The National AI Strategy in a European Context

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The 21st century has witnessed a profound acceleration in the effectiveness and performance of Artificial Intelligence (AI) technology. Modern AI employs machine learning (ML) technology that can learn new behaviours or develop new insights after being trained on large sets of relevant data. As the potential economic and societal benefits of AI become apparent, there are growing concerns about the potential harmful impacts of AI deployment due to loss of privacy, labour displacement, perpetuation of bias in automated decision making and the concentration of AI innovation and governance in the hands of a relatively small number of large multinational companies. This has driven a widespread policy response from governments at national and supranational/international level.

The European Union is particularly proactive in advancing both policy and legislative proposals related to AI and the data flows that unpin this technology as part of the Digital Agenda for Europe[1]. AI related policy and legislative developments in Ireland have been relatively slow in comparison[2]. However, on 8 July 2021, the Irish Government published Ireland's first National AI Strategy '[AI-Here for Good]' which the Strategy states "sets out how Ireland can be an international leader in using AI to benefit our economy and society, through a people-centred, ethical approach to its development, adoption and use".

In this *L&RS Note*, we briefly compare (and rate) the action plan presented in the National Strategy to that proposed for EU Member States in the European Commission's [Coordinated Plan for AI].

European Union

The European Commission (EC) has been proactive in driving AI policy, with an emphasis on making the EU a competitive player in the global race in AI technology while making protection of fundamental rights and the trustworthiness of AI a key differentiator. To achieve this, in June 2018 the EC established the interdisciplinary [High-Level Expert Group on AI] (AI HLEG) made up of 52 experts from across academia, industry, civil society and the public sector.

This group provided a set of policy recommendations to develop the infrastructure, knowledge and talent needed for the EU to compete globally on AI innovation and realise the economic and societal benefits of AI, but in a human-centric and trustworthy manner. In support of the latter, the AI HLEG developed a set of ethical AI principles, which were refined into a list of questions that can be used by organisations to self-assess their AI activities. The outputs of the AI HLEG, together with studies into the impact of digital transformation on the EU labour market and into the liability regime for AI, have influenced the EC's development of the European Strategy for AI. This Strategy builds on existing European strength in robotics, manufacturing and services and capitalised upon the strengths of European researchers, labs and start-up, the Digital Single Market and the wealth of data available in Europe. The legislative framework required for this Strategy is elaborated in a 2020 White Paper on AI[3], as part of a framework to develop ecosystems of excellence and trust. The AI excellence ecosystem involves supports for:

- Research
- Skills
- SME innovation
- Public-private partnerships (PPP)
- Public sector adoption of AI
- Secure data and computing infrastructure
- Policy collaboration with international bodies such as the UN and OECD.

The trustworthiness ecosystem for AI involves addressing risks to fundamental rights, including privacy and non-discrimination, and addressing risks to safety and liability regimes, through both regulation and voluntary schemes.

The various aspects of the EU AI Strategy have been assembled into the EC's 'Coordinated Plan' for AI published in 2018[4] and updated in 2021[5]. The updated plan breaks down proposed actions for EC and Member States into **17 areas**, grouped under four key sets (of proposals):

i.   Setting enabling conditions
ii. Making the EU the right place for AI development
iii. Ensuring technologies work for people
iv. Building strategic leadership in high-impact sectors

National AI Strategy

On 8 July 2021, An Taoiseach Micheál Martin T.D., and Minister of State for Trade Promotion, Digital and Company Regulation, Robert Troy T.D., launched Ireland's first National Artificial Intelligence (AI) Strategy, titled 'AI – Here for Good'. The National Strategy proposes seven strands of actions that aim to build public trust in AI, leverage AI for economic and societal benefit and enable AI technology adoption. The National Strategy involves existing and new initiatives by and across multiple Government Departments and Agencies. The implementation of the enterprise-focussed elements of the Strategy will be supported by the formation of an Enterprise Digital Advisory Board (EDAB). This will have representation from the relevant Departments and Agencies and be chaired by the Minister of State for Trade Promotion, Digital and Company Regulation. The EDAB will be complemented by the GovTech Delivery Board (GTDB), which will lead the digital transformation of the public sector, including the adoption of AI. To promote public trust in the benefits of AI, an AI Ambassador will be appointed, supported by the Department of Enterprise Trade and Employment (DETE). DETE has also established a top team on Standards

for AI to develop a roadmap for AI standardisation that builds on Ireland's existing strength in this area. The Strategy will also be reviewed, and the associated action plan updated annually.
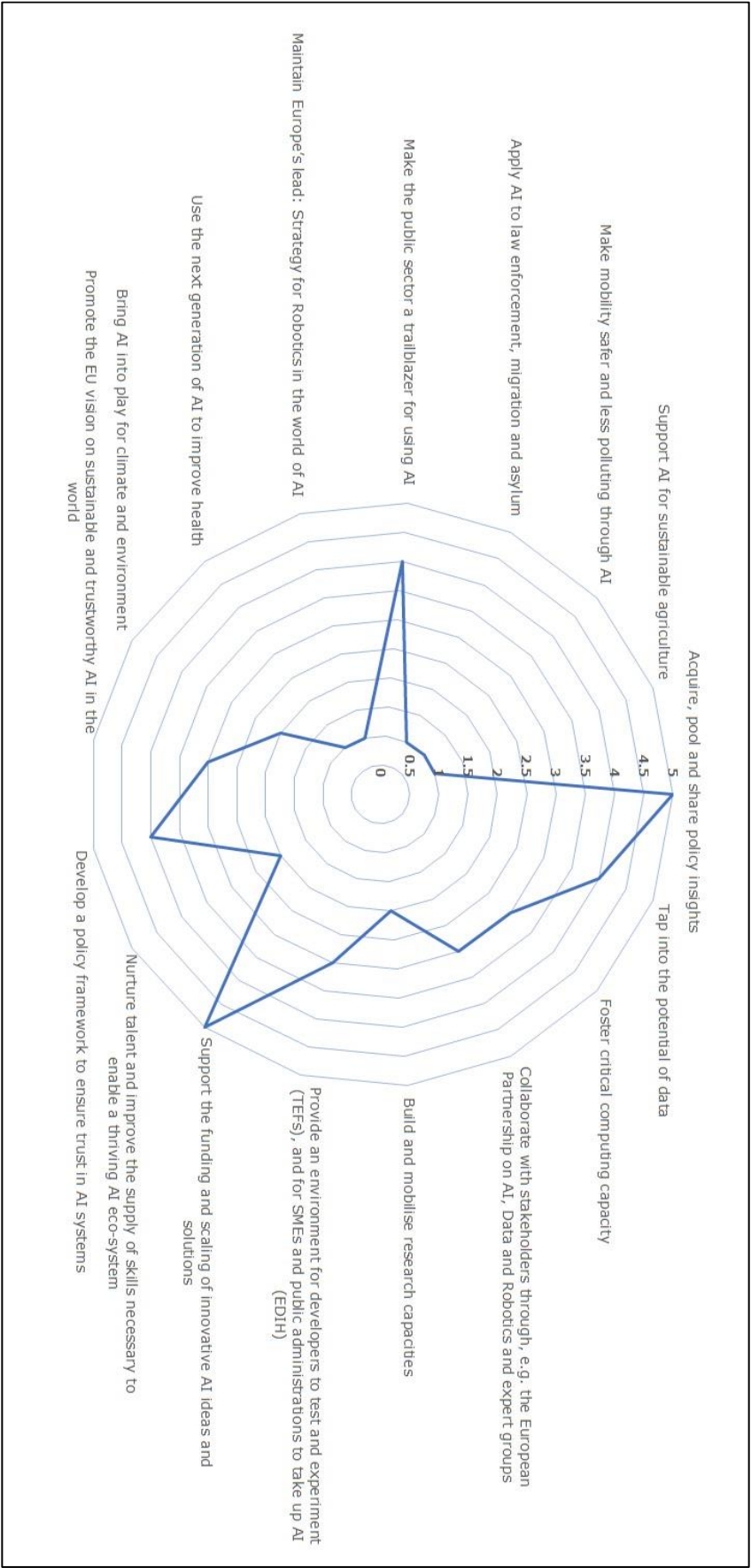
National AI Strategy in the context of the EU Coordinated Plan on AI

The National Strategy is comprehensive in identifying the many issues facing Ireland, as the impacts and opportunities of AI technology advance, and cataloguing the existing initiative and areas of strength within the State. It addresses many of the same issues included in the EC Coordinated Plan and benefits from the visibility of that Plan and its accompanying legislative proposals. It is useful therefore to compare the National AI Strategy in more detail to the proposed actions that Member States are encouraged to undertake in the EC Coordinated Plan in order to guide the planning of further actions at a national level and identify possible gaps that may need further consideration. The National Strategy is broadly rated against the 17 areas of the EC Coordinated Plan. A progressive scale is used by the author to assess the Strategy, as follows:

- Includes new funded actions (5)
- Includes actions within existing national initiatives (4)
- Aims to avail of EU or international initiatives (3)
- Action planning is under active consideration (2)
- Action planning is yet to be undertaken (1)

The rating outcome is illustrated by Figure 1 and Table 1 (an alternative presentation), overleaf.

Figure 1: Assessing the National AI Strategy against the EC Coordinated Strategy

Source: L&RS.

Table 1: Assessing the National AI Strategy against the EC Coordinated Strategy (an alternative presentation)

EU Coordinated Plan Sets	Chapters	EC Coordinated policy proposals	Rating (L&RS)	5: New funded actions	4: Action implemented under exisitng structures	3: Actions availing of EU/Int. structures	2: Action planning under consideration	1: Consideration of action is pending
I - Set enabling conditions for AI development and uptake in the EU	1	Acquire, pool and share policy insights	5	x				
	2	Tap into the potential of data	4		x			
	3	Foster critical computing capacity	3			x		
II - Make the EU the place where excellence thrives from the lab to the market	4	Collaborate with stakeholders through, e.g. the European Partnership on AI, Data and Robotics and expert groups	3			x		
	5	Build and mobilise research capacities	2				x	
	6	Provide an environment for developers to test and experiment (TEFs), and for SMEs and public administrations to take up AI (EDIH)	3			x		
	7	Support the funding and scaling of innovative AI ideas and solutions	5	x				
III - Ensure that AI works for people and is a force for good in society	8	Nurture talent and improve the supply of skills necessary to enable a thriving AI eco-system	2				X	
	9	Develop a policy framework to ensure trust in AI systems	4		x			
	10	Promote the EU vision on sustainable and trustworthy AI in the world	3			x		
IV - Build strategic leadership in high-impact sectors	11	Bring AI into play for climate and environment	2				x	
	12	Use the next generation of AI to improve health	1					x
	13	Maintain Europe's lead: Strategy for Robotics in the world of AI	1					x
	14	Make the public sector a trailblazer for using AI	4		x			
	15	Apply AI to law enforcement, migration and asylum	1					x
	16	Make mobility safer and less polluting through AI	1					x
	17	Support AI for sustainable agriculture	1					x

Source: L&RS.

Strong alignment with the EC Coordinated Plan goal to acquire, pool and share policy insights as demonstrated through the publication of the National Strategy itself, the planned establishment of the EDAB and the annual updates to the Strategy. Combined with the commitment to establish a European Digital Innovation Hub in support of AI innovation, these also show funded action aligned with the EC Coordinated Plan to support and scale innovative AI ideas and solutions.

The National Strategy also demonstrates that existing actions, such as the EMPOWER data governance collaborative research initiative and engagement with the GAIA-X cloud computing

programme aligns well with the Coordinated Plan in terms of data and infrastructure for AI. Further planning will need to ensure consistency of these actions with the role of the Data Governance Board to be established to oversee sharing of public data under Ireland's *Data Sharing and Governance Act 2019*.

The National Strategy also shows strong alignment with the EC Coordinated Plan's policy framework to ensure trust in AI through the planned appointment of an AI Ambassador, the development of an AI standardisation roadmap and drives for the responsible uptake of AI in the public sector via the GTDB. The latter does however raise the broader question of how National Strategy actions related to enterprise AI uptake driven by the EDAB and public sector update driven by the GTDB will be coordinated. Many of the National Strategy actions that will rely on engagement with EU or international initiatives or that are still in the planning phase could benefit from closer coordination of enterprise and public sector initiatives. An integrated enterprise and public sector approach may offer more opportunities for engaging with the European PPPs in AI, data and robotic and establishing Testing and Experimentation Facilities, Regulatory Sandboxes, and European Digital Innovation Hubs. Enterprise, public sector and academic coordination is also key to develop the strategy in relation to AI skills development and to international promotion of sustainable and trustworthy AI. In relation to skills, the Coordinated Plan goes beyond the need for skill to support AI innovation, with a strong emphasis on up/re skilling needed for professions and sectors that will be more impacted by AI-driven automation and disruption to business models.

The National Strategy is also less mature than the Coordinated Plan in sectorial strategic planning. This may require coordinated sectorial subgrouping under the EDAB, the GTDB and the Expert Group on Future Skills Needs (EGFSN) to bring together the stakeholders and specialists in planning for their respective sectors. AI for Health and Agriculture are important sectors for the Ireland and should be prioritised for sector-specific strategic AI planning. Irish research and innovation strengths in manufacturing automation and smart cities could be aligned as important niches within the robotics and mobility sectorial proposals in the Coordinated Plan.

The National Strategy should also consider initiatives in sectors not prioritised in the Coordinated Plan. For instance, Ireland's important role as a regulatory hub for data protection offers the potential to expand this role as the EU AI Regulation and Data Governance Act comes into force. This points to a potential synergistic niche for AI use in the RegTech/LawTech[6] sector as well as for legal services in AI and data regulation.

Finally, the Coordinated Plan places significant emphasis on Member States leveraging the Recovery and Resilience Facility (RRF) to implement the actions of the Coordinated Plan. As indicated by Minister of State Troy in his foreword, the National Strategy will be closely intertwined with Ireland's recovery and resilience efforts. Further planning will be required into how the National Strategy will integrate with Ireland's €915 Million submission to the RRF[7].

Summary

The National AI Strategy offers a comprehensive account of how Ireland may reap the economic and societal benefits of AI while mitigating the associated risks. While the prioritised actions in data, skills and trustworthiness are vital horizontal prerequisites, comparison with the EU Coordinated Plan for AI indicates the need for strong coordination across enterprise and public sector actions and to move rapidly to planning of sector-specific strategies.

[1] Digital Agenda for Europe, European Parliament Factsheet,
https://www.europarl.europa.eu/factsheets/en/sheet/64/digital-agenda-for-europe

[2] Van Roy, V., Rossetti, F., Perset, K., Galindo-Romero, L. (2021) AI Watch - National strategies on Artificial Intelligence: A European perspective, 2021 edition. EUR 30745 EN, Publications Office of the European Union, Luxembourg, ISBN 978-92-76-39081-7, doi:10.2760/069178, JRC122684:
https://publications.jrc.ec.europa.eu/repository/handle/JRC122684

[3] White Paper on artificial intelligence – A European approach to excellence and trust (COM(2020) 65 final):
https://ec.europa.eu/info/sites/default/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf

[4] Coordinated Plan on Artificial Intelligence, Brussels, 7.12.2018 COM(2018) 795 final: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0795&from=EN

[5] Fostering a European approach to Artificial Intelligence, 2021 Review of Coordinated Plan on Artificial Intelligence, Brussels, 21.4.2021 COM(2021) 205 final: https://digital-strategy.ec.europa.eu/en/library/coordinated-plan-artificial-intelligence-2021-review

[6] Algorithms, Big Data and Artificial Intelligence in the Irish Legal Services Market, 2021. Houses of the Oireachtas Service, 17 February 2021. https://data.oireachtas.ie/ie/oireachtas/libraryResearch/2021/2021-02-18_spotlight-algorithms-big-data-and-artificial-intelligence-in-the-irish-legal-services-market_en.pdf

[7] Laying the Foundations for Recovery: Ireland, 2021. European Commission Factsheet.
https://ec.europa.eu/info/sites/default/files/com-2021-419-ireland_factsheet_en.pdf