Ireland's AI Advisory Council Recommendations - Helping to Shape Ireland's AI Future

Executive Summary

The Fourth Industrial Revolution, powered by AI, is advancing at a pace that surpasses previous technological shifts. Many prevailing forecasts and economic models are rooted in historical data and incremental projections of technology adoption, potentially underestimating the exponential trajectory of AI and the magnitude of its impact. It is essential to plan not only for anticipated growth, but also for scenarios that may exceed our current expectations, ensuring Ireland remains competitive and safeguards our economy, workforce, and citizens.

Ireland stands in a prime position to excel in specialised areas of AI, particularly in applied AI and regulatory excellence, potentially becoming Europe's preferred base for both startups and established companies seeking to launch or scale AI products and AI-first ventures. By offering clear regulatory guidance, fostering innovation sandboxes (secure environments for testing and refining AI), and emphasising practical, real-world applications, we can build on our history of hosting multinational tech headquarters and supporting a dynamic startup scene. Nevertheless, our past successes alone are no guarantee for the future. Targeted policies and strategic investments will be vital for safeguarding our competitiveness and jobs as AI evolves. Some sectors and groups may face negative impacts, highlighting the importance of government support to manage risks and ensure broad-based benefits.

Ireland already benefits from strong foundational assets: a skilled and adaptable workforce, robust research capabilities, an energetic startup ecosystem, and significant multinational tech operations. These strengths enable rapid innovation, promote collaboration, and support informed policy development. Ireland's relatively small size allows for agile decision-making, while our stable regulatory framework can facilitate timely and effective policy responses as AI evolves. Equally important is maintaining a commitment to ethical considerations, ensuring that AI development delivers tangible benefits for citizens and society at large.

This document highlights critical areas where the AI Advisory Council (the Council) sees opportunities for the Government to accelerate AI adoption, encourage responsible innovation, and reinforce Ireland's role in the global AI ecosystem. These recommendations form a starting point; the Council will offer further insights throughout the year to help Ireland adapt to emerging AI developments, uphold public trust, and remain globally competitive. By acting decisively now, we can strengthen Ireland's leadership in AI while ensuring the workforce and broader economy are well-positioned for the opportunities and challenges ahead.

1. AI and the Future of Skills and Work

AI is a general-purpose technology that is demonstrating rapid and sustained development in capabilities. Its unprecedented substitutability for a broad range of cognitive tasks, combined with an ability to generate complementary innovations, offers the promise of increased aggregate productivity in the coming decade. This is a positive and should be welcomed as productivity growth is a vital component in improving long-term living standards. Additionally, Ireland is well placed to capture an above-fair share of global AI investment flows – a potential foundation to our future economic success.

However, it is not known today what exact impact AI will have on the total demand for labour or income distributions in Ireland. Significant research is underway internationally, but it will not be

able to resolve many fundamental uncertainties for some time. The nascent nature of AI adoption in Ireland and existing low unemployment could mask early signals of AI driven changes to work. What is easier to predict is that the structure of work will change - previously valuable human skills will see a decline in demand and new types of jobs will emerge. We have high confidence this will occur and will be widespread.

There is a reasonable likelihood that the pace of these changes will be unprecedented in our economy. Ireland needs to develop policies that can be sufficiently robust to a wide range of possible future scenarios and timetables. To deliver this, policy makers need better measurement and insights into what is occurring.

Therefore, we are calling on the Government to directly **invest in the development of a real-time, publicly available 'AI Observatory'** that delivers data and insights on a wide range of AI metrics such as labour market dynamics, capital flows, skills development, quality of life enhancement, complementary innovations, public attitudes and much more.

This resource will help policy makers, educators, and workers better navigate the changes ahead. It can also aid the Government in communicating developments such as the impact of AI on certain sectors as they occur. The Council is preparing more comprehensive advice on AI and the future of skills and work, which will be provided in due course.

2. AI Ecosystem

With key efforts underway, Ireland has positioned AI as a driver of economic growth and societal progress. However, urgency is needed to keep pace with change and actively shape AI's future. With a strong R&D startup culture and pro-business environment, Ireland is well positioned to lead in applied AI. R&D commercialization must be prioritized through a focused startup ecosystem, faster funding reviews, and expedited rollout of a national AI testbed. Additionally, a centralized approach to AI will accelerate innovation and ensure businesses have a clear path to EU AI Act compliance.

Building an AI-focused Startup Ecosystem: Ireland can become the ideal launchpad for AI startups and SMEs by strengthening investor incentives, enhancing regulatory guidance, and offering hands-on navigation support. Building on the OECD report "Supporting Start-up Globalisation in Ireland through Incubation and Acceleration," we must train entrepreneurs to create AI-first ventures, integrating AI across products, services, internal operations and business models for sustainable growth and global competitiveness. Establishing a high-visibility innovation campus, similar to Station F, with a specific AI focus would further accelerate these efforts, giving startups direct engagement with policymakers, access to hardware and research labs, and the resources necessary for transformative and globally competitive innovation.

Accelerating AI Funding Mechanisms: Support for AI R&D and commercialisation remains vital for innovation across the entire ecosystem and there is an opportunity to further refine key supports. To deliver faster, expert-informed decisions that match the pace of rapid global AI developments, establishing AI expert panels, like those at Innovate UK, which convene external experts to evaluate and guide funding decisions, while streamlining processes will ensure maintenance of rigorous oversight and result in expedited funding and support. This approach fosters confidence, attracts investment, and accelerates AI-driven growth.

National AI Testbed: Advancing rollout of an AI regulatory sandbox at pace will keep Ireland competitive and align with Mario Draghi's report on EU competitiveness, where he calls for Europe to close its "innovation gap". While the AI Act emphasises sandbox support for SMEs and startups,

we also suggest prioritising resources via thematic calls for proposals, and building out testbeds for multiple sectors in parallel to ensure progress across the ecosystem.

Unified Ecosystem Governance: A unified AI vision for Ireland is crucial. Creating a dedicated Irish AI Office will ensure a central point of authority across government, cohesive governance, clear success metrics, and a coordinated AI strategy and policy approach across all departments.

3. AI Literacy and Education

AI, and the recent upsurge of interest in Generative AI in particular, is having a transformational impact on education at all levels. This is because it is popular and it is accessible but it is also disruptive and not everyone is comfortable with the pace with which it is being developed and used in education. Our recommendations apply to the use of Generative AI in the primary / post-primary / third-level and further education sectors.

Guidelines: Government should create and publish coordinated and consistent guidelines for the use of generative AI when it is to be used, at appropriate education levels that harmonise with each other, while ensuring these guidelines remain "live documents" that can be quickly updated as AI technology evolves. These should cover both principles and use cases in order to ensure the safe, ethical and responsible use of AI.

Training in AI Literacy: Government should lead the development and implementation of AI literacy training for educators across all educational levels which should focus on equipping teachers with fundamental AI knowledge, preparing them to further spread this knowledge. This should form a core part of professional development programmes for educators.

Access to AI Tools: Government should establish a system to ensure equitable access to generative AI tools in education, specifically addressing the monetary barriers and language support issues (particularly for Gaelscoileanna with initiatives like Údarás na Gaeltachta's ArdIntleacht na Gaeilge), making sure generative AI tools are private, secure, and free for all teachers and students.

A National Conversation around AI in Education: Government should facilitate a national conversation between teachers, parents/guardians, policymakers, technology companies, students, and educational technology innovators once the various AI guidelines are published, to create a more stable and directed approach to leveraging AI in education and monitor and evaluate the impact of the use of generative AI by students in education.

4. AI Sovereignty and Infrastructure

We must urgently and proactively initiate a national dialogue on AI and data sovereignty, and recognise the cultural and economic necessity for Ireland to develop its own indigenous AI capability. AI is fundamentally enabled by data and energy, and we have work to do on both fronts to ensure Ireland fairly participates in the future AI economy.

Leading by Example: The government should fully integrate AI into its operations for streamlined public services. Emphasising "Irish AI" - tailored solutions for national needs - will strengthen local innovation. Our future regulatory AI "sandbox" should be sufficiently resourced to proactively assist both software and non-software businesses to navigate compliance hurdles, positioning Ireland as an AI-friendly regulatory jurisdiction.

Energy and Infrastructure: Ireland has excelled as an international data center hub, but AI - which involves a resource-intensive training phase (where models are built using vast amounts of data,

typically in specialised facilities elsewhere) and a continuous inference phase (delivering real-time outputs, likely be the primary function of our AI data centers) - is exceptionally energy-hungry, and expansion has halted due to grid constraints and fossil fuel dependency. We can become a vital link in the AI value chain by hosting AI inference data centers, but we must first urgently address our energy deficits. Ireland should establish an "AI Energy Council" to ensure necessary measures are taken to rapidly develop clean energy capacity, while transitioning from fossil fuels and winning public trust. This "AI Energy Council" should work across existing public bodies to identify bottlenecks and recommend policies to accelerate expansion of grid network capacity, adoption of energy storage technologies, streamline development of renewables, and help repurpose waste heat for free residential heating. It should also foster the public conversation on whether and how safe nuclear energy can be adopted in Ireland. The public should be reassured that data centers will never be allowed to "blackout" homes, and that the goal is to minimise "blacking out" data centers.

Safeguarding National Data Assets: AI is trained on data, and public data resources, such as media archives and healthcare data, have thus become incredibly valuable assets that are crucial to building a resilient, sovereign AI ecosystem. Ireland can further AI innovation by identifying and responsibly making available key public data resources, while preserving privacy, security and. Since certain EU rules were set before the widespread emergence of large-scale generative AI, Ireland could propose updates to the EU Open Data Directive so high-value public data can be preferentially shared with AI firms indigenous to, or conducting significant R&D within, Ireland or the EU. This would modernize data-sharing policies for the benefit of all member states.

5. Biometrics & the Public Service

Facial Recognition Technology (FRT) brings both opportunities and challenges. Its use in law enforcement is high-risk, given its impact on fundamental rights. The Council is of the view that public transparency, engagement, and accountability are crucial to building public trust around the contemplated use of FRT in policing and its operational parameters. Responsible implementation necessitates addressing a complex web of interconnected issues concerning accuracy, discriminatory effects, data privacy, data security, and fundamental rights. This, in turn, requires implementing highly robust legislation, procurement, operational, and accountability frameworks. Appropriate training, data management and ensuring that evaluation, procurement, and deployment of FRT is accurate, fair, transparent, and respects individual rights remain paramount.

A clear legal basis for FRT and its use cases: If a decision is made to legislate for use of FRT by An Garda Síochána, primary legislation must clearly indicate the underlying legal basis for it, its use cases, and legal parameters for how facial recognition databases will be compiled.

Need for a bespoke procurement framework: The adoption of a bespoke procurement framework for FRT systems, in consultation with AI experts, is necessary to ensure their reliability in meeting best practice for accuracy, transparency, fairness, and privacy.

Testing in Irish Real World Law Enforcement Conditions: We strongly recommend that, prior to procurement or deployment of FRT, a comprehensive independent evaluation of FRT tools in real-world conditions relevant to Irish law enforcement and across all demographics by an AI expert group is undertaken to assess performance and suitability.

Auditing as a Safeguard: Regular independent auditing of FRT deployment should be provided for as a safeguard and feedback loop to ensure reliability, transparency and accuracy.

6. AI and Ireland’s Creative Sector

AI technology is transforming Ireland's creative sector, offering both opportunities for growth on the one hand, but also presenting significant challenges.

Protecting Creators and Copyright: To protect creators in the Age of AI, the Council is of the view that it is imperative the Government considers whether Ireland's copyright laws and licensing regimes are equipped to address AI disruption.

AI as an Enabler: AI also offers significant opportunities for the creative sector, acting as a powerful enabler that can enhance artistic expression; and the Government should assist the creative sector in adopting this new technology as another means of buffering the sector from AI disruption.

Addressing AI Misuse – Deepfakes and Digital Cloning: In light of the potential misuse of AI, such as widely available technology that can digitally clone the image, likeness, and/or voice of individuals, the Council recommends that the Government considers introducing a specific law prohibiting the creation of digital "deep fakes" of individuals without their consent.

Cultural Policy in the Age of AI: The Council also recommends that the Government explore other policy initiatives aimed at protecting and promoting Irish and European culture in the age of AI.

Conclusion

In conclusion, these recommendations from the Council highlight key opportunities to strengthen Ireland’s AI ecosystem by emphasising strategic resource allocation, robust ethical oversight, and targeted support for AI-driven growth, safeguarding our global competitiveness and societal wellbeing while addressing potential AI-related risks. Building on existing AI initiatives, they provide an initial focus that will evolve in step with advances in AI. The Council will continue issuing guidance and refining these recommendations throughout the year, keeping Ireland strategically poised to harness AI’s potential responsibly and inclusively.