



# **NORTHERN IRELAND** AN AI FRONTIER REGION

**A MICROSOFT MANIFESTO**

# CONTENTS

<b>Executive Summary</b>	3
<b>Foreword</b>	6
<b>Introduction</b>	8
<b>Northern Ireland – At the Frontier of Innovation</b>	12
<b>Foundations for an AI Frontier Region</b>	13
<b>AI Benefits</b>	16
<b>Responsible AI</b>	18
<b>Northern Ireland – an AI Pioneer</b>	20
<b>AI Roadmap</b>	24
<b>Building an AI Frontier Region – Next Steps</b>	26
<b>Economic Growth</b>	29
<b>Conclusion</b>	31

## EXECUTIVE SUMMARY

---

**Proposition:** Northern Ireland can become an 'AI Frontier Region' by leading rapid, responsible *adoption* of AI, especially through public sector leadership. The Northern Ireland Civil Service (NICS) serves as a scalable testbed to improve services and productivity, while also supporting an indigenous supplier ecosystem through the 'test/learn/scale/sell' model.

### Why this matters now

- AI capability and adoption are advancing rapidly; the window for first mover advantage in reform and competitiveness is narrowing.
- Northern Ireland's emerging AI private sector has, with the right support, the opportunity to replicate the region's success as a global cybersecurity centre.
- Northern Ireland's public services face sustained fiscal pressure and rising demand. AI is a practical lever to modernise delivery, reduce administrative burden, and release frontline capacity, if deployed with clear ownership and consistent governance.

### Northern Ireland's AI Building Blocks are already in place

- **Triple helix collaboration:** strong government–academia–industry links that can coordinate delivery and reduce duplication.
- **NICS and wider public sector as an AI testbed:** breadth of functions, shared platforms, and manageable scale to pilot at pace and scale what works, helping pump-prime private sector activity.
- **Pragmatic platform position:** focus resources on adoption and deployment using existing cloud capacity.

## Priorities

1. **Executive ownership:** treat AI-enabled reform as a cross-cutting priority (not another IT programme) with clear sponsorship and accountability at Ministerial and Permanent Secretary level.
2. **Delivery centre of gravity:** strengthen/evolve the Office of AI and Digital (or equivalent) to coordinate delivery, set standards, and be the primary interface with industry and academia.
3. **Roadmap with measures:** publish and maintain a deliverable AI strategy/roadmap spanning public sector transformation and private sector adoption, with transparent, measurable outcomes.
4. **Data and infrastructure readiness:** commission a focused review to enable lawful, secure data sharing and prioritise the highest-value modernisation gaps for AI workloads.
5. **Skills and SME enablement:** scale AI literacy (from leaders to frontline employees) and create practical SME supports (workshops, mentoring, targeted funding), including procurement approaches that enable faster experimentation and SME participation.

## What will an 'AI Frontier Region' deliver?

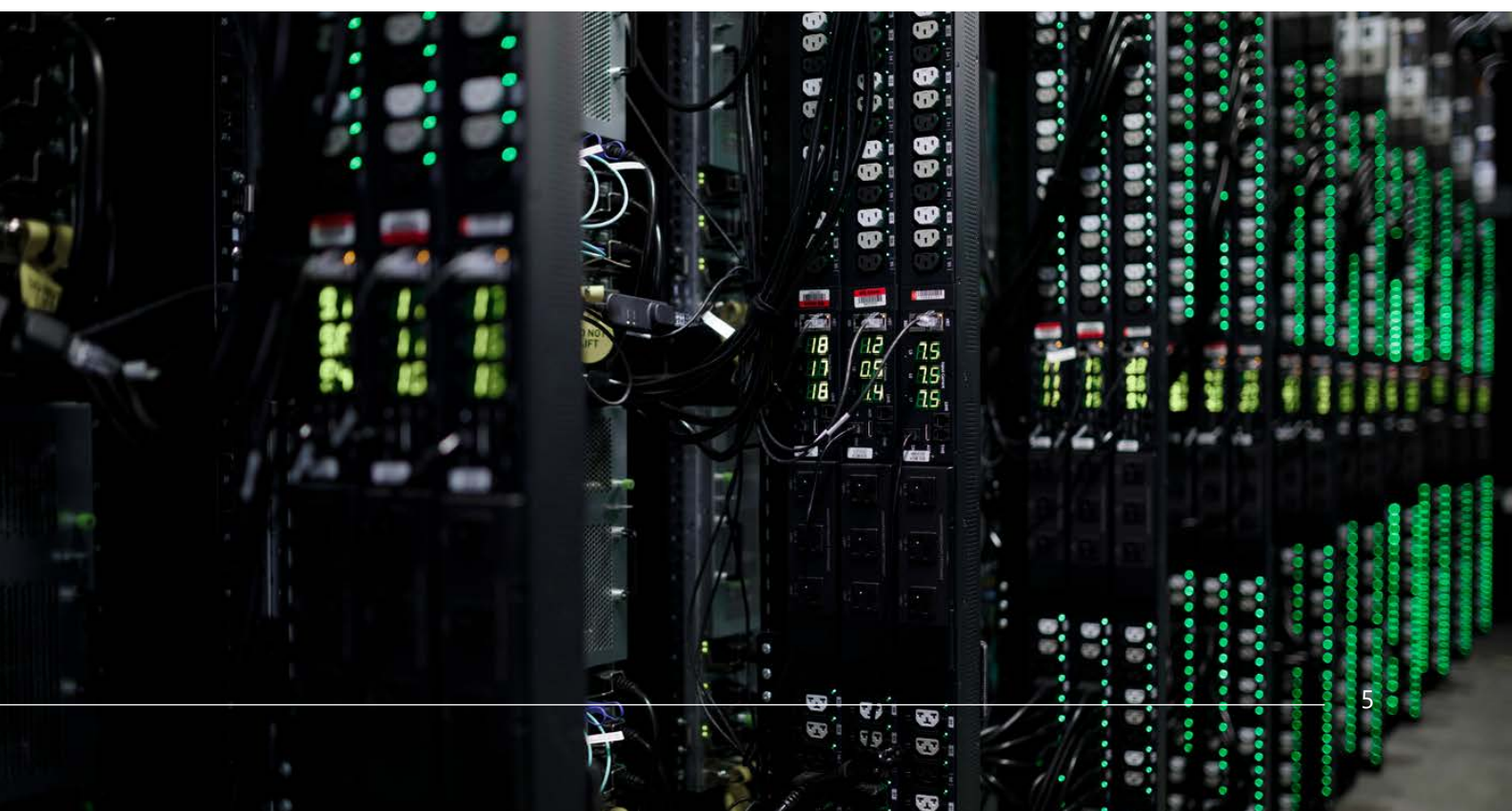
- **Better public services:** faster turnaround, improved consistency, and improved citizen experience in high-demand areas.
- **Productivity and capacity:** measurable time savings on routine work and improved decision support across the public and private sectors.
- **Economic spillovers:** improved competitiveness and a stronger indigenous AI supplier base developing 'Northern Ireland-proven' solutions with export potential.
- **Skills:** enhanced AI-related skills in the public and private sector providing the capacity to adapt with agility to emerging AI opportunities.
- **Responsible AI:** deployment that is safe, transparent and accountable, protecting privacy, managing bias, and maintaining human oversight to sustain public trust.

## Challenges

- **Fragmentation:** avoid siloed pilots by maintaining a single delivery centre of gravity, shared standards, and shared learning.
- **Public trust:** clear governance for privacy, security, transparency, and accountability, especially where AI influences decisions.
- **Skills:** time and resource constraints for organisations, particularly SMEs, which will inhibit AI adoption.

## Next steps – an ‘AI Manifesto’

- Confirm senior sponsorship and delivery ownership; agree three to five priority use cases/programmes with clear metrics (time saved, outcomes, cost avoidance) within the framework of a bespoke Northern Ireland AI Growth Zone.
- Strengthen the coordinating function (Office of AI and Digital or equivalent) with remit for standards, assurance, and ecosystem engagement.
- Review data handling/infrastructure and define minimum responsible AI controls for public sector deployments.
- Mobilise skills and SME support: AI literacy programmes for civil servants and an SME adoption package.



## FOREWORD

---

### **Catherine Doyle, General Manager, Microsoft Ireland**

Northern Ireland has faced moments before where global change demanded not invention from scratch, but the intelligent adoption, adaptation, and scaling of emerging technologies. In the nineteenth century, the region didn't invent wet spinning, yet it transformed it. By refining the process, integrating it into complete production systems, and industrialising it at scale, linen was turned from a fragile craft into a world leading industry. In doing so, it demonstrated a distinctive strength: the ability to translate technological potential into widespread economic and social value.

Artificial intelligence (AI) presents a similar inflection point. As with wet spinning, many of the foundational breakthroughs in AI originate elsewhere. The opportunity for Northern Ireland is not to compete head on in the creation of frontier models, but to lead in their adoption and diffusion — embedding AI into real world industries, services and institutions in ways that are practical, trusted, and productivity enhancing.

In this policy paper 'Northern Ireland - An AI Frontier Region' Microsoft sets out its 'manifesto' to help the region grasp the opportunities of the 'Fourth Industrial Revolution'. Northern Ireland has a legacy of industrial systems thinking, is experienced in integrating technology with skills development, and has the optimal scale, large enough to matter, small enough to coordinate, which provide the conditions for rapid experimentation and learning.

Just as linen mills combined spinning, weaving, finishing and logistics into integrated operations, AI today must be woven into supply chains, public services, manufacturing, creative industries, and small businesses.



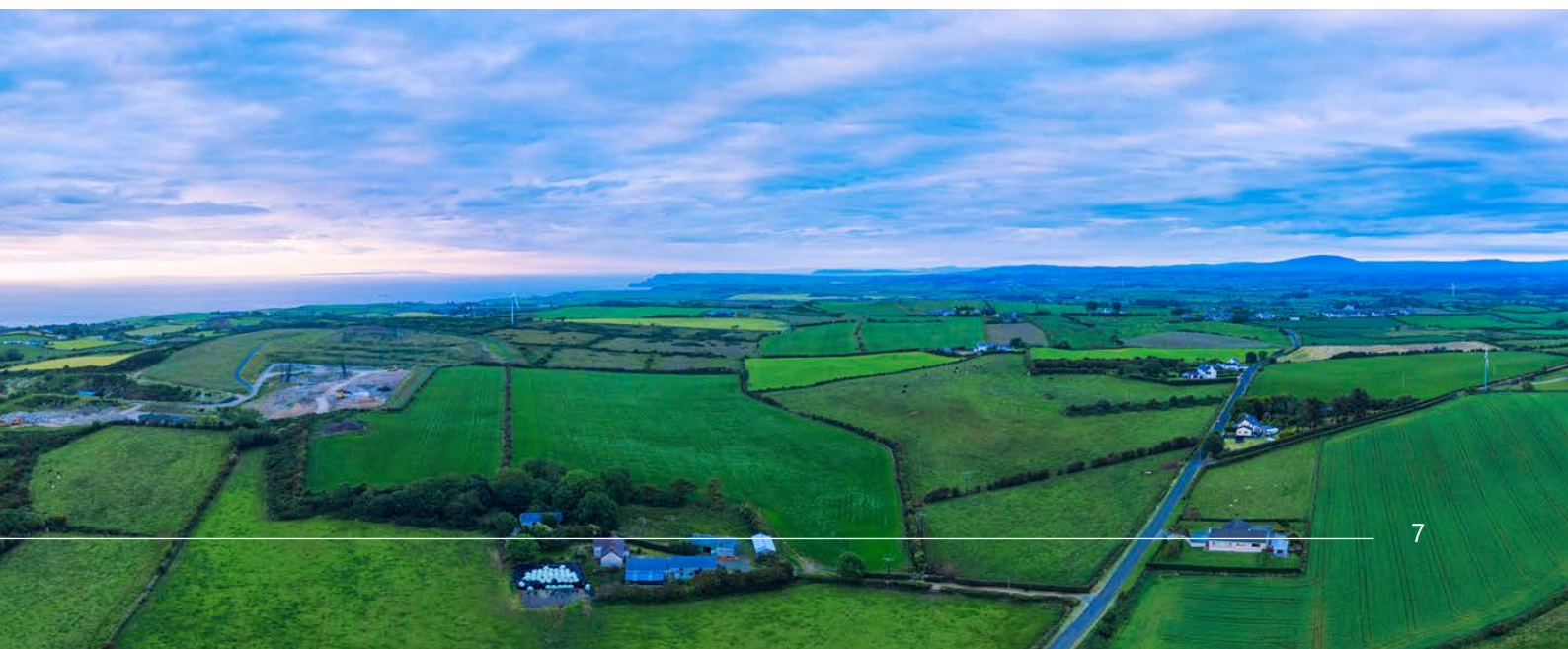
By focusing on refinement over novelty, application over abstraction, and diffusion over concentration, Northern Ireland can once again act as a bridge between technological possibility and everyday use. In business and in nature adaptation rather than size is often the basis of success.

Increased and coordinated adoption of AI can help to transform citizen experiences of public services, unlock new productivity gains across key sectors, and drive sustainable economic growth in the years ahead.

This paper makes the strategic case for accelerating the responsible adoption of AI across Northern Ireland.

Northern Ireland is already demonstrating healthy levels of AI private sector and academic activity, and the public sector is delivering pockets of excellence. Invaluable work has also been progressed by the AI Collaboration Centre (AICC) and Matrix.

On that basis, this 'manifesto' suggests what policy actions the Northern Ireland Executive (and the wider public sector from local government to arm's length bodies) can take now to promote further adoption in a way that builds trust, supports inclusion, and ensures that innovation delivers tangible benefits for society as a whole.



# INTRODUCTION

---

## **Northern Ireland – A Pioneer in Europe’s AI Frontier**

We are entering a new reality, one in which AI can reason and solve problems in remarkable ways. This ‘Intelligence On Tap’ will rewrite the rules of how public services are delivered and how business operates. It will transform knowledge work as we know it.

Unlike the Industrial Revolution, however, this transformation will not take decades to deliver its full promise. The AI revolution reflects the principles that shaped other seismic technological changes, but the pace of change and its effect are unprecedented. Those regions which succeed, therefore, are those which move with urgency and act accordingly.

The race to position regions at the fore of this revolution has already begun and the opportunity for Northern Ireland has been identified in a number of recent reports produced by Matrix and Ulster University among others.<sup>1</sup>

Northern Ireland has the building blocks already in place to become an AI Frontier Region, a European exemplar of what can be achieved.

It is only with urgency and priority today, however, that this opportunity for tomorrow will be realised.

## **AI – a 21st Century Opportunity**

Northern Ireland has a remarkable reputation for innovation and commercialising research. For a region of less than two million people it has consistently outperformed expectations.

From being a powerhouse of the Industrial Revolution to establishing a globally renowned reputation for Cyber Security, Northern Ireland has continually led, adopted and adapted to the frontiers of new technology.

This Microsoft manifesto lays out our vision of how Northern Ireland can replicate that success in AI this century.

---

1. Matrix: ‘AI & Future of Work in Northern Ireland’ (September 2025)/Ulster University Strategic Policy Unit: ‘AI for NI: A Strategic Overview for the adoption of Artificial Intelligence in NI’ (May 2025)

With over \$2 trillion due to be invested in AI global infrastructure and services in 2026 alone, the AI Revolution is only just beginning.<sup>2</sup>

Northern Ireland's opportunity lies not in manufacturing chips or building data centres, but from what comes next:

- developing and harnessing the power of AI with real world applications that transform citizen experiences of public services
- unlocking pathways for tangible productivity gains
- commercialising data
- economic growth
- leveraging public sector leadership as a catalyst to support an indigenous ecosystem of developers.

The exciting prospect for Northern Ireland is that we're ahead of our competitors in making this opportunity a reality.

The foundations are already in place, now we need the right policy framework to make it happen.

---

2. Gartner (January 2026)



## Playing to our Strengths

This policy paper is a manifesto to help make Northern Ireland an AI Frontier Region.

It is a plan focused on progressing activity in a few focused yet critical policy areas.

Our aim is to play to Northern Ireland's existing strengths, utilising the public sector's transformation journey, and turning it into a large-scale testbed to pump-prime private sector activity.

There is also a focus on building AI Skills throughout the economy and promoting a responsible approach to AI that ensures fairness.

The building blocks for success already exist:

- **Enterprise/Skills**

There are almost 200 firms (indigenous and global) actively engaged with AI in Northern Ireland with expectations that AI-related Gross Value Add (GVA) could double locally to £200m by 2028 with appropriate support.<sup>3</sup>

Currently, there is sufficient availability of AI-related skillsets and the architecture for further AI skills development (e.g., Northern Ireland Skills Council, AICC's AI Learning Lab, Microsoft's Dream Space™ etc.) already exists.

- **Northern Ireland Civil Service**

Its size, range of functions and shared data/technology platforms make Northern Ireland the ideal public sector testbed. Significant opportunities also exist in local government and the wider public sector.

- **Triple Helix Model**

Excellent existing relationships between government, academia, and industry.

- **Capacity**

Ample access to datacentre capacity and public cloud offerings.

---

3. Artificial Intelligence Capability Census: A Baseline Study of AI Adoption, Opportunity and Impact in Northern Ireland (2025)

## A Call to Action

The pace of AI's development is unprecedented. In health, for example, AI has quickly moved from expertise in diagnostics into symptom triage and treatment planning. The experience in other sectors is just as compelling.

Research suggests that the ability of AI systems to complete complex tasks is doubling approximately every 130 days.<sup>4</sup>

Adoption of Microsoft's Copilot has been faster than any other software suite in the company's history.

Despite the rapid speed of change, Northern Ireland can position itself as a leader and an AI Frontier Region. Success requires an agile response from the Northern Ireland Executive, building on and accelerating the work of its dedicated Office of AI and Digital (or equivalent).

While appropriate resourcing always helps, the most important driver of change is ambition, a culture that encourages innovation, and a regulatory framework that enables rather than inhibits.

This policy paper sets out Microsoft's view on how that ambition can be realised.

---

4. METR 'Time Horizon 1.1' January 2026



## NORTHERN IRELAND – AT THE FRONTIER OF INNOVATION

---

Northern Ireland has a proud track record as a disrupter and innovator which is well in excess of its size.

Belfast's wealth and growth in the late 1800s reflected its remarkable contribution to the Industrial Revolution.

As 'Linenopolis' the city was the capital of the world's linen industry.

Its shipyards earned it the nickname of 'Ship Builder to the World' and its heavy engineering firms were a byword for excellence.

Belfast's workshops produced the Titanic, Britannic, and Olympic, the space shuttles of the Edwardian era. They invented air conditioning, pneumatic tyres, and the modern tractor.

In more recent years Northern Ireland can lay claim to inventions such as the portable defibrillator, the ejector seat and the discovery of pulsars. We are to the fore of the electric vehicle revolution in public transport and have evolved into a centre for FinTech, Life and Health Sciences, Agri-Tech, and arguably the world's leading Cyber Security hub.

## FOUNDATIONS FOR AN AI FRONTIER REGION

---

- **Northern Ireland Civil Service – Public Sector Testbed**

Northern Ireland's devolved departments provide a microcosm of many government functions, including a mix of devolved activity and the delivery of UK-wide government services such as welfare. The range of functions managed by a relatively small bureaucracy makes the NICS an ideal candidate for a large-scale pilot study/testbed.

Work is already underway involving the Strategic Investment Board, the Department of Finance, the Department for the Economy, and The Executive Office to utilise this opportunity.

Such is the rapid pace of AI development, those regions which respond with agility will reap the most benefit. Agentic AI, which is more akin to a digital personal assistant rather than a smart search engine, offers the next wave of opportunity in the medium term.

Unlike other regions in these islands, NICS also benefits from shared technology and data platforms which can underpin AI adoption and adaptation. The benefits of this should not be underestimated, and could be harnessed within the framework of a bespoke Northern Ireland AI Growth Zone.

### **What could an NICS AI testbed deliver?**

At a time of constraint in public finances and pressure on public services, AI solutions offer the potential to deliver better and more cost-effective citizen experiences.

NICS could also help stimulate Northern Ireland's existing AI ecosystem through a Test/Learn/Scale/Sell approach:

- Test AI in NICS at scale
- Learn operational, procurement, governance lessons
- Scale with indigenous suppliers
- Sell "Northern Ireland-proven" solutions overseas

- **Triple Helix Model**

In the world of AI adoption and development, small can be beautiful. Given its size, the level of interconnection and collaboration among government, academia and industry is excellent. These relationships bring agility and support frameworks that are hard to replicate in larger markets.

With the right coordination and impetus, this is a meaningful competitive advantage for the region.

- **Skills**

Northern Ireland already benefits from a strong base of software engineering skills and related clusters including cyber security, AI, data analytics telecom, mobile and data networks, IT and cloud services, fintech, govtech, and sports tech.

**Key numbers**

- 198 firms active in Northern Ireland's AI ecosystem
- 1,340 direct employees<sup>5</sup>

This has attracted a mix of global tech leaders and supports an impressive indigenous tech sector. This foundation offers Northern Ireland a strong competitive advantage, but the rapid changes AI brings present a "skills agility challenge".<sup>6</sup>

Meeting this challenge will require a multi-layered approach offering flexible and responsive skills development tailored for the public and private sectors, dedicated initiatives to develop leadership capacity, and programmes to support societal upskilling.

- **Capacity**

Microsoft operates data centres across the UK in London, the South-East and Wales. There is also a significant Microsoft data centre presence in Ireland, including the "mega data centre" in Dublin.

5. Artificial Intelligence Collaboration Centre's Capability Census (2025)

6. 'AI and the Future of Work in Northern Ireland' Matrix (September 2025)

Northern Ireland-based entities can also access public cloud offerings from Amazon and Google, among others.

Given that Microsoft is not aware of any issues with customers regarding lack of access there is no pressing technical or sovereign imperative for Northern Ireland to have its own physical, hyperscale datacentre presence.

That may change over time but, particularly considering existing planning and infrastructure challenges within Northern Ireland, it suggests that to seize today's AI opportunity, resources would be better deployed towards adoption and deployment rather than physical bricks and mortar.



## AI BENEFITS

---

AI has the potential to create a more sustainable, productive and prosperous future by changing the way that both individuals and organisations work.

At a macro level AI will accelerate and scale innovation to drive economic growth and address societal challenges such as climate change and healthcare for an ageing population.

For individuals it is already improving personal productivity through a range of uses including the automation of repetitive tasks, better time management, and content creation. This helps free up time to focus on more creative, higher value tasks.

For organisations, AI is reducing waste, improving efficiency, enabling entirely new types of products and services, and speeding up the development of new science and technology. AI is already delivering faster and more accurate medical diagnosis, shortening timelines for new drug discovery, and streamlining manufacturing processes.

Over the past 13 years, the amount of computing power used to train AI models has increased by a factor of 350 million.<sup>7</sup> As we continue to scale up AI models, the potential opportunities and applications will also continue to grow.

---

7. GovAI 'Computing Power and the Governance of AI' (2024)



## Economic Impact

- AI-related revenue in Northern Ireland reached £188m in 2024<sup>8</sup>
- AI could contribute between £200m to £3.7bn incremental GVA in Northern Ireland by 2030<sup>9</sup>
- Boost UK GDP by 2.98% (£79.3bn) by 2035<sup>10</sup>
- Add €250bn to Ireland's economy by 2035<sup>11</sup>
- Increase EU economic output by €2.7 trillion by 2030<sup>12</sup>
- Automating routine administrative tasks in the UK's public sector could save over £12 billion by 2030<sup>13</sup>
- Up to 70% of new value in the global economy over the next decade based on productivity gains from digital technology adoption<sup>14</sup>
- For every \$1 a company invests in generative AI, the return on investment is \$3.70<sup>15</sup>

***"Artificial Intelligence (AI) has the potential to enhance economic productivity, promote regionally balanced good jobs, and facilitate decarbonisation efforts."***

Department for the Economy, AI Strategic Direction (2025)

8. GovAI Computing Power and the Governance of AI (2024)

9. Artificial Intelligence Collaboration Centre's Capability Census (2025)

10. 'AI and the Future of Work in Northern Ireland', Matrix (2025)

11. 'The wider economic impacts of emerging technologies in the UK', DSIT (2023)

12. 'AI Economy in Ireland 2025' Trinity College Dublin/Microsoft Ireland (2025)

13. 'Tackling Europe's gap in digital and AI' McKinsey (2019)

14. Microsoft Unlocking the UK's AI Potential

15. World Economic Forum (2023)

## RESPONSIBLE AI

---

Microsoft is committed to developing AI systems in a way that is transparent, reliable, and worthy of trust.

As AI reshapes how we work and live, it brings with it both transformative potential and complex challenges. Across the industry, there are concerns about bias, safety, and transparency.

Realising AI's benefits requires a shared commitment to responsibility—one Microsoft takes seriously. As a result, we aren't just creating AI solutions, we're taking the lead on infusing responsible AI principles into our technology and organisational practices.

As Northern Ireland increasingly adopts AI to help deliver public services and equips its citizens with AI skills, there is a role for the Northern Ireland Executive to educate the public about AI and advise how it proposes to deploy it responsibly.

Microsoft's AI principles provide a strong and workable framework to help inform the Executive's approach to its own ethical approach to AI.

*"As we look ahead, we must ask ourselves: Are we building machines to replace people, or to help people thrive? Are we trying to create AI that will outsmart humanity—or elevate it?"*

*"At Microsoft, we're putting a clear stake in the ground: we believe in advancing AI by putting people first"*

Brad Smith, Microsoft Vice Chair & President

### Microsoft's Responsible AI Principles

- **Fairness**

AI systems should treat all people equitably. They should allocate opportunities, resources, and information in ways that are fair to the humans who use them.

- **Reliability and Safety**

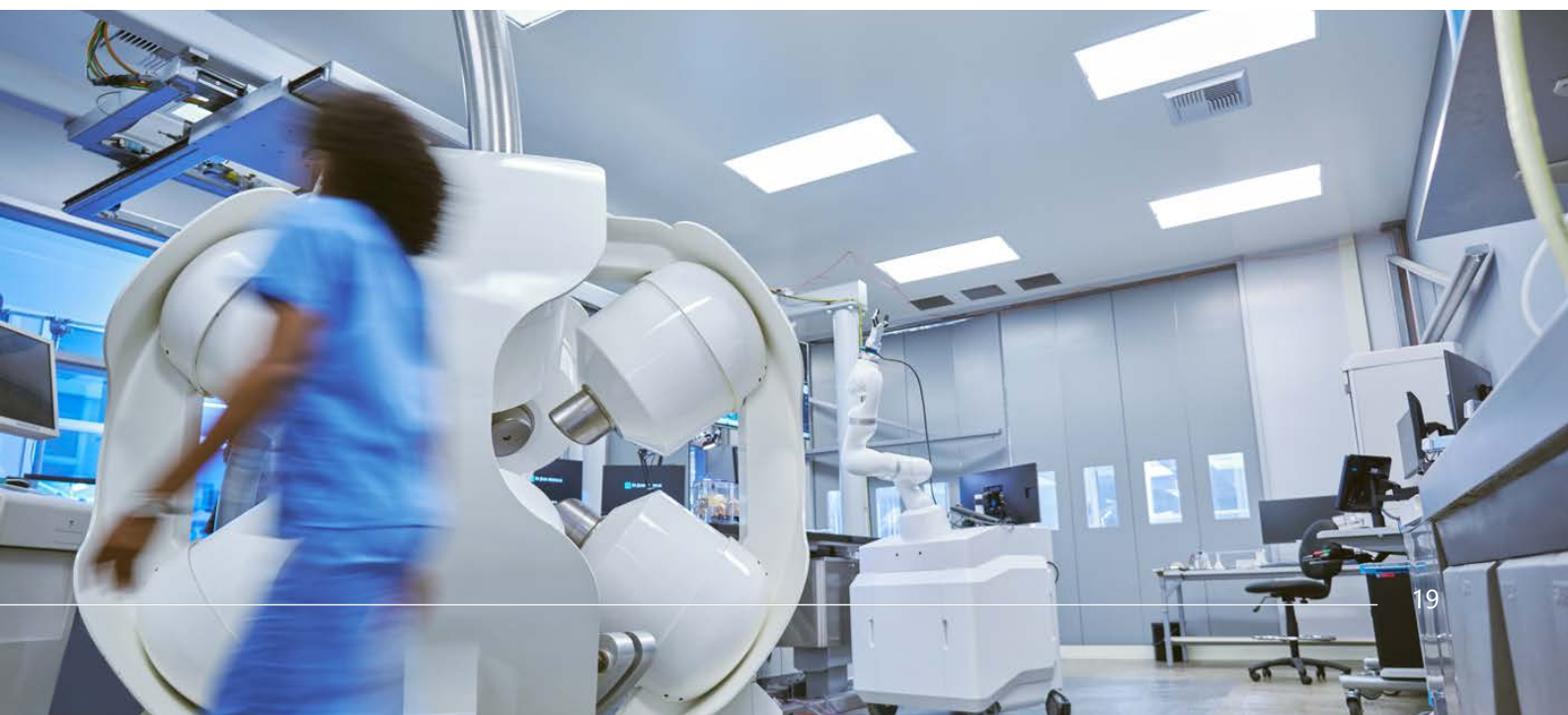
AI systems should perform reliably and safely, functioning well for people across different use conditions and contexts, including ones they weren't originally intended for.

- **Privacy and Security**  
AI systems should be secure and respect privacy.
- **Inclusiveness**  
AI systems should empower and engage everyone, regardless of their background, striving to be inclusive of people of all abilities.
- **Transparency**  
AI systems should ensure people correctly understand their capabilities.
- **Accountability**  
People should be accountable for AI systems with oversight in place so humans can maintain accountability and remain in control.

## Microsoft's European Digital Commitments

At a time of geopolitical volatility, Microsoft is committed to providing digital stability. In April 2025, Microsoft announced its European digital commitments. Through these commitments:

- We will help build a broad AI and cloud ecosystem across Europe
- We will uphold Europe's digital resilience even when there is geopolitical volatility
- We will continue to protect the privacy of European data
- We will always help protect and defend Europe's cyber security
- We will help strengthen Europe's economic competitiveness, including for open source.



## NORTHERN IRELAND – AN AI PIONEER

---

### Education Authority

As part of its move to adopt the latest in learning technology and further embrace AI, Northern Ireland's Education Authority began exploring integrating AI into Microsoft Teams to support educators with providing personalised and efficient feedback. The solution learns from educators' responses to suggest relevant comments in future assessments, reducing administrative workloads.

*"In terms of supporting curriculum development and the various interventions that can support children, we were looking for best-in-breed technology to help every child succeed in the classroom. What we saw in Copilot was the opportunity to reduce teacher workload and to prepare lessons in a much faster but more meaningful way. And for us, that's a real game changer."*

Damian Harvey, Interim Head of EA C2K (Classroom 2000)

*"The opportunity to personalize learning is huge. Now every child can utilize the resources they need to move them forward academically."*

Brenda Mullan, Vice Principal, Clifton School, Bangor, Northern Ireland

### Kainos

*"Kainos has built a technology unicorn from the heart of Belfast through strong partnerships with academia and government, and the people, skills and culture forged here are the fabric of our business."*

*"With Northern Ireland as our springboard, we've earned a long-held position as a UK leader in AI services to highly regulated industries."*

*"We're leading our own transformation too, striving towards being a Frontier Firm. Microsoft 365 Copilot is available across the business, with around 90% adoption, 20,000 AI-assisted hours every month, and over 1,000 Copilot agents built by our people to support how they work. Alongside that, over 800 of our engineers now code AI-first with GitHub Copilot.*

*"We're re-skilling local talent and embedding AI across our products and services, and seeing a clear shift from experimentation to practical, everyday use, where AI is starting to improve how work gets done in a real and measurable way."*

Ruth McGuinness, Head of Artificial Intelligence, Kainos Group plc.

## Northern Ireland Water

*"NI Water wished to utilise the potential of AI to meet its daily administrative and information-heavy tasks, while prioritising its requirement to operate within established security and governance controls.*

*"Microsoft Copilot has delivered both for NI Water; using the capabilities of Microsoft 365, we are now accelerating document creation, summarising meetings and communications, and providing rapid insights for decision makers. This enables staff to focus more of their time on value-adding work. This has improved collaboration, decision speed, and overall organisational efficiency."*

Peter Semple, Chief Information Officer, NI Water

## Almac

*“Almac’s AI journey has progressed from exploration to organisational embedding. We have laid the foundations for responsible scale: an AI Council provides cross-business governance, supported by Group-level policies covering acceptable use, generative AI and emerging EU AI Act obligations.*

*“Our AI deployment across the workforce has shifted AI from a specialist capability into an everyday tool, complemented by targeted adoption initiatives such as a curated prompt library.*

*“Strategically, we are moving beyond tool consumption toward AI as an embedded layer within our core platforms ensuring value is captured where work actually happens. Our focus is now on disciplined platform consolidation, evidenced ROI, and capability building, including Responsible AI leadership development. The next horizon is agentic AI: governed, secure, and aligned to the regulated environment in which Almac operates.”*

Andy Hillis, Vice President and Group Head of Information Services, Almac Group

## Northern Ireland Civil Service

Microsoft 365 Copilot continues to be adopted across NICS at pace. The Department for Agriculture, Environment and Rural Affairs (DAERA) was an early adopter, initially running an 11-week pilot in 2025.

Staff reported saving close to an hour each week on routine tasks, while major activities such as drafting business cases were shortened by several hours. Meeting notes, previously a time-consuming chore, were produced in minutes.

DAERA and other Departments have continued to roll out Microsoft 365 Copilot in recent months. The Executive Office, for example, is using Microsoft Copilot to support staff in enhancing personal productivity and streamlining administrative tasks, such as the preparation of routine briefing materials.

## Dream Space™

Positioning Northern Ireland as an AI Frontier Region will depend upon developing the region's digital skills. As part of its response, Microsoft has created Dream Space™, a STEM-based learning centre at W5.

Representing a £3m capital investment, with support from partners including the Odyssey Trust, Almac, and Belfast Harbour, Dream Space™ offers free skills-based learning and training programmes and outreach.

Our ambition is to reach 160,000 people over a five-year period, with a focus on underrepresented communities, hard-to-reach schools, and teachers.

Dream Space™ Programmes:

- Primary Field Trip (P6 and P7)
- Post-Primary Field Trip
- Ambassador Programme
- Teacher Training
- Shared Education Trips
- Youth Groups
- Virtual Workshops
- Dream Space™ TV

*"A huge thank you to Matty at Microsoft Dream Space for an amazing coding session today! Our Digital Leaders had a fantastic time developing team-building skills and learning to code within Minecraft"*

Holy Trinity PS, Belfast



## AI ROADMAP

---

As detailed, Northern Ireland has the foundations in place to establish itself as an AI Frontier Region.

The Northern Ireland Executive is harnessing that potential by the creation of an Office of AI and Digital and progress on developing Northern Ireland's first AI Strategy.

These are important first steps, but agility and drive are necessary to remain ahead of rapid technological change.

Based upon our experience in other jurisdictions, Microsoft recommends that policy makers prioritise and commit to an 'AI Roadmap' to drive activity in the public and private sectors.

Our ask is that this roadmap and related preparatory work are initiated by the current Northern Ireland Executive. This will provide the incoming Executive following the 2027 Northern Ireland Assembly elections with a tangible legacy and a headstart in developing its approach to AI.

Northern Ireland has a genuine opportunity to become an AI Frontier Region – but the key to success is political commitment to drive change.

### **Navigating AI Roadblocks**

The need for a roadmap implies that there may be 'roadblocks' on the way to Northern Ireland fulfilling its AI potential.

With rapidly evolving technology, regions which balance agility with responsibility to deploy and adapt at pace will reap the most reward. Anticipating and addressing these potential obstacles will be integral to any successful AI Roadmap.

### **Public Sector Inertia**

Deloitte's 'State of the State 2026' report, based on interviews with public sector leaders, was positive about AI's "potential to improve and transform public services", noted an appetite to scale successful use cases and stressed the importance of appointing a Chief Scientific and Technology Officer.<sup>16</sup>

---

16. 'Delivery that Matters, State of the State 2026' Deloitte (February 2026)

While the 2025 report acknowledged that leaders lacked bandwidth to deliver change, this year's report focussed on challenges including "skills gaps, poor base data, infrastructure limitations, and some internal scepticism".

The challenges of change are not unique to Northern Ireland and an assessment of AI in the Scottish public sector heard evidence of a "fragmented approach and risk averse culture" which "stifles innovation and prevents progress, leaving significant productivity gains unrealised".<sup>17</sup> It also highlighted the need to prioritise data infrastructure, scale successful pilot programmes, and provide sustained multi-year funding.

Similar conclusions have also been reached by the Northern Ireland Audit Office in reports examining the delivery of major IT projects, resourcing, and leadership.<sup>18</sup>

The reports suggest:

- Project timelines are too long
- Digital leadership is fragmented
- Too much focus on replacing legacy systems rather than delivering new capability
- Too few in-house subject matter experts.

As Ireland's AI strategy acknowledges, delivering AI ambitions "will require a whole-of-Government approach".<sup>19</sup> This can be challenging in Northern Ireland given that the structure and legal footing of Northern Ireland's departments encourages a silo-based approach.

This in turn helps fragment policy, data and leadership – slowing down delivery and inhibiting the adoption of good practice. This is the very antithesis of the agile call to action required to make Northern Ireland an AI Frontier Region.

Overcoming these problems doesn't mean that the IT and AI function must be centralised away from departments, but it does require a new approach which empowers the creation of shared platforms and architecture that facilitates shared identity, data, and standards.

---

17. 'AI & the Scottish Economy' Economy & Fair Work Committee, Scottish Parliament (January 2026)

18. Leading & Resourcing the NI Civil Service (Northern Ireland Audit Office, January 2026)/Major IT Projects in Northern Ireland (Northern Ireland Audit Office, July 2025)

19. Reference 'Digital Ireland, Connecting our People, Securing our Future', Department of the Taoiseach (2026)

## **BUILDING AN AI FRONTIER REGION – NEXT STEPS**

---

### **Public Sector**

#### **Political Prioritisation and Ownership**

With the creation of a Northern Ireland Office of AI and Digital and the appointment of the region's first Chief Scientific and Technology Adviser the foundations have been laid for a coordinated approach towards AI policy.

Microsoft welcomes the progress the Northern Ireland Executive is making on launching its first AI Strategy but notes that other jurisdictions, such as Ireland, have already updated existing strategies.

Strategies are critically important to provide a framework for efficient AI adoption. More importantly though is the need to drive strategies and cultural change (across society, NICS and the wider public sector/economy) through political prioritisation and ownership.

Utilising AI to help transform public services is not just another 'IT project' – it requires systemic change and a willingness to be agile.

Given that AI has applications for both individual and departmental productivity, as well as how public services are designed and delivered, AI adoption is clearly a cross-departmental challenge.

To ensure timely action and a consistent approach which facilitates learnings across NICS and departments, we recommend that The Executive Office (TEO) continues to lead on AI strategy and delivery, and that AI Adoption becomes a standalone TEO responsibility.

TEO should also commit to publishing a multi-year strategy, subject to regular review and refresh, to maintain momentum and relevance.

The incoming Executive following the 2027 elections should clearly articulate its AI ambitions and detail these with deliverable activity within its Programme for Government.

## **Execution and Monitoring**

To support TEO deliver its policy objectives and overcome barriers to adoption Northern Ireland needs a dedicated and suitably resourced body.

This could be achieved through the evolution of the existing Office of AI and Digital or AI Advisory Council, or the creation of another entity.

Creating a single driving force with clarity of purpose and a clear mandate within the machinery of Stormont would help overcome the widely acknowledged tendency within departments towards a silo approach. It will also help avoid fragmented efforts and ensure accountability.

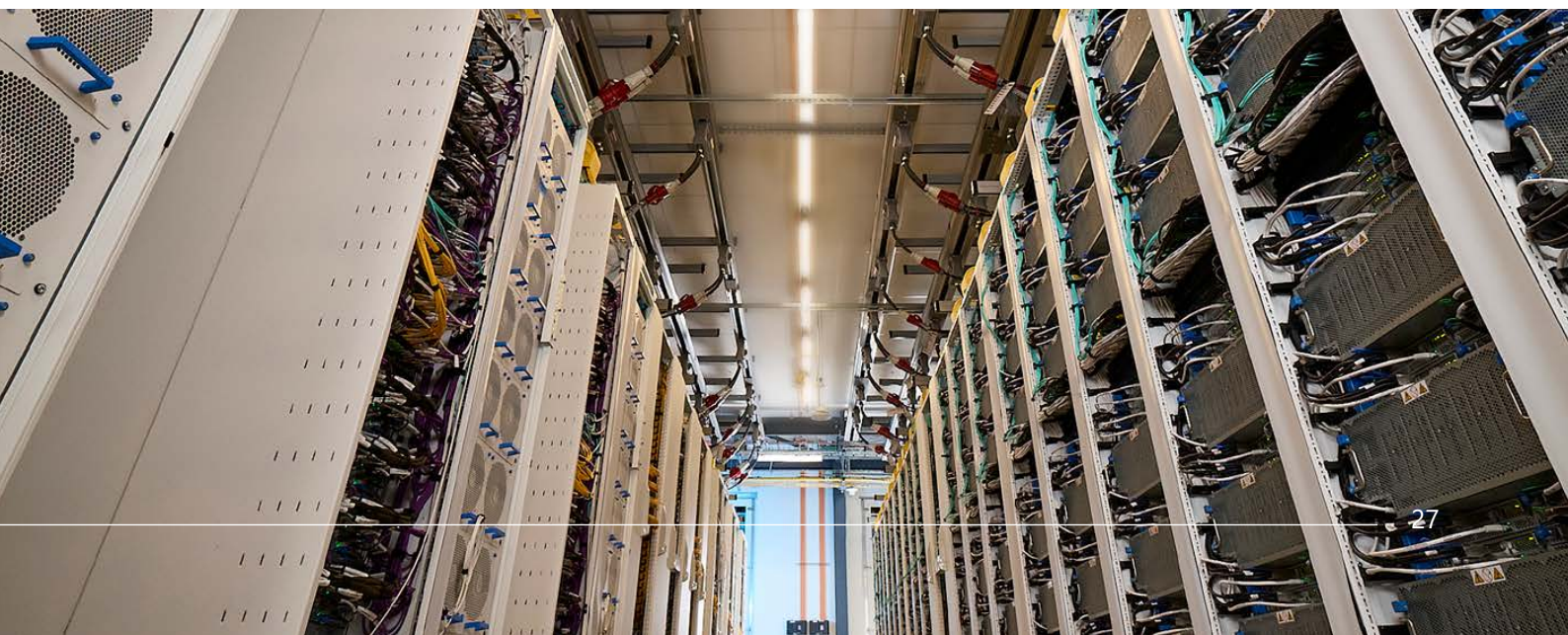
Given the rapid nature of AI development, an overly complicated delivery and decision-making structure will fail to respond in a timely manner to opportunities as they arise.

In addition to driving adoption within the public sector, this body should also have a remit to coordinate activity with industry and academia, and be their primary point of contact with government.

## **Comprehensive Northern Ireland AI Strategy**

Welcome progress is being made on Northern Ireland's first AI Strategy, focussing on six pillars of governance, infrastructure, data, skills, public sector transformation, and citizenship.

By necessity, this is primarily focussed on AI adoption within the public sector, but there is a need to rapidly build upon it with an overarching strategy that looks externally towards encouraging private sector adoption, how best to utilise the skills of industry and academia, and how to ensure that cross-departmental resources, arms-length bodies, local government, and policy are working in tandem with Northern Ireland's AI ecosystem.



## **Data and Infrastructure Modernisation**

AI is only as good as the data and infrastructure upon which it is based.

While NICS does benefit from shared organisational-wide platforms, there are issues around the ease and legality of sharing data. There is also a need to close the gap between departments' current legacy systems and the new data platforms required for AI workloads.

High quality data is also, as recognised in the Ireland's Public Service Data Strategy, a strategic asset. At present, however, there is too much disconnect in how data is managed and utilised across Northern Ireland's public sector.

The Northern Ireland Executive should commission an in-depth review of existing data handling policies and related infrastructure. This in turn should form the basis of a modernisation investment programme and the creation of a governance model that encourages data flow between public bodies whilst safeguarding the rights of citizens.

This would be further complemented by a clear Ethical AI policy framework to ensure that AI is deployed responsibly.

## **Public Sector Testbed**

In January 2025, the UK Government published its 'AI Opportunities Action Plan', which set out support for AI Growth Zones, with a primary focus on overcoming planning delays and improving power access for new data centres.

The plan also emphasised the need for the public sector to rapidly pilot and scale AI products and services, while encouraging wider private-sector adoption. In response to this opportunity, Microsoft proposes the development of a bespoke Northern Ireland AI Growth Zone, centred on three to five priority use cases within NICS. This would create a public-sector testbed capable of scaling successful approaches across wider UK Government.

## **Local Government**

The AI opportunity is equally applicable in local government, which often runs high-volume, citizen-facing services that can benefit quickly from well-governed automation and decision support.

Developing and implementing council-focused AI use cases could increase efficiency and productivity, and improve service delivery to citizens. Councils provide a suitable environment for

practical small pilots that have the potential to scale into successful initiatives, delivering wider economic impacts (for example, using AI to improve planning approval timescales).

Local government can also play a role in developing Northern Ireland's indigenous AI and SME ecosystem. Councils could encourage and de-risk AI-focused innovation by acting as a 'first customer', helping SMEs validate solutions in real-world environments, and providing access to data and domains not always available in the private sector alone.

Additionally, targeted programmes to build AI literacy across local government workforces would increase overall absorption capacity throughout Northern Ireland and support more consistent, responsible deployment.

## ECONOMIC GROWTH

AI adoption will drive much of the growth of the future. Productive and competitive economies that provide good quality jobs will increasingly be characterised by their ability to successfully harness AI's potential.

The pre-eminent determinant of how well economies maximise AI's impact will be skills and AI literacy.

Consequently, an AI Skills Strategy should be the primary external policy focus of a new and comprehensive Northern Ireland AI Strategy.

### **Skills Strategy**

Although the current supply of AI skills is sufficient for Northern Ireland's emerging AI ecosystem, policy makers need to anticipate an imminent shortage of digital and technical skills, particularly those related to AI, data science, machine learning, and software development.

Northern Ireland has a strong skills development infrastructure, but it needs to begin reorientating towards AI requirements. The aim, through an AI skilling initiative, should be to build AI literacy across society, in businesses, and in the civil service, from senior leadership through to frontline staff.

In this regard, Ireland has made strong progress and there may be scope for the Northern Ireland Skills Council to leverage cross-border opportunities. For instance, the Irish Government, Solas, and the Irish Skills Council have already launched 'AIReady.ie', which offers AI skills for free, with short, trusted courses related to everyday tasks. This could be replicated in Northern Ireland or delivered on an all-island basis.

Northern Ireland should also continue to utilise and learn from UK-wide initiatives.

### **SME Support**

For a regional economy with a greater preponderance of SMEs, AI offers significant opportunities to Northern Ireland firms to overcome restrictions associated with scale.

AI, for instance, can help automate repetitive tasks, improve customer engagement, and provide data-driven insights that are usually only available to large businesses.

This potential for a step-change in productivity and capacity can also support greater regional balance by offsetting disadvantages traditionally encountered by firms based in more peripheral locations.

There will be a requirement for the Department for the Economy and Invest Northern Ireland to develop, at pace, policies and support to help SMEs become AI-enabled. This will include targeted support programmes for SMEs, including practical workshops, mentorship, and funding schemes to facilitate AI adoption and address specific challenges faced by smaller firms.

### **Procurement**

Utilising NICS as an AI testbed can support the private sector through the Test/Learn/Scale/Sell process but NICS can also use its considerable purchasing power to encourage the provision of AI services from SME suppliers.

Remodelling the procurement process to be more flexible would enable suppliers to provide faster experimentation with AI and help build their expertise within a public sector setting.

## CONCLUSION

---

Northern Ireland's differentiator is not simply whether it can adopt AI, but whether it can do so *faster and more safely* than peers, earning public trust while delivering visible improvements in day-to-day services.

If the Executive and its successor after the 2027 Northern Ireland Assembly elections can show measurable progress within the next 12–18 months Northern Ireland can become a demonstrator region: proving responsible AI at public-service scale and creating a repeatable playbook that local firms can help deliver and take to market.

### Priority next steps

- **Confirm executive ownership and delivery model:** nominate a single accountable senior sponsor and empower a coordinating function (e.g., Office of AI and Digital) with a clear mandate across departments and public bodies.
- **Select three–five priority use cases, publish and maintain a roadmap, and define success measures:** choose services with high volume and measurable outcomes (time saved, turnaround times, quality, cost avoidance) and publish a delivery plan. This could be within the framework of a bespoke Northern Ireland AI Growth Zone.
- **Establish minimum Responsible AI controls:** adopt consistent assurance for privacy, security, transparency and human oversight, with clear guidance for procurement and operational deployment.
- **Accelerate data and platform readiness:** complete the proposed data-handling/infrastructure review and prioritise the specific modernisation gaps that block safe scaling (identity, access, interoperability, data quality).
- **Scale AI skills and change management:** implement tiered AI literacy for leaders, practitioners and frontline staff across NICS and local government, aligned to the priority use cases.
- **Enable SMEs through procurement and 'first customer' pathways:** simplify routes to pilot, create repeatable contracting patterns, and actively capture lessons to support the 'test/learn/scale/sell' model.

