



**Northern Ireland
response to the
AI Council AI Roadmap**



Contributing organisations



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**Belfast
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matrix.

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Introduction

The Northern Ireland Innovation Stakeholder Group made up of representatives from across Government, local authorities, economic development agencies, academia and industry welcome the opportunity to respond to the finding of the AI Council's UK AI Roadmap report. The stakeholder group includes members from Queen's University, Ulster University, Belfast City Council, Invest NI, Digital Catapult NI, Further Education Colleges and Matrix (the NI Science Industry Panel).

The UK Government published an independent report (carried out by the AI Council) containing a number of recommendations to help the government plot the strategic direction on AI. The AI Council highlighted 16 recommendations designed to assist in the process of developing a National AI Strategy. These recommendations span four thematic areas including 'Research, Development & Innovation', 'Skills and Diversity', 'Data Infrastructure and Public Trust' and National, Cross sector adoption'.

The Stakeholder Group has identified seven Northern Ireland priority areas that, with additional focus, could enhance the AI Council AI Roadmap:

Key NI Priorities



NI AI Strategy should be integrated and co-ordinated with the national AI strategy through a collaborative framework



Establishment of a national framework for AI talent development through all levels of education from Primary through to Higher and Further education



Develop a formal pathway for regional engagement and investments in NI from publicly funded AI assets (e.g. Turing Institute, ODI, Ada Lovelace, Hartree, Catapults)



Map UK AI capability and opportunities for regions to support growth (e.g. Citizen Engagement, Public Sector adoption, AI in Health, Cyber)



National AI strategy should leverage NI AI initiatives including City Deals to lead or collaborate on AI Roadmap outcomes



Develop engagement mechanism to increase levels of diversity and underrepresented groups within AI research and Innovation



Align Government support through UKRI "levelling up" to scale and retain research excellence and translational capability into industry

The Impact of AI

According to PWC UK GDP will be up to 10.3% higher in 2030 as a result of AI – the equivalent of an additional £232bn – making it one of the biggest commercial opportunities in today's fast-changing economy. The impact over the period will come from productivity gains (1.9%) and consumption side product enhancements and new firm entry stimulating demand (8.4%). There will be significant gains across all UK regions, with England, Scotland, Wales and Northern Ireland all seeing an impact from AI in 2030 at least as large as 5% of GDP, and extra spending power per household of up to £1,800-£2,300 a year by 2030.

Evidence suggests that increased use of Artificial Intelligence can bring major economic and social benefits insofar as it offers businesses, from all industry sectors, the ability to improve their efficiency and performance: be that from improving or scaling existing processes; from reduced costs; or more accurate decision making through better use of data. Key factors that increase the capability of AI in recent years include the existence of and access to new and larger volumes of data; the supply of experts with the specific high level skills; and the availability of increasingly powerful computing capacity. In the intervening period there has been much done to stimulate research and innovation within the UK – for example Innovate UK (charged with implementing the Industrial Strategy Challenge Fund to a value of £4.7bn over a four-year period to 2020/21) launched the Artificial Intelligence and Data Grand Challenge Mission – calling for industry and academia to use data, artificial intelligence and innovation to transform the prevention, early diagnosis and treatment of chronic diseases by 2030.

Further insights into the uptake of AI and Data Science is provided within a 2020 Microsoft report (which is based on a survey of 1,000 business leaders and 4,000 employees conducted in partnership with Goldsmiths, University of London), noting the following key points:

- The estimated national UK rate of AI adoption is 56%;
- This adoption rate varies by sector, with financial services leading the way - 72% of the nation's finance leaders say their organisation is using AI – a 7% increase from 2018; 51% of manufacturing leaders who were interviewed said they were using AI, falling to 46% for healthcare and 43% for retail;
- Less than a quarter of UK organisations (24%) have an AI strategy in place;
- While nearly half of business leaders stated that AI is a skill that will help secure future prospects in the UK, only 32% said they understood the breadth and depth of AI skills their workforce needed to succeed in the next twelve months
- 96% of employees said they had never been consulted by their boss about its introduction, while only 11% of staff had completed training to improve their understanding of how to use AI in their role.

It is estimated that the global adoption of cognitive systems and AI across a wide area of sectors will drive worldwide business revenues from 6.4 billion euro in 2016 to more than 37.8 billion euro in 2020. More broadly, AI could contribute 12.8 trillion euro to the global economy by 2030, representing an increase of 14% on today's global GDP. It is anticipated that 7.4 trillion euro could come from consumer demand for new products, while 5.4 trillion euro could be generated from higher market productivity.

NI's ICT Sector

In late 2018, NI's ICT sector (SIC J61-63) accounted for 2.2% of all (full-time and part-time) employment and over £1,277m of GVA (3% of total GVA). NI's ICT sector is smaller than the UK average of 5.28% ICT sector share of total GVA. At the same time, an analysis of the current open vacancies shows that there are more vacancies in tech in NI (relative to the total vacancies) than in the rest of the UK. Across the UK, job postings for Data Scientists and Advanced Analyst positions also grew the most in NI (563%).

Matrix NI commissioned The Alan Turing Report to undertake an evaluation of the AI research landscape in Northern Ireland. This report, which was completed in May 2019, reported positively on the need and role of an AI technology innovation centre in Northern Ireland.

The main objectives of the review were to:

- Evaluate overall levels of regional academic-commercial research excellence within the AI sector and the role played by public sector research institutes
- Determine how the research conducted by public sector research institutes meets the needs of local businesses in both Northern Ireland and the UK
- Assess Northern Ireland's capacity to establish a Regional Centre of Excellence in Artificial Intelligence linked to the UK's Alan Turing Institute, all within the context of the development of a thriving AI cluster in Northern Ireland
- Suggest policy actions likely to support the future development of the AI sector in Northern Ireland.

Alan Turing Report

Key findings from The Turing Report highlighted the quality and range of AI research being undertaken in Northern Ireland at Ulster University and Queen's University; Great academic and commercial potential including data science, cyber security, computer architecture IoT, health related tech, robotics and multimedia analytics. Sectors with particular growth potential include health, manufacturing, cyber, fintech

and data services. The report recommended the establishment of an AI Centre of Excellence with strong academic, industry and government collaboration at its core. This centre would need to support a wide range of TRLs akin to a TIC (Technology and Innovation Centre) but also focus particular attention to education, and training at the heart of a NI AI Talent and Skills pipeline supporting program. Finally, establishing stronger links with the Alan Turing Institute was also recommended.

City Deal Investment

Across Northern Ireland a number of government backed strategic investments and initiatives demonstrate strong alignment with the AI Roadmap. The most significant investment into ICT and innovation that has already been announced is the City Deals for the Belfast and Derry / Londonderry regions, in which many national and regional public and private parties are participating. The Belfast Region City Deal totals almost £1bn, unlocking £350m investment from the UK government, which is matched by a further £350m from the NI Executive, as well as co-investments of upwards of £150m from City Deal partners such as private sector, councils and universities. The Derry / Londonderry City Deal will receive £50m from the UK government, supplemented by £55m for the new Inclusive Future Fund.

Specific projects within the Belfast City deal with strong AI components include GII (Global Innovation Institute); AMIC (Advanced Manufacturing Innovation Centre); CODA (Citizen Office of Data Science); CDHT (Centre for Digital Healthcare Technology) and SMIL (Screen and Media Innovation Lab). AI will also be strongly present in the Derry/Strabane deal including the CARL (Cognitive Analytics Research Laboratory), CIDRA (Centre for Industrial Digitalisation, Robotics and Automation) and the Transformation for Healthcare Research and Innovation Value Based Ecosystem (THRIVE).

A proposed first UK Digital Twin centre led by Artemis Technologies (a £50M Strength in Places enabled investment from 2021 to 2024) will be based in Northern Ireland and will closely align to critical and sizeable investments being made in the commercial and defence sectors in the area which can gain significant advantage from an enhanced focus on the digitalisation of design and manufacturing processes. Two critical projects are to be launched in the area almost simultaneously, creating a once in a generation opportunity to capitalise on private and government investments across civil and defence sectors to have impact on net zero and national security and delivering technology development and highly skilled work into the region.

Northern Ireland is investing in AI in:

- Screen and Media
- Digital Twin
- Advanced Manufacturing
- Health and Life Sciences
- Net Zero
- Fintech
- Cyber



Northern Ireland AI Council Roadmap Alignment

The NI Innovation Stakeholder Group have reviewed the AI Council Roadmap themes and have identified areas of strategic alignment spanning existing, proposed and future AI related investments in Northern Ireland.

Research Development and Innovation

Queen's University

Research themes include Multimedia Analytics (Ophthalmic imaging, Machine learning of visual & language data, Video analytics, Geomatics and Astronomical science); Large Scale and accelerated analytics (Cancer research, Public health); Intelligent Control and Robotics (Industry 4.0, Autonomous Systems, Automated Inspection and Cobotics); Cyber Security (Network Intrusion Detection, Deep Learning for Hardware Security, Malware Detection AI Security and Privacy Preserving); AI and Society (Algorithmic governance, Fair Exploration and political action and decision making).

Ulster University

Artificial Intelligence (AI) has been a core focus of Computer Science research at Ulster University for over 25 years, with an established track record of world leading research in AI, machine learning and data analytics. There are over 60 academic staff contributing to such research across all subject areas of the University. CARL consolidates this expertise into one centre. Ulster is one of just eight UK universities to form a major five-year Data Science Research Partnership with the BBC that aims to unlock the potential of data analysis in the media. Ulster University's strong commitment to commercialisation of research has already led to the creation of numerous successful spin-out companies including Intelesens, Heartsine Technologies, ActionSense, Axial3D, Datactics, Performa Sports and the award-winning wearable neurotechnology company NeuroCONCISE.

Cognitive Analytics Research Lab

The Cognitive Analytics Research Lab (CARL) is a transformational new cutting-edge Applied Research Centre that brings together data analytics and Artificial Intelligence ("AI") expertise which are key technologies for future innovation. The Centre seeks to exploit the massive advances in High Performance Computing by applying Artificial Intelligence and Machine Learning techniques to sectors as diverse as health, financial technology, media, energy and public policy.

Artificial Intelligence Collaboration Centre

The proposed AiCC (Artificial Intelligence Collaboration Centre) will provide CR&D focused resources designed to engage with academia in NI's Universities i.e. understand existing AI research, AI research potential and help identify opportunities where industry engagement is viable/appropriate i.e. the regional shop window for all NI AI research. The centre will also provide researcher capacity to expedite potential CR&D projects leading to increased CR&D pull down by Industry in NI.

Skills and Diversity

Open Data Strategy for NI

The Open Data Strategy for Northern Ireland 2020-23 aims to increase the rate of publication and sharing of government information as open data and to promote the innovative use of open data as a means for advocating its benefits. The strategy covers all of the Northern Ireland public sector (both central and local government) and has strong working relationships with stakeholders including Queen's University, Belfast and Ulster University. The strategy seeks to engage with the NI public sector to promote open data and its potential through a series of events, including the establishment of an innovation fund, and running open data competitions. The Open Data Strategy also commits to the launch of an annual data focused competition targeted at the third level education sector in Northern Ireland.

Further Education Colleges

NI's Further Education (FE) Colleges run comprehensive Data Science Assured Skills academies that offer pre-employment training to provide the skills needed to compete for new employment opportunities. These NI regional government supported programmes work with global companies that have current job vacancies available and offers pre-employment training to meet the skills needed for those roles. Current focus areas include data science, data engineering and network analytics engineering. In addition to this company specific training in AI / data science has also been provided to local industry by NI's FE colleges through local government initiatives including Skills Focus, Innovation Vouchers, Connected and InnovateUS. At present all of NI's six FE Colleges deliver AI / data science as part of their FE and HE provision. At FE (Level 3) AI / data science is included in the BTEC and OCR programme delivery with units in Data Modelling, Systems analysis and design, Business Computing and Big Data analytics. At HE (Level 4-6), AI / data science is included as part of the BSc Honours Degree, Foundation Degree and Pearson HN curriculum provision offered by the six FE Colleges.

Universities

NI's Universities offer a number of AI related programs from Undergrad to PhD. QUB run the Leverhulme funded Doctoral Training Programme – LINAS (Leverhulme Interdisciplinary Network on Algorithmic Solutions) including 30 PhDs in AI and Society; MSc courses in Data Analytics & Electronics and host CreDIT (Centre for Doctoral Industry Training) in ECIT, funded through industry partners.

Ulster University (UU) has invested heavily in course provision in AI and data analytics, launching new courses including: Artificial Intelligence BSc; Artificial intelligence MSc; Data Science MSc; Professional Software Development (Data Science) MSc; Corporate Law Computing and Innovation LLM/MSc; International Business with Data Analytics MSc. Ulster also responded to the DfE Covid Skills call and following a successful application and securing funding we are delivering a PgCert in AI (recruited 49 students) and a PgCert in Software Systems Development (Data Science) (recruited 192 students). Additionally, 25 students were recruited on AI and Data science upskilling modules.

The AiCC plans to invest up to £1.7M (government & industry) in the first 3 years of its operation on addressing NI's AI Talent and Skills Pipeline deficit. Three key areas will be focused on including a scholarship MSc course (students placed into existing AI related MSc courses at Queen's University and Ulster University); AI Leadership Masterclasses targeting Industry leadership and improved SME & Micro company access to the best Advanced AI Professional training. The AiCC will also fund a number of Industry based "Industry Engagement Analysts" whose purpose will be to represent Industry in the Centre. They will specifically represent their parent company's sector but work with the other sector analysts to look for cross-leverage, knowledge sharing and/or potential collaboration opportunities.

Data Infrastructure and Public Trust

Citizen Office of Data Analytics

CODA (Citizen Office of Data Analytics) will build the capacity of a cohort of citizens to use data and innovative technologies and to co-create and co-design data-driven projects that will have social, economic and environmental impacts. Through CODA citizens will work with partners to develop and adopt open standards, enhancement of data and digital skills and shared technologies needed to complement and enhance existing data investments. They will be involved in and support cross sector data collaborations which will generate new and emerging data through dynamic consent. CODA will also create an ecosystem in which personal data will be available including IOT data and data in the public sphere.

Data Analytics Research and Exploitation

DARE (Data Analytics Research and Exploitation) manages the Northern Ireland SBRI Programme. Under the programme to date, innovative AI-based solutions are being deployed to diverse areas - from identifying and monitoring livestock using satellite imagery, using real-time image analytics on the edge to detect anti-social behaviour in public spaces (while minimising data capture), to real-time adaptive control of critical water treatment infrastructure that is reducing costs while maintaining quality. A new 'DARE Challenge Programme' is being launched to scale the innovation funding model to a wider set of public sector challenges - ensuring all parts of the NI public sector can benefit from innovative digital and data technologies, including those incorporating AI. DARE is driving a number of COVID response initiatives including Contact Tracing, COVID Analytics and Vaccine Analytics.

Ulster University

Ulster University is part of the inter-disciplinary health and research project aimed at helping Europe's ageing population to live actively and independently at home in their communities with the support of assisted living technology. **SHAPES (Smart and Healthy Ageing through People Engaging in supportive Systems)** is a 36 strong partnership spanning 14 European countries designed to leverage AI, data analytics and the best healthcare technologies to solve one of the biggest challenges that society faces today. The Ulster University led **MIDAS (Meaningful Integration of Data, Analytics and Services)** project has been working on using synthetic data sharing techniques to increase privacy whilst facilitating the safe sharing of 'representative' data. From an AI Ethics perspective Ulster executed leading research into Automation bias which discovered that a doctor's ability to read an Electrocardiogram can drop from 86.38% to 27.43% when the algorithm provides unreliable advice i.e. would AI bias and even deskill the human contribution. Ulster's work on 'Explainable AI' is attempting to combat this automation bias by making the AI more ethical by introducing decision support tools that integrate the human decision before a recommendation is made. Finally, through Ulster's **ChatPal program** the team developed a mental health chatbot that leverages a more system based approach to ensure the Chatbot is more ethical.



National Cross Sector Adoption

Artificial Intelligence Collaboration Centre

AiCC is a proposed initial investment of £9M over the first three years of its existence. 77% of this investment is coming directly from NI government. The AiCC will establish a strong NI AI ecosystem, engage with 100's of companies through its data scientists, make a significant impact to NI AI skills with 100's of additional MSc graduates, 100's of leadership focused AI masterclasses and 1000's of individuals gaining access to the best Advanced AI training & certifications. AiCC's unique ecosystem will create the opportunity for cross-sector pollination of AI expertise i.e. help reduce 'reinvesting the wheel' amongst SME's in different (non-competing) sectors. The AiCC through its various AI skills programs will help raise the 'skills' tide across all sectors and businesses.

Global Innovation Institute

The Global Innovation Institute (GII), led by QUB will be a nexus for co-innovation between researchers and industry in data security, connectivity and analytics. It will be a place where local and global companies, entrepreneurs and researchers will come together in a multi-disciplinary innovation environment. As we are faced with the data deluge in our increasingly connected world, the secure, connected intelligence capabilities of the GII will become ever more critical.

Advanced Manufacturing Innovation Centre

The Advanced Manufacturing Innovation Centre (AMIC) will operate at the interface between academia and industry, by creating new opportunities for innovative manufacturing in the Belfast City Region. Involvement of both Queen's University Belfast and Ulster University will ensure that real-world industrial challenges based on market need are solved through cutting-edge research. AMIC builds on 50 years of sustained innovation and industry support through the Northern Ireland Technology Centre (NITC), the Polymers Processing Research Centre (PPRC) and the more recent university-industry partnership, NI Advanced Composites and Engineering (NIACE), and will consolidate and enhance these existing facilities.

iREACH

iREACH is an exciting new project for healthcare in Northern Ireland, the outcome of creative collaboration between academia, industry, the NHS and public sector/government stakeholders to drive UK science and innovation, by creating a unique ecosystem for testing new drugs through their development life cycle and integration into care pathways.

Creative Industries

The Creative Industries have shaped an incredible success story for Northern Ireland – and the story does not end with Game of Thrones. The Screen and Media Innovation Lab (SMIL) will help to maximise the benefits of this sector for the Belfast Region by providing a dedicated physical infrastructure to support the rapidly expanding activity in this area.

Ulster University Centre for Digital Healthcare Technology

The Centre for Digital Healthcare Technology (CDHT) will provide a world-class space for academia, industry and clinicians to come together to innovate and boost the productivity of the Life and Health Sciences sector, as well as medical device and related sector activity in Northern Ireland.



Ulster University Centre for Industrial Digitalisation

The Ulster University Centre for Industrial Digitalisation Robotics and Automation (CIDRA) that will support industry and commerce in their adoption and exploitation of industrial digital technologies, robotics and automation promoting innovation and accelerating new applications in the service sectors. At the heart of this proposal is the need to improve innovation, productivity and competitiveness in the regional economic base whilst considering the needs, skills, and well-being of the future worker.

Key AI Conferences

The now annual NI AICON event was most recently hosted in December 2020. The 2020 event focused on AI in Fintech; AI in the Public Sector; Impact of AI on Society, Arts and Culture; Applied AI/Supporting AI Startups; AI Research and Innovation and AI in the Screen Industry. The event also welcomed speakers from across the UK and Europe including Marten Kaevats, National Digital Advisor, The Government Office of Estonia; Dame Wendy Hall Regius Professor of Computer Science at the University of Southampton and Dr Marieke Navin, Head of Programming, Cheltenham Science Festival. Key event partners included Kainos, Matrix NI, Digital Catapult NI, Invest Northern Ireland (InvestNI), AI NI, Allstate and Liberty IT. The success of AICON and Big Data Belfast has led to Belfast securing the prestigious EmTech Europe 2021 – 2023 conference.

Artificial Intelligence NI

Artificial Intelligence Northern Ireland (AI NI) is a collaborative network focused on the development and support of the Northern Ireland AI community. AINI was founded in 2018 and hosts circa 15 meet-up events a year, 2 Hackathons with membership grown to over 1,400. All AINI events are designed to educate and stimulate discussion key AI topics and/or new developments in AI technology, but most importantly highlight the success of the community and fostering collaboration between members. These events range from insightful talks, educational workshops, panel discussions and Hackathons.

Centre for Secure Information Technologies

The Queen's University CSIT (Centre for Secure Information Technologies) organisation executes world leading AI research in the area of cyber security. Funded by EPSRC and Technology Strategy Board, IKCs are a key component of the UK's approach to the commercialisation of emerging technologies through creating early stage critical mass in an area of disruptive technology. Based at Catalyst, in Titanic Quarter, Belfast, this flagship Centre has helped in the attraction of over 100 high-tech Foreign Direct Investment (FDI) and start-up companies. These companies employ more than 2,000 people and is evidence of the wider economic benefits to be gained from translating science into wider business and economic opportunity. CSIT has also worked closely with a number of large multinational partners including Allstate, BAE Systems, Direct Line Group, Thales, InfoSys and Seagate Technology.

Leading AI SMEs

A number of exemplar Northern Irish SME's have pioneered the development and leveraging of AI include CattleEye (bringing to market the first autonomous livestock monitoring system for ruminant livestock based on video analytics powered by deep learning Artificial Intelligence); Axial3D (a medical technology firm harnessing AI to transform patient outcomes while driving the global adoption of 3D printing within healthcare); BrainWaveBank (using AI to make it possible to measure and track brain activity and cognitive performance for anyone, anytime, anywhere); Analytcis Engines (specialists in data integration, machine learning, AI, in-depth analytics and visualisations) and AquaQ (a leading provider of specialist data management, data analytics and data mining products and services). A few examples of large companies (FDI and Indigenous) that have built strong AI capabilities in their NI operations (with their own in-house CoE's) include Allstate, Kainos, PwC, Liberty IT, Diaceutics, Thales and Seagate Technology.



Key NI Priorities and Recommendations

1 NI AI Strategy should be integrated and co-ordinated to the national AI strategy through a collaborative framework.

Government should support the establishment of a centre for AI in Northern Ireland aligned to the national AI strategy and a network of publicly funded AI assets.

A national AI strategy must ensure that “Levelling Up” is considered for all regional investments focusing on growth, the strengths of regions and the absorption. NI is different from the rest of the UK with a greater percentage of SME’s. Thus a key focus when developing the strategy around AI is to take into consideration SME’s as well as FDI companies.

Establish a diverse and multi-agency group, including regulators, to develop data governance protocol encompassing private sector, public sector, academia and societal data requirements.

2 Establishment of a national framework for AI talent development through all levels of education from Primary through to Higher and Further education.

Increased support for a range of interventions to prioritise targeted AI skills base and career progression, pathways to employment including reskilling for adult learners, lower level course provision, Apprenticeships and retraining options for employees.

Assessment, development and delivery of short-term interventions to reskill individuals whose careers have been adversely impacted by COVID-19.

Government should support the development and delivery of a citizen centric data literacy programme.

Need to establish a long term plan across key-skill stages from primary to third level education for IT and non-IT courses to ensure data literacy is embedded into curricula.

3 Develop a formal pathway for regional engagement and investments in NI from publicly funded AI assets (e.g. Turing Institute, ODI, Ada Lovelace, Hartree, Catapults).

All publicly funded AI assets should make certain NI representation within their governance, program bodies, panels and boards to ensure diversity of thought and regional engagement. National centres such as the Alan Turing Institute should, where they do not already exist support local AI initiatives.

UKRI should assess the application of publicly funded AI asset membership models to all regions of the UK and determine their suitability to supporting regional AI growth.

The ODI should partner with the NI AI ecosystem to research and develop data trust model for the purpose of AI innovation, public trust and governance models.

BEIS should engage with NI to assess and provide support for greater regional access to the wider Catapult network to stimulate cross sector and national AI research, commercialisation and innovation.

4 Map UK AI capability and opportunities for regions to support growth (e.g Citizen Engagement, Public Sector adoption, AI in Health, Cyber).

Development of an ethics centric environment for data enabled AI innovation.

Government should develop a public sector AI strategy to address education, awareness & understanding to accelerate the use of AI in the region

- could invest in a competition that would challenge AI experts to develop accessible AI demos and talks that could teach AI to kids/teachers/public

Develop a NI AI strategy aligned with UK AI strategy integrating public trust models such as Belfast Region City Deal Citizen data initiatives.

Ensure prioritisation of Health and Life science within a National AI Strategy:

- NI has the potential to contribute the UK’s leadership in Health AI
- NI should focus on the development of new AI-Native business in Health

5**National AI strategy should leverage NI AI initiatives including City Deals to lead or collaborate on AI Roadmap outcomes.**

Government should ensure that the National AI Strategy is aligned to “Levelling up” outcomes and “place” must be core to the performance indicators of all publicly funded AI assets.

NI has size and stable population that lends well to pilot Open Data / innovation / AI/ML projects in small scale before scaling up to UK / Global. Government should provide more support to programs like Open Data NI to promote and progress accessibility of public sector data sets at scale to enable innovation, engagement, deployment and skills development.

More must be done to engage society in the co creation of AI policy and data sharing for societal good. The proposed Digital Pillar program within the BRCD proposals are an enabler for achieving this.

6**Develop engagement mechanism to increase levels of diversity and underrepresented groups within AI research and Innovation**

Conduct an assessment of diversity and inclusion levels across AI research, development, ethics and deployment. Data generated should be used to develop policy and programs to address underrepresentation and include a diversity KPI for all publicly funded programs, institutions and assets.

UKRI should allocate an appropriate proportion of research and innovation to provide scholarships or funds for underrepresented groups within society, increase research diversity and ethical development practices.

All DfE studentship awards should be International - this would immediately improve EDI and applicant quality.

7**Align Government support through UKRI “levelling up” to scale and retain research excellence and translational capability into industry.**

Targeted support should be provided for the recruitment of more AI talent to NI Universities. A primary focus should be on core AI research and activity to address public sector challenges. This could be achieved through the establishment of a NI AI CDT via UKRI and research council support.

UKRI should increase investment in cutting edge research & encourage researcher/PhD entrepreneurial passion to start companies and assist in the transition of research to new products and services.

UKRI should develop place appropriate interventions to support the development of clusters of excellence. An accessible, tailored Strength in Places fund would support AI cluster development and regional impact.

NI has strengths in cybersecurity. With technology continually changing it is important to ensure that NI remains a leader in this field.

Contributing organisations



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