Health

The Department of Health has an approved policy on the use of generative artificial intelligence (Gen AI) which is based on recommendations from the National Cyber Security Centre's (NCSC) Cyber Security Guidance on Generative AI for Public Sector Bodies and the Department of Public Expenditure NDP Delivery and Reform's (DPENDR's) Interim Guidelines for Use of AI in the Public Service.

Training was provided to 25 staff as part of a proof of concept, regarding possible use cases of gen AI, including improved efficiency and productivity. This will inform decisions regarding the potential use of gen AI in the future.



An Roinn Dlí agus Cirt
Department of Justice

Department of Justice

The Department of Justice did not respond to *eolas Magazine*.



An Roinn Caireachais Phoiblí
Sheachadadh PFN agus Athchóirithe
Department of Public Expenditure
NDP Delivery and Reform

Department of Public Expenditure, NDP Delivery and Reform

In relation to the use of AI, the Department of Public Expenditure NDP Delivery and Reform (DPENDR) has regard to relevant guidance published by the National Cyber Security Centre, the seven requirements for ethical AI that have been developed by the European Commission's High Level Expert Group on AI in their Ethics Guidelines for Trustworthy AI and the Interim Guidelines for the Use of AI in the Public Service. These Interim Guidelines, which were published by this Department, underscore the Government's commitment to promoting the adoption of trustworthy AI in the Public Service and set out high level principles to support this.

Reflecting on the rapid pace of change in the adoption of AI tools, the coming into force of the EU AI Act and the refresh of the National AI Strategy by the Department of Enterprise, Trade and Employment in November 2024, this Department is now finalising more advanced, practice-orientated Guidelines for the Responsible Use of AI in the Public Service, including Generative AI.

Specifically regarding use of ChatGPT within DPENDR, a guidance note on AI, in the context of the use of ChatGPT, was issued to all staff in May 2023. This reminded staff of their responsibilities in general as set out in the Department's Acceptable Use of ICT policy and advised staff that an appropriate risk assessment should be carried out before using any new technology. Known risks in using AI were also flagged in the guidance.

The Department does not currently use ChatGPT, or similar AI products, to conduct official business. However, potential use of AI to enable the Department's work is kept under review so that we can avail of the opportunities AI offers where appropriate. If the use of AI tools is being considered, this will be discussed and an appropriate and proportional risk assessment will be conducted.



**An Roinn Forbartha
Tuaithe agus Pobail**
Department of Rural and
Community Development

Department of Rural and Community Development

The Department of Rural and Community Development did not respond to *eolas Magazine*.



An Roinn Coimirce Sóisialaí
Department of Social Protection

Department of Social Protection

The Department of Social Protection is currently examining the potential future use of AI technologies.

An AI chatbot on the Department's MyGovID platform is in use, providing real-time advice to customers on how best to use the MyGovID service. As part of an internal review of Microsoft Office services in the Department, a small number of users are temporarily piloting an upgrade, which includes limited integration of AI tools within the suite as standard.

The Department will continue to examine the merits of AI suitability for its needs.



An Roinn Iompair
Department of Transport

Department of Transport

The Department is awaiting the publication of updated guidelines on the use of AI from the Department of Public Expenditure, NDP Delivery and Reform, which are due in the near future and these will inform any internal policy that is subsequently developed. In the interim, some departmental staff have attended events and training relating to the capabilities and potential applications of AI. Use cases and possible "proof of concepts" are being explored.

A free version Microsoft's Copilot is being assessed by staff in the Department under strict controls. A project has also commenced with an AI proof of concept for the Coast Guard. Further use cases and additional proof of concepts may be explored in the year ahead but no specific projects have been approved nor budget allocated at this time.

AI: Here for Good, a national artificial intelligence strategy for Ireland published by the Government in 2021, states in Section 4.1: "Government will leverage the potential of AI to assist in achieving excellence, innovation, and improved productivity in the delivery of public services and in other key activities". In this context, the Department of Transport is assessing potential applications of AI which may deliver efficiencies and other benefits to the work of the Department.



**An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta**
Department of Housing,
Local Government and Heritage

Department of Housing, Local Government and Heritage

The Department does not use ChatGPT or any other AI to conduct business. As with all new technologies, the Department is assessing the potential of AI in the delivery of services, in line with the National Cyber Security Centre guidance on its usage in the public service.



Roinn an Taoisigh
Department of the Taoiseach

Department of the Taoiseach

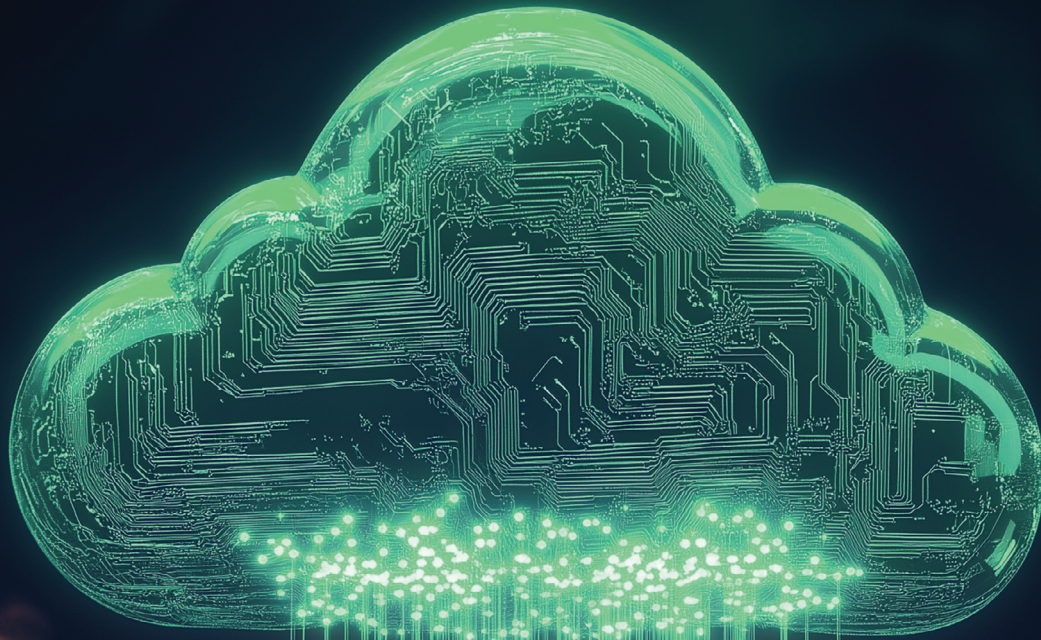
The Department of the Taoiseach did not respond to *eolas Magazine*.



**An Roinn Turasóireachta, Cultúir,
Ealaíon, Gaeltachta, Spóirt agus Meán**
Department of Tourism, Culture,
Arts, Gaeltacht, Sport and Media

Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media

The Department is guided by relevant legislation, policies and the National Cyber Security Centre in respect of all matters related to the use or operation of AI. All applications and platforms used or operated by the Department must be in line with relevant policies and be consistent with advice provided by the National Cyber Security Centre (NCSC). The Department occasionally uses the European Commission's eTranslation machine translation platform, which is based on neural machine translation, being a form of artificial intelligence. This platform can be used to provide a draft translation of a text or a document between the Irish and English languages as part of the Department's work, thus assisting in making efficiencies in the organisation's operations.



Exploring common questions about choosing the right cloud infrastructure for AI workloads



Carita O'Leary, Sales Leader Ireland, HPE.



Rajesh Raheja Senior Vice President and General Manager for Private Cloud, HPE.

As AI continues to transform the enterprise landscape, a key decision looms: Should organisations rely on public cloud or private cloud to support their AI workloads? Rajesh Raheja Senior Vice President and General Manager for Private Cloud, HPE and Carita O'Leary, Sales Leader Ireland, HPE, write.

The answer to this fundamental question is increasingly clear. Hybrid cloud – balancing private cloud with selective use of public cloud – offers the best combination of performance, security, cost management. Some of the following are key questions in exploring what is the right fit for today noting the mix of workloads.

Q: How do you typically decide between public and private clouds and how does deploying AI change this approach?

Private cloud use for AI is seeing remarkable growth. Public cloud offers advantages like elasticity, ease of use, and quick access to new features. But many Users still prefer on-premises or private cloud solutions for a variety of reasons, such as security, governance, latency, and lower cost of ownership. The choice between public and private cloud depends largely on the enterprise's workload needs.

AI is one of the workloads behind the resurgence of interest in private cloud. AI workloads require very large amounts of data and consistent utilisation of compute resources, this can be more cost effective on private cloud. Data gravity is also critical. High-quality data needs many complex data pipelines to feed and train machine learning models, it is more efficient and less costly to compute close to where the data resides, which may largely be on-premises. Therefore, users tend to adopt a hybrid cloud approach, blending both public and private cloud depending on workload requirements.

Q: With regulations like the EU's General Data Protection Regulation (GDPR) and the EU AI Act in mind, how do public and private clouds compare in terms of data governance and sovereignty?

Private cloud provides ownership, hence, more control, governance, and flexibility over security policies. This is why it is increasingly preferred to meet regulatory needs such as GDPR, other data sovereignty, risk and control considerations under the EU AI Act also. Public cloud can handle some of these needs, but users may struggle with issues like data leakage, transparency in incident management, ensuring true isolation of resources and sensitive data.

Q: How do security requirements influence the choice between public and private clouds? Are there specific AI applications where one type of cloud is significantly more secure?

Security overlaps with regulatory, compliance concerns because a lot of the regulatory requirements, like FedRAMP, also tie into security. There is much to consider around data sensitivity, role-based access control, ensuring that proprietary data is locked down, including who holds the encryption keys – the cloud provider or the enterprise. Having full control in a private cloud gives customers much more assurance that their data is secure. While managing all this can be complex, managed private cloud services make it simpler for users to handle security without giving up control.

Q: How does the total cost of ownership of running AI workloads compare in public versus private clouds? Are there hidden costs to be aware of with either option?

Public cloud's flexibility, elasticity come with a

steep price. Public cloud costing may appear simple because for each CPU used per minute, you pay a few cents. This may work quite well for development teams experimenting before committing to any infrastructure. But as usage grows, especially with production AI workloads, costs can quickly escalate. At scale, public cloud bills can take up a significant portion of the IT budget, with hidden costs including storage costs, ingress charges due to moving data between regions.

There are also costs related to security, compliance customisations, which may come as a surprise. Owning resources outright can reduce costs significantly. According to recent data, private cloud can deliver 50 per cent lower TCO compared to public cloud.

It also provides 65 per cent higher workload performance, making it an attractive option for users that need high performance, predictable costs. With the rise of generative AI, we are going to see a mix of approaches when it comes to where compute resides." Although public cloud is beneficial for quickly testing new technologies on a small scale, private cloud can offer better long-term value for sustained AI workloads, especially when security, regulatory, performance factors are considered. This is why CIOs are now being more thoughtful in their choice of where workloads are executed.

Choosing the right cloud infrastructure is crucial for managing AI workloads. Each option has its strengths, the best fit ultimately depends on your enterprise's specific needs. Private cloud often provides the control, security, flexibility required for handling complex AI operations, while reducing the complexities of managing infrastructure. As AI initiatives grow, evaluating managed private cloud services could offer a solution that balances performance with operational efficiency, helping your business stay agile in a rapidly evolving landscape.

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**Hewlett Packard
Enterprise**

¹ "You don't have to be a data scientist," Boeing

² "The New 2023 Cloud Reality: A Rebalancing Between Private and Public," HPE, June 15, 2023

³ Ibid

About the author Rajesh Raheja is the senior vice president and general manager of the Private Cloud group within the Hybrid Cloud organization at HPE. He is responsible for leading the teams that develop the technology's offerings, with a focus on expanding the Private Cloud portfolio. Article Extract from The Doppler.

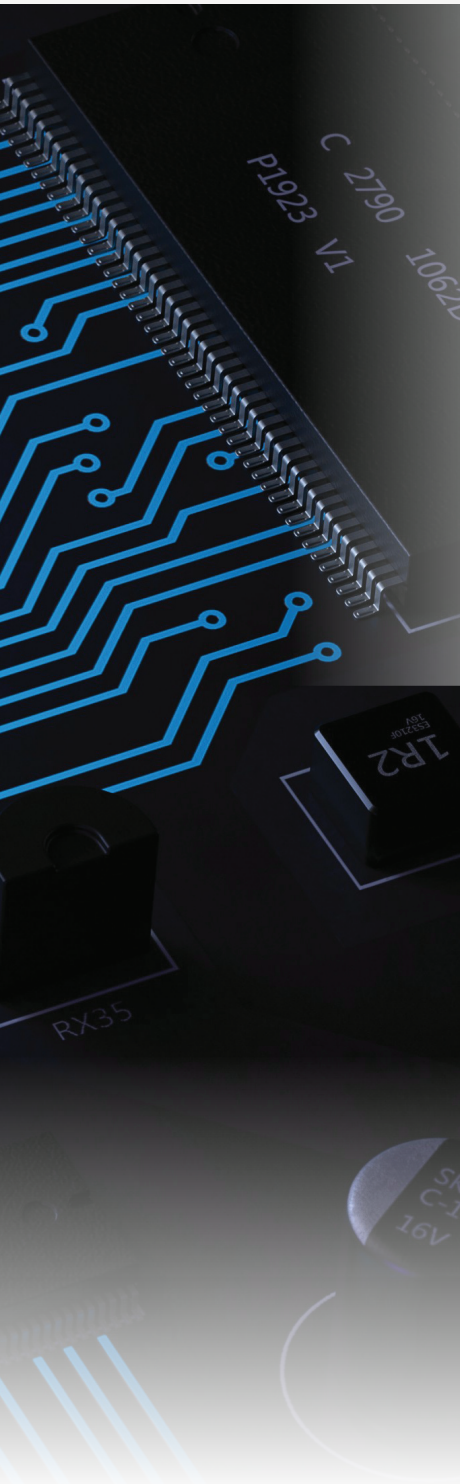
The AI economy in Ireland

Although AI adoption could contribute €250 billion to Ireland's economy over the next 10 years, half of all organisations still lack clear AI policies, a report has found.

The report, *The AI Economy in Ireland 2025: Trends, Impact, and Opportunity*, published by the Trinity Centre for Digital Business and Analytics (CDBA), finds that "a supportive AI policy environment" could inject an additional €60 billion into the economy. Widespread AI adoption with supportive policies would result in Ireland's per capita GDP being 42 per cent higher than if AI adoption does not take place, it claims. However, the report also outlines "a more realistic scenario", where AI begins in the high-tech sector followed by a "delayed broader adoption".

"Under this scenario, per capita GDP with supportive policies would still be 8.3 per cent higher compared to a slower adoption case. Over a 12-year period, even with phased adoption, AI integration would lead to a 31 per cent increase in Ireland's total economic output, underscoring the long-term benefits of AI-driven growth."

Multinationals lead on policy preparedness as 50 per cent have or are working on an AI policy. Only 10 per cent of public sector organisations have an AI policy, with 40 per cent developing one. Of organisations with revenue exceeding €40 million, 5 per



cent do not have an AI policy, compared with 25 per cent of organisations with revenue under €10 million. The report asserts that this signifies a greater need for support and guidance in small organisations regarding AI adoption.

The report found that 75 per cent of organisations recognise AI's value, up from 65 per cent in the CDBA's 2024 study. While 65 per cent of small organisations believe in its usefulness, this rises to 85 per cent for large organisations. In the public sector, belief in AI grew from 42 per cent in 2024 to 65 per cent.

Multinationals lead the way

The CDBA found that 9 per cent of organisations do not use AI in any form, down from 51 per cent in 2024. It also found that the amount of organisations integrating AI across all divisions grew from 1.81 per cent in 2024, to 8 per cent. Multinationals lead in AI-adoption, with 63 per cent actively using the technology. For the domestic private sector, 60 per cent use AI, while the public sector has an adoption rate of 50 per cent.

The report highlights "the prevalence of shadow AI culture", where employees use AI despite it being against company policy. It found that 13 per cent of organisations strictly prohibit free or public AI tools, but that of this group, 61 per cent of managers said they are aware that employees use these tools. The report asserts that "organisations would likely be better off managing AI usage rather than attempting to prohibit it outright".

Analysis of AI implementation found that it is instigating "major organisational redesign" in 12 per cent of organisations. The report notes: "However, 50 per cent report little to no productivity gains, highlighting the need for more thoughtfully integrated, enterprise-

grade AI tools to drive higher efficiency and transformation."

Multinationals leverage AI more effectively with 38 per cent reporting no or minor productivity gains from AI, with this figure rising to 51 per cent for domestic public and private sector organisations. The report says: "Organisations may currently view AI as more valuable for strategic transformation rather than day-to-day administrative functions."

Challenges

Training and workforce readiness were also examined in the report, finding that multinationals report lower investment in end-user AI training compared to Irish-owned organisations. However, 70 per cent of multinationals expressed confidence in their workforce's AI adaptability, compared with 55 per cent in the public sector.

Recruitment challenges identified in the report necessitate investment in manpower training, curriculum updates, and reskilling initiatives. The report adds: "While talent shortages persist, the situation is gradually improving, potentially due to a combination of increased AI training efforts and a growing talent pool."

With 56 per cent of organisations claiming sectoral regulations create barriers to implementation, the report illustrates they are "perceived as a major inhibitor to AI adoption". However, 63 per cent of organisations believe the Government supports AI adoption.

On AI ethics and security the report found that only half of senior managers believe their organisation has a responsible or ethical approach to AI adoption. The report also highlights a "potential gap in security preparedness", as only 50 per cent of respondents believe their organisation has implemented enhanced security measures in response to AI adoption.

During a Dáil Éireann debate on AI in April 2025, Taoiseach Micheál Martin TD said: "AI can be a game-changer in helping us to deal with many of the economic and societal challenges we face here in Ireland and across the European Union. We need a balanced approach that does not stifle entrepreneurship or over-burden innovative firms with regulation. We must be open to the significant economy-wide productivity gains made possible by fast-growing young firms at the technological frontier."

Artificial intelligence report: Taking Irish organisations from experimentation to impact



Martin Mannion



Nicola Flannery

Artificial intelligence (AI) is firmly embedded in our day to day lives. In Ireland, 73 per cent of professionals are aware of GenAI tools, and nearly half have used them¹. Deloitte's State of Generative AI in the Enterprise Q4 report² shows that while companies see returns on GenAI investments, scaling them is challenging.

This report highlights six key findings.

1. **There is a speed limit:** GenAI continues to advance at incredible speed. However, most organisations are moving at the speed of change in their organisation and not the speed of the technology.
2. **Barriers are evolving:** Significant barriers to scaling and value creation exist, with these challenges increasing over the past year due to regulatory uncertainty and only moderate levels of trust in the accuracy of GenAI outputs hampering adoption and creating hesitations to move forward.
3. **Some users are outpacing others:** GenAI is further along in some areas than others with IT, cybersecurity, operations, marketing and customer service showing strong adoption.
4. **The focus is on core business value:** A strategic shift is emerging from technology catch up to competitive differentiation with GenAI.
5. **The C-Suite sees things differently:** CxOs tend to express a rosier view of their GenAI investments and underestimate how easily GenAI barriers can be addressed.
6. **Agentic AI is here:** GenAI powered systems having "agency" to orchestrate complex workflows, coordinate tasks with other agents and execute tasks without human intervention represents a breakthrough innovation that may unlock the full potential of GenAI.

"There are two steps to take: invest in training your team on how to use GenAI and create effective policies around its use... more comprehensive training can support transition hesitant users to confident ones and employers implementing clearer policies will help."

Martin Mannion

These findings ring true when we see that many Irish businesses continue to struggle to move beyond small, fragmented AI initiatives, with pilots remaining locked in a perpetual ‘proof-of-concept’ phase that promise significant gains but are always one step away from delivering true value. For organisations to make a step-change in their pace of change for AI adoption there are three key areas they need to address.

1. Define and commit to an actionable AI strategy

Companies that successfully scale AI have one thing in common: they integrate AI deeply into their core strategy. This demands executive sponsorship, clear policy frameworks, and comprehensive integration plans. Organisations need to move beyond treating AI as an experimental side-project to embedding it within their strategic agenda, ensuring alignment with key business goals and priorities.

A recent Deloitte survey highlights this strategic gap vividly: despite significant adoption and positive user feedback, most Irish companies have yet to establish a structured, company-wide AI strategy.

2. AI fluency and change management are essential

The Deloitte Digital Consumer Trends report finds: “Irish employees are ahead of employers and ready to take advantage of GenAI. Employers need to back this up with initiatives and investment for organisational changes to take place.”

At its core, the success of AI is not about algorithms or computational power alone; it is about people. This means communicating the organisation’s AI strategy effectively, providing training and education to demystify employee fears and concerns and gives them fluency to adopt AI solutions effectively and safely. three key points are critical here. 1. 82 per cent of interviewed leaders believe that AI increases job satisfaction and enhances performance of their employees. 2. the EU AI Act, obligates that providers and deployers of AI must take measures to ensure a sufficient level of AI Literacy and, 3. Common reasons for low AI adoption include: lack of time to explore the technology; lack of capability to use it effectively and lack of direction for where it can provide

“Designing with intent and ensuring that safety, integrity, accessibility, security, privacy and transparency are baked into the technology from the outset and risk is addressed throughout the lifecycle is taking a proactive and holistic approach to AI development. This approach increases user trust, adds value, and ultimately enables innovation to move at a faster pace.”

Nicola Flannery

value.

This means organisations need to be controlled and specific about guiding how AI can be used, providing hands on training and time to employees and directly putting tools in the hands of users to encourage adoption. This will accelerate the pace of adoption and change and ultimately increase the return on investment that the CxOs are demanding.

3. Design with intent

AI solutions need to be designed with clear intent from the outset, designed with the intent that it will deliver value, designed with the intent that it will need to be scaled, designed collaboratively from day one with interdisciplinary input from across the organisation (such as compliance, risk, legal, IT, data, business, strategy etc.) with the intent to challenge and adapt the solution to meet the needs of the business and designed with the intent that trustworthy AI principles are applied. Failing to design with this intent leads to stalled pilots, frustrated leadership with investment not yielding return, loss of consumer/user trust and ultimately leading to the organisation falling behind in race for value driving AI adoption.

Becoming AI leaders

Irish businesses have the potential to lead globally in AI adoption, but realising this ambition demands strategic clarity, organisational commitment, and effective execution. Beyond this, Ireland’s position as an

innovation hub for Europe offers unique opportunities for Irish organisations to leverage sovereign AI solutions and refresh their R&D capabilities. Ireland’s investment in AI-centric infrastructure and policies can cultivate a landscape ripe for innovation and advance its role in shaping European AI standards. Many use-cases so far have been focused on efficiency plays, but moving towards experience and capability plays can propel Irish businesses to the forefront of global AI adoption. 50 per cent of leaders cite the top challenges of adoption as managing AI-related risk, a lack of executive commitment, and a lack of and post-launch support.

In the age of AI, the winners will not merely be the technologically sophisticated, but those who master the integration of human intelligence with AI capability.

The next step is action. At Deloitte we can support you in implementing scaled AI capability that brings value to your business. Drawing on our expertise we can help you meet your AI vision by navigating your challenges in technical and data infrastructure, advising and implementing changes in your processes and governance, and fostering AI adoption with your teams.

W:
www.deloitte.com/ie/en/services/consulting/services/artificial-intelligence-and-data.html

Deloitte.

1. www.deloitte.com/ie/en/Industries/tmt/research/digital-consumer-trends/digital-consumer-trends-generative-ai.html
2. www2.deloitte.com/us/en/pages/consulting/articles/state-of-generative-ai-in-enterprise.html



ENSURING RESPONSIBLE

AND ETHICAL DESIGN FOR AI

Abeba Birhane, Assistant Professor at the School of Computer Science and Statistics in Trinity College Dublin, speaks to *eolas Magazine* about why the future of artificial intelligence must be rooted in empirical evidence.

“We are at the peak of the AI hype cycle,” she says. “Whether you are in research, in the tech industry, or in regulation, much of what we hear today is based on inflated narratives. AI is too often portrayed as autonomous, intelligent, even god-like; capable of performing on par with or surpassing humans.”

However, the Trinity College Dublin (TCD) professor says that this portrayal is far from the truth. AI systems, particularly the large language and image models capturing the public’s imagination, are not sentient. They do not understand, think, or possess agency. What they do, Birhane explains, is regurgitate patterns in vast datasets through statistical computation.

“They are incredible technical feats,” she acknowledges. “But at their core, they are

prediction engines; predicting the next word tokens, generating likely image outputs, or mimicking structure based on training data. They do not ‘understand’ in any human sense. And it is dangerous when we pretend otherwise.”

Pattern matching

This mischaracterisation has significant implications. By viewing AI as an autonomous force, we overlook the deeply human foundations that enable these systems, and the very human consequences of their deployment.

“These models are human through and through,” Birhane stresses. “From the data they are trained on, often scraped from the internet with little oversight, to the underpaid workers – often in the global south – who clean, label, and detoxify that data, AI reflects and reproduces the world as it is, including its inequalities.”

She points to the LAION dataset, one of the largest open-source image-text datasets used in AI development. In an audit conducted by her team, stark biases emerged in how different identities were portrayed.

Birhane outlines that searching the term ‘African’ returned stereotypical and often dehumanising imagery. “Compare that with what appears under ‘European,’ and the difference is immediate,” she notes. “AI systems do not just reflect ‘reality’, they amplify the societal assumptions embedded within it.”

Birhane warns that these encoded stereotypes have real-world consequences. From healthcare and hiring to education and law enforcement, biased systems can shape outcomes for individuals and communities in seemingly invisible, yet powerful, ways.

Common misnomers

Birhane warns of how speculative narratives such as the arrival of artificial general intelligence (AGI) are diverting attention and resources from the actual, measurable harms AI systems are already causing.

“We are hearing claims that models like GPT-4 are showing signs of human-level intelligence or ‘sparks’ of AGI,” she says. “But these claims are not backed by thorough empirical evidence. In fact, when these models are rigorously evaluated for tasks like mathematical reasoning or logical coherence, they often fall short, especially as complexity of tasks increases.”

She references recent audits in which large language models were tested on grade-school mathematics. “The more complex the questions, the more the systems struggled,” she notes.

Despite these limitations, the AGI narrative persists in part, she argues, because it serves particular interests. “When AI is framed as something that might soon become superintelligent or even dangerous, it draws attention, investment, and urgency but often away from the real ethical, environmental, and social concerns.”

Proper regulation

This shift in focus is beginning to affect policy, Birhane warns. “We are seeing regulation that is increasingly preoccupied with hypothetical risks, rather than addressing real-world harms,” she says. “There is a tendency to focus on ‘compute thresholds’ or abstract metrics, when what we need are safeguards against discrimination, exploitation, and misinformation.”

She points out that many audits and studies highlight consistent failures in AI performance especially in areas where the public is told these systems excel, such as document summarisation or code generation.

“In one audit of summarisation models, human-written summaries were rated 81 per cent coherent, while AI summaries scored just 47 per

cent,” Birhane says. “Important information was often omitted, and what was presented was frequently incoherent or misleading.”

However, Birhane says that these same models are being rapidly deployed in government services, journalism, education, and corporate decision-making. “We are being told they are ready for real-world use, but when you look at the data, the picture is very different.”

Cultural bias

Birhane also draws attention to more subtle forms of algorithmic discrimination, which she calls “covert bias”. One recent study analysed how dialect impacted perceptions of intelligence in AI-generated speech assessments. Identical statements were judged very differently depending on whether they were written in African-American Vernacular English or Standard English.

“In one example, a perfectly coherent sentence written in vernacular dialect was rated as ‘lazy’ and ‘dirty,’ while the same sentence in standard English was rated as ‘intelligent’ and ‘brilliant,’” she recalls. “This kind of covert racism is harder to detect and correct, and it is deeply embedded in how these systems function.”

It is, she says, a reminder that bias is not simply a technical problem, but a societal one. “AI systems inevitably carry the values, assumptions, and exclusions of the worlds they are built in.”

Responsible AI

For Birhane, the solution lies in a more grounded, empirical approach to AI that centres people, and not just performance.

“We must base our decisions on what the research tells us, not on what marketing departments or speculative theorists want us to believe,” she says. “Responsible AI is not just about technical performance. It is about recognising and accounting for power asymmetries and ensuring accountability and justice.”

That includes valuing the work of auditors, social scientists, and affected communities. “Too often, those sounding the alarm are sidelined in favour of the loudest voices in tech,” she says. “But we need a diversity of perspectives to understand and govern these systems responsibly.”

Concluding, the TCD professor rejects the consensus that AI development is an unstoppable force. “There is nothing inevitable about AI. These systems are made by people and we have the power and responsibility to shape how they are made, used, and governed.”



Five things the board should know about AI

Many public sector organisations in Ireland are now actively exploring AI through pilots, procurement, or internal working groups. Here are five areas that senior leaders should focus on right now writes Nathan Marlor, Head of Data and AI at Version 1.



These are not abstract principles – they reflect the practical, grounded conversations taking place today and the kinds of conversations that should be encouraged.

1. Strategic focus matters more than technical ambition

We are already seeing AI improve outcomes across public services. From prioritising housing inspections to categorising citizen queries, to forecasting surges in emergency care, early examples are delivering tangible benefits. The common thread in

successful cases is this: they begin with a clear, specific problem linked directly to a public service priority.

By contrast, projects that are disconnected from real-world challenges – those launched primarily to explore “what is possible” – often struggle to deliver sustained value. Strategic alignment must come first. Every AI initiative should start with a defined problem, a measurable outcome, and a direct link to your mandate – whether that is reducing wait times, improving equity, or boosting efficiency.

This becomes especially important when seeking support or investment.

Outcomes will always matter more than novelty. Define the public value first; the technology can follow.

2. Ethical governance must be embedded, not added on

Trust is core to public service. People need to know that decisions shaped by AI are fair, explainable, and subject to oversight. This means governance must be structured, active, and organisation-wide – not just a technical responsibility.

Start with internal clarity. Who approves the use of AI? Who is responsible for monitoring risks, and who is accountable

if something goes wrong? There should be a formal process for assessing each use case based on its potential impact – light-touch tools may need minimal oversight, but decisions that affect services or entitlements require deeper scrutiny.

Transparency must also be built in. Systems that affect the public should come with clear, plain-language documentation: what the system does, what data it uses, and how decisions can be reviewed or challenged.

Some public bodies in Ireland are already introducing AI registries – internal tools that track use cases and governance requirements. Others are preparing for the EU AI Act by mapping risk levels across departments. These steps are well worth considering now.

3. Workforce capability Is the most common bottleneck

The biggest constraint on AI adoption is rarely technology; it is people. Many public service teams do not yet feel confident working with AI, and without support, tools often go unused or underperform.

Building capability needs to happen across the organisation. Senior decision-makers must be able to assess proposals and understand ethical risks. Operational teams should help shape how AI is introduced in day-to-day delivery. Technical staff need training in areas like model management and data governance.

Ireland's Civil Service AI masterclasses are a valuable foundation, but they must be scaled and matched with in-house initiatives. This could include internal experimentation time, AI champions, or peer learning groups.

It is also essential to frame AI as a support, not a threat. When staff see that AI reduces repetitive work and creates space for more meaningful tasks, morale and adoption both improve. The goal is to bring staff along, not leave them behind.

4. Return on investment needs to be measured, not assumed

As budgets tighten, public bodies are expected to justify every investment – including AI. While the potential is real, so are the costs: training models, integrating systems, and maintaining oversight all require resources. And that is before factoring in staff upskilling or data security.

That is why every AI proposal should begin with a clear understanding of current performance – what the process costs, how long it takes, and where the pressure points are. From there, leaders can assess how a system might realistically improve outcomes, and on what timeline.

Starting with small, well-defined pilots helps manage risk. One local authority began with a tool to triage environmental complaints. After showing a measurable reduction in staff workload and processing time, they scaled it to other departments. These modest successes generate insight and internal momentum.

AI systems also need regular review. Some may underperform or introduce risks that outweigh their benefits. If that happens, they should be redesigned – or retired. The same principles that apply to any capital programme apply here: monitor performance and act accordingly.

5. Procurement will shape outcomes as much as technology

Most public sector organisations will rely on external providers for at least part of their AI solutions and that makes procurement a strategic function. The design of contracts influences everything from performance and compliance to ethics and transparency.

Procurement processes should include clear expectations for explainability, bias mitigation, data protection, and model updates. Contracts should define who monitors system behaviour, how models evolve, and what happens if the vendor relationship ends.

Some departments now require vendors to document how their systems meet trustworthy AI principles. Others are building requirements around accessibility and data sovereignty into their RFPs. These are not simply legal safeguards – they help shape a more ethical and reliable AI ecosystem in the long term.

Bringing legal, data protection, and technical teams into procurement conversations early helps ensure strong outcomes from day one – not just after deployment.

Final thoughts

AI is already shaping the future of public service delivery, but how it is deployed – where, by whom, and with what oversight – will determine whether it delivers sustainable public value.

Now is the moment to move from exploration to strategy. Set clear priorities, invest in people and build governance that lasts. And make sure each project, no matter how innovative, ultimately improves outcomes for the people and communities served.

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Supporting innovation through the EU Artificial Intelligence Act



Eamonn Cahill, head of the AI and Digital Regulation Unit at the Department of Enterprise, Trade and Employment, tells *eolas Magazine* that the EU Artificial Intelligence Act currently being rolled out in phases will support the adoption of AI, rather than impede it.

Cahill asserts: “The AI Act is not an obstacle to the adoption or the deployment of AI systems. Quite the opposite. The AI act is designed to be supportive and even to accelerate the adoption of AI across the EU.”

It is predicated on the definition of AI by the OECD which states AI systems generate outputs based on an inference from inputs they receive. Cahill says the inference process is “the secret power of these systems”, but adds that its “inherent uncertainty” can pose risks. The Act, Cahill hopes, will “go some way towards putting manners on these systems so the power is exercised responsibly and ethically, and in a human-centric manner”.

Governance

The Act is linked with the EU’s AI strategy which is based on three pillars: innovation, governance – which includes the AI act – and guardrails. On governance,

Cahill indicates that “a coherent, unified” structure regarding AI must be implemented across member states. Essential to facilitate this are national competent authorities, the European Commission’s AI Office, the European Artificial Intelligence Board, an advisory forum, and a scientific panel.

The AI Office forms “the backbone of the framework”, by producing secondary legislation including standards, guidance, and codes of practice, all of which Cahill says are “necessary for the full implementation of the AI Act”.

He asserts that the Act is designed to provide “the minimum proportionate protections that are necessary to foster the development and adoption of safe, responsible AI”. Central to this is the European Artificial Intelligence Board, where member states decide on AI strategy. Cahill describes it as “the decision-making platform for Europe’s engagement with the broader world”.

The AI act is designed to be supportive and even to accelerate the adoption of AI across the EU.”

He explains that the scientific panel will comprise independent AI experts who will support the AI Office and national competent authorities to implement and enforce the Act. It has not yet been appointed, but Cahill says the Commission aims to launch a call for expression of interest for the panel soon.

Aimed at “pre-empting any anomalies or inconsistencies” in its application across the EU, the Act is designed to intervene only “where absolutely warranted”, according to Cahill. He adds: “It does not in any way smother or hinder the adoption of AI or AI innovation.”

Guardrails

Cahill traces how the Act is applied according to a risk hierarchy comprising four categories:

- unacceptable;
- high;
- transparency; and
- minimal or no risk.

In February 2025, eight AI practices with ‘unacceptable’ risks were

prohibited under the Act, including subliminal techniques, exploitation of vulnerabilities, discrimination, inference of emotions, and certain uses in law enforcement. However, there are exceptions to these rules and Cahill outlines that exemptions can relate to safety concerns.

High-risk categories fall into two categories: the use of AI connected to safety systems in 12 product categories, and applications of AI that can impact people’s fundamental rights.

Some applications of AI pose a lower risk but require transparency such as customer service chat bots that must reveal they are enabled by AI. Cahill claims most applications of AI will not pose “credible risks to health, safety, or fundamental rights”, and adds that people should be able use these applications “to innovate, untrammelled by any considerations of the AI Act”.

Rollout

The Act will be rolled out on a phased basis until August 2027. Provisions on general-purpose AI models will apply from August 2025, regulations of

certain high-risk uses of AI will apply from August 2026, and obligations on the use of AI in certain products categories will apply from August 2027.

Cahill asserts that August 2025 is “the big deadline” for member states as this is when competent authorities must be designated to apply penalties for breaches of the Act. Fines for the most “egregious” breaches can be up to €35 million, or 7 per cent of annual global turnover.

Under the act, providers, developers, deployers, and importers need to ensure they have evidence which demonstrates that appropriate quality control mechanisms are in place to mitigate risks that may arise from the use of AI.

Cahill concludes: “The EU AI Act, if implemented properly, can drive AI innovation and AI adoption by building confidence in systems, and by providing regulatory certainty for investors, developers, and deployers across the EU.”

Leading with purpose in the age of augmented intelligence



Ellie Fitzpatrick



Barry Haycock

In today's rapidly evolving technological landscape, artificial intelligence (AI) is transforming the way organisations operate, offering unprecedented opportunities for innovation and efficiency.

However, the journey to harnessing AI's full potential presents challenges. Many organisations struggle to move beyond the 'Proof-of-Concept' stage, often due to a lack of strategic alignment between AI initiatives and overall business goals. Moreover, becoming the 'Boss of AI' also requires an understanding of which AI technology to use, often with a need to balance predictive and generative AI. But fundamentally decisions should be anchored to responsible and sustainable practices.

This article considers how prioritising strategic alignment and purpose, can turn AI into a powerful tool for sustainable innovation, ensuring long-term success.

Public sector organisations that do not strategically align their AI initiatives risk

falling behind those who are leveraging AI as a force for sustainable innovation. According to Gartner, 60 per cent of AI projects will falter without strategic alignment to business goals. Strategic alignment of AI with business goals is non-negotiable for long-term success, requiring innovation, empowerment, ethics, and organisational transformation. For example, organisations with B-Corp accreditation are uniquely positioned to turn AI into a force for ethical growth.

Three areas are key to guiding your journey towards strategic, sustainable, and profitable AI utilisation. First, consider the various types of AI that can benefit your organisation. Second, focus on empowering your team to effectively utilise these tools while engaging in ethical considerations. Finally, emphasise

the importance of governance to build trust in AI applications.

1. Types of AI: Leading with strategic clarity

By understanding the strengths and applications of different AI types, you can strategically implement solutions that enhance productivity and foster innovation.

For example, generative AI, like retrieval augmented generation (RAG), acts as a knowledge search engine, saving time by providing expert-like responses from internal documents. Customer-facing chatbots and AI video-call interfaces, such as BearingPoint's Virtual Consultant, are also emerging in the modern, augmented workplace. Recently, BearingPoint implemented a RAG tool for the Department of Social Protection to help understand circulars and allow users to more easily navigate the directives prescribed within them. This effort saves time and reduces potential errors, helping people better address citizens' needs. Generative AI used in this way is highly impactful, similarly, the Autorité des Marchés Financiers (AMF) in France is leveraging generative AI to enhance its supervisory functions, including pre-processing documents, detecting market abuse, and classifying ESG themes in issuer press releases.

Predictive AI, as a more mature technology, has had large-scale impact in fields like supply chain analysis, intelligent sourcing, etc. Unilever, for example, is using AI to locate sources of Palm Oil that do not contribute to deforestation. One example of this is in demand forecasting, within an Irish public sector department that has tight deadlines for delivery to citizens, we have built predictive tools that estimate upcoming demand and allow for staff to be assigned in time to meet demand, returning to other value adding work when demand will be lower.

Typically, strategic leaders use predictive AI for efficiency and GenAI for innovation. Through a balanced combination of both techniques, modern augmented workplace ideals can be reached in a way that is sustainable and ethically responsible while generating business buy-in.

2. Empowerment through ethical guardrails

The modern augmented workplace movement is also keenly focussed on upskilling teams, not replacing them. This makes sense on every dimension, people deliver their best when given the best tools for the job, and AI is just a new tool. With a view to B-Corp alignment, initiatives like AstraZeneca's GenAI accreditation programme is a great example of empowering people. By gamifying training, employees not only learn technical skills but also gain confidence in integrating GenAI into workflows ethically.

Sustainability requires us to know how new initiatives will impact employees, but also the subjects of the predictions or analysis. There are now readily available tools designed to ensure that data bias and AI bias can be reduced effectively.

Tools like Microsoft's Responsible AI Dashboard and Amazon's Sagemaker Clarify, monitor AI predictions for bias and fairness. Explainable AI techniques, now widely adopted, allow us to understand the metrics behind individual AI decisions, exposing and mitigating latent biases.

The identification and mitigation of bias is an ongoing concern at academic and business level. Stanford University's recent paper, *Fairness through Difference Awareness: Measuring Desired Group Discrimination in LLMs* proposes benchmarks to assess AI models' awareness of biases. Thought leadership like this informs offerings like BearingPoint's Data Strategy Framework to better enable wide adoption.

3. Governance: The linchpin of trust

Effective governance that simultaneously enables the benefits of AI while providing guardrails and enabling understanding of why the AI does what it does is critical for success in the future of work. This is achieved by building



trust via the cross-functional leadership that enables AI in the first place. Implementing a framework that proactively addresses regulatory compliance (e.g., EU AI Act) while integrating sustainability metrics into decision-making processes is key.

Examples include how Pfizer's cross-functional AI council oversees ethical AI deployment, while AWS uses AI to reduce data centre emissions. Aligning AI investment with employee goals maximises success, as shown in BearingPoint's 2024 survey of 700 global companies titled *Transitioning into an Augmented Organisation*, where it is shown that leaders are more likely to include employees in AI decision making.

A responsible AI framework integrates principles like algorithmic fairness and transparency while minimising environmental impact through energy-efficient models. As the field evolves, both in policy and technical advancements, a sensible framework must continue to develop.

Our framework also includes privacy preserving methods, for example techniques like federated learning ensure data privacy by keeping sensitive

information decentralised during model training.

Conclusion

The future belongs to organisations where AI serves purpose by delivering measurable value to citizens, communities, and the environment. Strategic alignment of AI initiatives with organisational goals is most impactful when it enables measurable improvements in citizen well-being, community resilience, and environmental sustainability. Invest in the right technologies, upskilling and practices for your needs that balance growth with environmental responsibility. Most importantly, build trust through transparency and ethical governance. Organisations that audit their initiatives against KPIs and ESG goals, adapting frameworks such as B-Corp's Impact Assessment for public sector needs, will be more successful in implementing AI.

Organisations that align AI with purpose will thrive in an era where technology must serve humanity and sustainability.

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How AI can enhance public services

Michaela Black, professor of artificial intelligence (AI) at Ulster University, says that with careful planning, strong governance, and an unwavering focus on fairness and transparency, AI can be a transformative tool in creating more equitable and effective public services.

“One of the most compelling benefits of AI is its ability to enhance frontline services,” Black says, adding her belief that, in public sector settings, AI can act as an “interface, allowing citizens to ask questions and receive quick and accurate answers”.

“AI tools can sift through vast amounts of data, instantly providing citizens with the information they need, often creating the impression that they are speaking with a knowledgeable colleague rather than navigating an impersonal bureaucracy.”

What makes AI particularly powerful in this instance, according to Black, is its ability to retain context from prior interactions: “This means that when citizens follow up with additional questions or requests, they do not have to start from scratch.”

“The AI tool remembers past exchanges, helping to streamline communication and making the experience much more efficient. In a public service environment where staff are often overwhelmed with a high volume

of inquiries, AI can greatly alleviate this burden, enabling human workers to focus on more complex or sensitive cases.”

A citizen-centric approach

Talking on prospective uses of AI in the public sector, Black emphasises the prominent role that AI can make in enabling the transition towards more remote and self-service options in public services.

“As AI technologies evolve, they enable citizens to resolve challenges independently, without the need for direct interaction with a human agent.”

Black states that this shift is especially important in circumstances where in-person service is limited or impractical, such as during crises or in geographically remote areas.

“AI-powered systems allow citizens to find the information or solutions they need on their own,

reducing the need for human intervention. This, in turn, helps to reduce pressure on public sector workers and allows them to focus on more nuanced or complicated challenges.”

According to Black, this empowerment of citizens is a key factor in reshaping the public service experience: “By providing self-service options, AI can make public services more efficient, flexible, and accessible to all”.

Integrating and enhancing AI

The Ulster University professor says she is optimistic about the potential for AI to accumulate institutional knowledge over time.

“As public service organisations use AI tools, these systems can learn from every interaction, building a wealth of knowledge that can be used to answer citizens’ questions more accurately and effectively.

“Over time, the AI system becomes an expert in its own right – drawing on a vast pool of information to provide reliable and precise responses.”

In Black’s view, this ability to accumulate and refine knowledge is especially beneficial in large organisations that handle a broad range of queries and services. By integrating AI into daily operations, she asserts that public service organisations can build a “deeper, more robust internal knowledge base”, which benefits “both citizens and employees”.

The AI tool, trained by the data it accumulates, becomes an ever-more efficient source of expertise, improving service delivery for everyone involved.

AI also plays a role in transforming the workforce in the public sector, according to Black. The younger generation, often described as “digital natives”, are well-versed in AI and other emerging technologies. Unlike previous generations, they are not intimidated by AI’s integration into the workplace but rather see it as an opportunity to enhance their work and productivity.

Black believes that the newest generation of workers, can bring “not only technical skills, but also an inherent understanding of how AI can be a tool for positive change”. She underscores that these digital natives will need to be equipped with AI literacy training.

“For AI to be integrated successfully in public services, employees must understand both its potential and its limitations. Without this training, organisations risk using AI in ways that could be inefficient or even harmful.”

The need for AI governance

While Black is enthusiastic about the potential of AI, she is equally aware of the risks associated with its adoption, especially in public sector settings. One of the most pressing concerns is the risk of bias in AI models, outlining that if AI systems are trained on biased data, there is a significant risk that they could perpetuate inequality or unfair outcomes. The Human in the loop (HITL) approach is vital in developing and widening these new technologies, as is adhering to the REST principles: Responsible, Explainable, Sustainable, and Trustworthy AI.

Black warns that “AI tools in areas like healthcare, social services, or law enforcement could unintentionally disadvantage certain groups of people if not properly trained and monitored”.

Black also emphasises the importance of using diverse and representative data when developing AI tools. AI systems must be designed to avoid reinforcing biases that may already exist in society.

She believes that transparency is also critical, as citizens and employees need to understand how AI makes decisions and what data it relies on: “Strong governance frameworks must be put in place to ensure that AI tools are used ethically and fairly.”

Another major concern for Black is the risk of misinformation and disinformation, particularly in the context of AI’s ability to generate content. As AI systems like ChatGPT become more prevalent, she warns that the potential for spreading inaccurate or misleading information grows.

In her view, AI systems need to be “carefully managed to avoid spreading false or misleading content”.

Concluding, Black says that she believes AI holds the potential to “significantly improve” public services, making them “more efficient, accessible, and user-centred”.

“By enhancing frontline services, enabling remote self-service, and accumulating knowledge, AI can help public institutions meet the growing demands of an increasingly digital society.”

However, Black stresses that the successful adoption of AI requires careful planning, strong governance, and an unwavering focus on fairness and transparency, saying: “When used responsibly, AI can be a transformative tool in creating more equitable and effective public services.”



From intent to impact: Ireland's next step in AI and cloud leadership



Ireland has established itself as a hub for cloud and digital services in Europe. This is reflected in daily conversations with our customers and partners – including public bodies laying the groundwork for smarter, connected services, writes Robbie Byrne, Country Manager in Ireland, Red Hat.

Strong infrastructure, consistent foreign direct investment and a tech-savvy workforce have positioned the country well to take on opportunities in AI and hybrid cloud.

But future progress will not be defined by infrastructure alone. It will depend on how effectively organisations align strategy, skills and technology to extract meaningful outcomes – particularly in areas where public services and citizen impact are at stake.

AI is no longer a distant goal. It is already testing how well organisations can execute.

According to Red Hat's research, 95 per cent of IT managers in Ireland plan to increase investment in AI over the next 12 months. 93 per cent will do the same for cloud. These figures put Ireland ahead of many peers across Europe. It is encouraging to see – but it also raises the question: how ready are organisations to act on that investment in a way that is sustainable, cost-effective and aligned?

A strategic gap, not just a technical one

Our survey, which examined the priorities and challenges facing IT managers in cloud and AI adoption, uncovered a difference between Ireland and other European markets.

While countries like the UK identified AI as their most significant skills gap, IT managers in Ireland pointed to strategic thinking and the ability to address business-level challenges – cited by 44 per cent as the top area of concern. That stood out to me. While we are building real technical strength, the challenge now is turning that into meaningful, organisation-wide outcomes – a critical next step for delivering trusted, data-driven public services.

AI adoption is not only about adding tools or hiring data scientists. It requires clarity around what AI is being used for, how it will integrate with existing systems and how outcomes will be governed.

Cost remains central to cloud strategy


While AI continues to dominate headlines, cost optimisation remains the top priority for IT managers in Ireland as they evolve their cloud strategies, cited by 71 per cent of respondents.

This reflects a maturing market that is moved past early adoption and is now grappling with sprawl and rising costs. For public sector teams managing tight budgets and legacy systems, these challenges are acute.

In many cases, applications have been moved to the cloud without being rearchitected. As organisations begin layering AI workloads onto these systems, issues around scalability, data movement and cost control become pressing.



When you need
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That is why we are seeing renewed focus on platform-based approaches – using technologies like Red Hat OpenShift to refactor legacy applications, modernise delivery pipelines and centralise governance across hybrid environments.

Siloed teams are slowing progress

Almost every IT manager we spoke to (96 per cent) mentioned a key challenge: siloed teams are creating obstacles for cloud and AI adoption. For more than half, these silos are a frequent issue.

We have seen the impact: increased costs, limited visibility and difficulty in adopting new technologies. In the public sector, this means slower service delivery and challenges in scaling digital programmes. As AI becomes more embedded across functions, the cost of fragmentation will rise.

Addressing this requires new ways of working. Organisations are adopting platform engineering and modern operating models like Team Topologies, which create clearer interfaces between teams and enable efficient collaboration.

When combined with enterprise automation, through platforms like Red Hat Ansible Automation Platform, these approaches reduce manual effort, improve security posture and ensure governance at scale.

AI is shifting to smaller, targeted models

While attention often focuses on large language models (LLMs), our research

shows the majority of IT managers in Ireland (84 per cent) cite domain-specific models as a key factor in establishing trust in an enterprise approach to generative AI.

We are seeing interest in smaller models that perform specific tasks effectively while using significantly fewer computational resources. For example, a 10 billion parameter small language model (SLM) can be optimised for enterprise use at a fraction of the cost and complexity of a 400 billion parameter LLM.

This is relevant for organisations with sensitive data – including those in the public sector – where training models on-premise using synthetic or internal data offers greater control over privacy, security and compliance.

Their smaller footprint makes them more flexible and easier to deploy across hybrid environments, enabling organisations to run AI where it delivers the most value.

Trust is no longer optional

AI adoption will not scale without trust. The majority (85 per cent) of IT managers in Ireland say transparency, modifiability and explainability are essential to trusting enterprise AI models.

Open source plays a critical role. It gives organisations greater visibility into how platforms, tools and models are built, how they perform and how they can be improved. They also help democratise AI and overcome skills gaps. For example, the open source project InstructLab,

developed by Red Hat and IBM, makes AI development more accessible to domain experts with relevant business knowledge, not just data scientists.

Hosting AI workloads within a controlled environment also matters. This is relevant for government departments and agencies that handle sensitive data or operate under strict compliance frameworks. With Red Hat OpenShift, organisations can deploy and govern the full lifecycle of AI applications in a common way across their preferred environments, keeping data where they choose.

From building platforms to driving outcomes

Ireland has proven its ability to build infrastructure, attract global players and scale fast. But the next stage of digital leadership will not be defined by what is built – it will be defined by how well it is used.

The opportunity is to move from deploying tools to shaping outcomes. At Red Hat, we are proud to support Irish enterprises on that journey – with open, hybrid platforms that reduce complexity, enable innovation and build trust in AI systems from the ground up.

Discover how Red Hat can support your AI and cloud journey

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AI's growing importance in the Government's plans

The rapid integration of artificial intelligence (AI) across society is demonstrated by its prevalence in the Government's 2025 Programme for Government (PfG) in comparison to the singular, brief mention it got in the 2020 PfG.

AI's only mention in the 2020 PfG came when the Government stated its aim to "further develop Ireland's leadership in new digital technologies, including cloud computing, data analytics, blockchain, Internet of Things, and artificial intelligence".

The use of AI has permeated every sector of society since then, reflected in the Government's AI strategy published in 2021, *AI: Here for Good*. This document was refreshed in November 2021 to align with developments in technology and regulation, such as the EU's AI Act which is currently being rolled out in phases.

In the 2025 PfG, the new coalition government, comprising Fianna Fáil, Fine Gael, and the Regional Independents Group, makes 16 references to AI, setting out its aims to make Ireland a leader in the digital economy and AI. Specific actions the Government aims to take regarding AI are as follows:

- realise the benefits of AI to increase

productivity of Irish businesses;

- ensure Ireland and the EU benefit from the innovation and investment potential of AI by working with EU partners while protecting privacy and fundamental rights;
- invest in AI digital skills at all levels;
- provide AI skills necessary for its deployment, innovation and support; and
- research the impact of AI on classrooms.

The 2025 PFG asserts that the development of AI will increase the importance of data centres which it identifies as critical in economic growth and public service delivery. It also identifies the "opportunities presented by artificial intelligence" to improve teaching and learning methods "as schools adapt to digital learning". AI will also play a role in justice as the Government says it will "support the Gardaí to use artificial intelligence in criminal investigations subject to clear guidelines and oversight".



Government approves implementation of EU AI Act

In March 2025, the Government adopted a distributed model of implementation of the EU AI Act.

The Department of Enterprise, Trade and Employment states that this approach to implementation of the Act will “build on the deep knowledge and expertise of the established sectoral regulators”.

The Government has approved the designation of an initial list of eight public bodies as ‘competent authorities’, responsible for implementing and enforcing the Act within their respective sectors. These authorities are:

- Central Bank of Ireland;
- Commission for Communications Regulation;
- Commission for Railway Regulation;
- Competition and Consumer Protection Commission;
- Data Protection Commission;
- Health and Safety Authority;
- Health Products Regulatory Authority; and
- Marine Survey Office of the Department of Transport.

Additional authorities, and a lead regulator tasked with coordinating enforcement of the Act and providing additional centralised functions, will be designated by a future government decision to ensure comprehensive implementation of the Act.

The EU AI Act aims to provide a high level of protection to people’s health, safety, and fundamental rights, and to simultaneously promote the adoption of human-centric, trustworthy AI. The Act entered into force in August 2024 and its provisions apply in a phased manner over the period to August 2027.

Minister for Enterprise, Tourism and Employment, Peter Burke TD says: “AI presents Ireland with a strategic opportunity; it holds the prospect of major benefits for our economy and for our society. For business it can boost productivity, spur innovation, and deliver better customer services; for the public it can provide enhanced public services; and for society, accelerated advances in science and medicine. It is a priority for me to ensure that we capture these benefits.

“However, to capture these benefits, we

must build trust in AI systems. For this reason, the landmark EU AI Act, the first in the world comprehensive regulation establishing guardrails for the safe and ethical use of AI, is a strategically important regulation for Ireland, as well as the EU. I am committed to an efficient and well-resourced implementation of the Act in Ireland, in a manner that provides the necessary safeguards, while spurring innovation for the benefit of our economy and our society.”

Minister of State for Trade Promotion, Artificial Intelligence and Digital Transformation, Niamh Smyth TD says: “The decision by Government to use the existing national framework of well-established sectoral authorities for enforcement of the EU AI Act will make compliance with the AI Act easier for businesses. It is also an important step towards the commitment in the Programme for Government to make Ireland an EU centre of expertise for digital and data regulation for companies operating across the EU Digital Single Market. Providing an efficient, comprehensive, fair and transparent implementation of the Act in Ireland will enhance Ireland’s reputation for quality regulation and its competitiveness for attracting further investment in this burgeoning technology.”



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Phone:
01 661 3755



Email:
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