

The State of AI in Northern Ireland Businesses: Adoption, Barriers and Strategic Impact

Insights into how AI is being adopted by Northern Ireland businesses, the barriers slowing progress and the impact it is already making.

Produced by **gcd.** in partnership with **ID**

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Forewords



Andrew Gough
Managing Director, GCD



Our findings reveal that Artificial Intelligence adoption in Northern Ireland remains in its infancy, with most businesses only beginning to explore its potential. At present, just 19% of companies are using AI, and of these, fewer than four in ten (39%) have implemented AI in a custom or strategic way. The remainder are primarily using general purpose tools such as ChatGPT, Copilot and Gemini. Across the full sample, businesses most often identified 'quick wins' as the perceived benefits of AI - pointing to workflow automation (35%), content generation (34%) and improved data quality (34%). While valuable, these applications only scratch the surface of what AI can deliver.

Early adopters that have taken a strategic approach report markedly greater benefits. Among this group, 86% cite measurable improvements in efficiency, 71% report enhanced customer experience and 58% have already seen revenue growth.

The difference is clear: AI delivers its biggest impact when it is aligned to core business objectives and treated as a driver of innovation, not merely as an efficiency tool.

Interestingly, a third of businesses in Northern Ireland say they do not expect to implement AI at all. As with the Internet and the smartphone, hesitation risks leaving businesses at a competitive disadvantage. Those who dismiss AI today may soon find themselves at a disadvantage compared with more agile competitors.

This makes it even more important to shift perspective. Instead of asking where AI can save

time, business leaders should examine what it enables that was previously impossible or prohibitively expensive. This perspective unlocks entirely new business models, breakthrough products and richer ways of serving customers.

Judgement, however, is essential. Almost half of businesses not using AI cite lack of knowledge or expertise (41% and 36% respectively) as barriers, and some remain sceptical about return on investment (13%). Applying AI indiscriminately risks wasted effort and shallow outcomes. The real gains come from using AI where it adds unique value, strengthens decision making and enables step change improvements.

Looking ahead, the rise of agentic AI promises even greater potential. These systems, capable of taking independent actions to achieve goals, could transform how organisations operate. Yet with this potential, comes responsibility. Governance maturity remains uneven, with only 20% of non-strategic users having policies to control unauthorised AI use. As agentic AI develops, ensuring it is safe, transparent and aligned with organisational objectives will be critical to delivering a net positive impact for customers, employees and society.

By investing in skills, strategy and governance today, businesses can move confidently from experimentation to transformation. Those who embrace AI as a core part of their business strategy will not just keep pace, but will set the pace for the next decade of growth.

AI is not a passing fad; used well, it holds the potential for creating lasting competitive advantage.



Kirsty McManus

*Director for Professional Development Services
& National Director at IoD Northern Ireland*



It is a great honour to introduce this study into how Northern Ireland businesses are approaching AI, undertaken by our team at the IoD NI, in partnership with GCD.

The findings provide valuable insight into how organisations here are approaching what has been described as the most transformative technological advancement of our time.

The research shows that businesses here not only understand the opportunities brought about by AI, but that almost one fifth of companies surveyed have already adopted some element of AI within their day-to-day operations.

At the IoD we too share the view that AI has the potential to reshape business models while improving productivity and opening new avenues for growth. This is an exciting time for businesses, and we are confident that local firms will seize these opportunities with the same spirit of innovation and adaptability we have seen business leaders here display time and time again.

As with all new technologies, there are of course some challenges surrounding AI, and while this research highlights the enthusiasm businesses here are experiencing, it also depicts some of the reservations others may be feeling as they navigate the full spectrum of possibilities AI presents.

The IoD is committed to helping our members engage with AI in a way that is above all responsible and ethical. But which also encourages them to be forward-looking and use AI to build on their strengths and compete more effectively on a global scale. There will need to be a great deal of work done in areas of governance, oversight and perhaps even a rethinking of the skills we need to see developed within a company's workforce, but our research shows businesses and directors here are prepared to ready themselves to meet these challenges.

This report provides a snapshot of where Northern Ireland businesses currently stand and the areas where greater focus and support are still required. I would encourage you to study it carefully and allow it spark a conversation about how we can embrace this technology in a way that best reflects our existing values and ambitions.

By working together and creating space for enhanced collaboration across industry, government, academia and professional bodies, we can ensure that businesses here grow at pace in line with technological changes and are supported to embrace the opportunities AI presents with confidence.



Background and Methodology

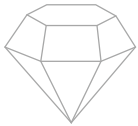
This research was conducted through telephone interviews with 200 businesses across Northern Ireland, each employing at least 20 people. A pilot of 20 interviews was completed in early May 2025, with the remaining 180 interviews conducted in June 2025.

The sample was broadly evenly split between organisations with 20–49 employees and those with 50 or more to ensure that each cohort had a sufficient base to permit comparisons. Post survey, weighting was then applied to the overall sample so that aggregated results reflected the representative distribution of organisation sizes in Northern Ireland, based on NISRA data on VAT and/or PAYE registered businesses operating in Northern Ireland in 2024. As a result of weighting and statistical rounding of figures, the sums on charts may not always total 100 per cent.

The following sectors were excluded from the survey: Education; Public Administration & Defence; Accommodation & Food Services; Motor Trades and Retail.

The telephone interviews were conducted by Cognisense, a market research company, on behalf of GCD and the Institute of Directors (IoD) Northern Ireland.





Key Findings

1. AI ADOPTION STATUS AND PERCEIVED BENEFITS

AI adoption in Northern Ireland is still in the early stages, but is poised for growth.

Just 19% of businesses currently use AI, but nearly half (48%) are planning to adopt or are open to AI adoption in the near future.

Strategic use remains limited, but there is confidence in AI's future role

Only 39% of the businesses using AI are using it strategically, however 72% of non-strategic adopters expect AI to become a core part of their business strategy.

Productivity and Growth Drive AI Adoption

Northern Ireland businesses see AI primarily as a driver of efficiency, creative productivity and better data use, with cybersecurity (16%) emerging as the leading technical application.

Only 39% of the businesses using AI are using it strategically.

2. STRATEGIC USE AND IMPACT

Strategic use of AI is dominated by automation, improving customer experience and innovation

The most common strategic applications of AI are to automate processes (64%), improve customer experiences (59%) and drive product innovation (47%).

Strategic AI adopters see clear ROI

Among strategic adopters, 86% report efficiency gains, 71% better customer experience and 58% revenue growth.

AI has reached the strategic agenda

71% of strategic adopters have placed AI at the heart of their business strategy.

Governance is being prioritised, but a significant minority without policies

69% of strategic adopters have policies for responsible AI use, but one third still operate without formal governance.

Most strategic users plan to expand their use of AI in the next 12 months

67% of strategic adopters plan to expand AI use in their business in the next 12 months, mainly to drive innovation (32%), cut costs (25%) and improve employee experience (23%).

Budgeting for AI implementation is limited and adhoc

Only 38% of strategic adopters have dedicated AI budgets.

3. CHALLENGES AND SKILLS GAP

Skills and culture hurdles block strategic AI

Lack of in-house skills (61%) and resistance to change (44%) are the most common challenges to strategic AI implementation.

4. BARRIERS TO ADOPTION

Lack of knowledge & skills are the biggest barriers to adopting AI

Those businesses not using AI strategically, or at all, cite lack of knowledge (41%) and expertise (36%) as the main reasons they have not implemented or adopted the technology.

Without governance, shadow AI is a significant risk to businesses

Just 20% of non adopters have implemented controls around AI use.

78% expect AI to improve efficiency and 69% see it unlocking innovation, while relatively few view it as a tool for job cuts.

5. PREPARATIONS AND FUTURE OUTLOOK

Financial preparation is the leading step

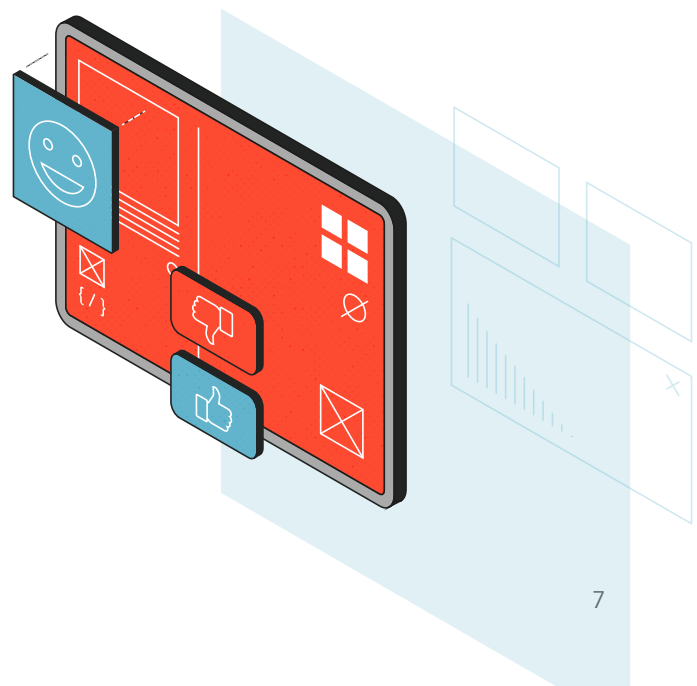
More than half of non-strategic AI users are already setting aside funds for future AI investment.

Competitive awareness is strong

53% of businesses track competitors' AI activity, recognising it as a source of competitive advantage.

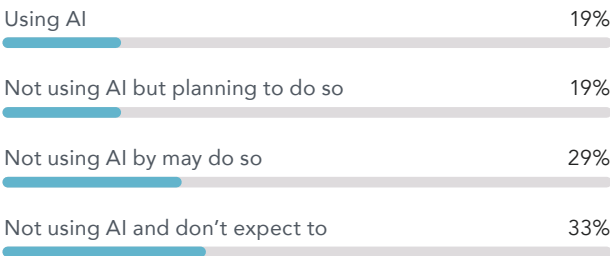
AI is seen as a driver of efficiency and innovation, not for job cuts

78% expect AI to improve efficiency and 69% see it unlocking innovation, while relatively few view it as a tool for job cuts.



AI Adoption Status & Perceived Benefits

CURRENT AI ADOPTION RATES BY NORTHERN IRELAND BUSINESSES



INSIGHTS AND COMMENTARY

Adoption is still in the early stages

With fewer than one in five businesses (19%) currently using AI, usage in Northern Ireland is at the early adopter stage, with most organisations likely still in an exploratory or wait and see mode.

Growth potential is strong

19% of businesses plan to adopt AI, which would double current usage if implemented soon. A further 29% are open to adoption at a later stage, bringing the proportion of businesses actively planning or open to future AI use to 48%.

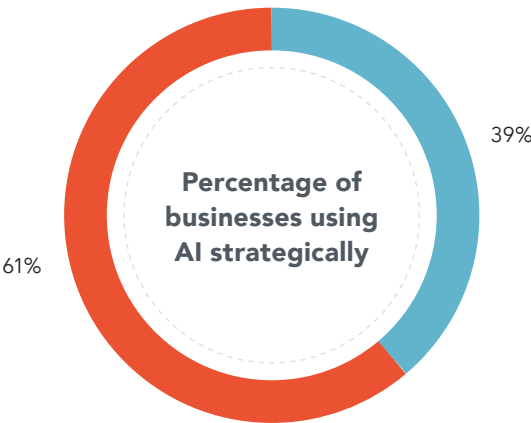
A third remain resistant

Currently a large proportion of businesses (33% of respondents) do not expect to adopt AI at all.

STRATEGIC USE OF AI

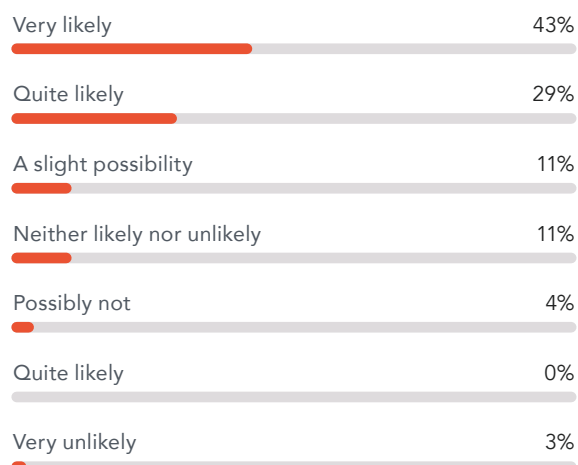
Among the 19% of businesses in Northern Ireland currently using AI, only 39% report using AI strategically, meaning it is integrated into their wider business goals and decision making.

The remaining 61% use AI at a tooling level only, employing off the shelf tools like ChatGPT etc.



Whilst strategic use may be low, it is interesting to note that 72% of the non-strategic adopters expect AI to become a core part of their business strategy (very likely or quite likely).

Likelihood that AI will become a strategic priority



INSIGHTS AND COMMENTARY

Strategic integration remains limited

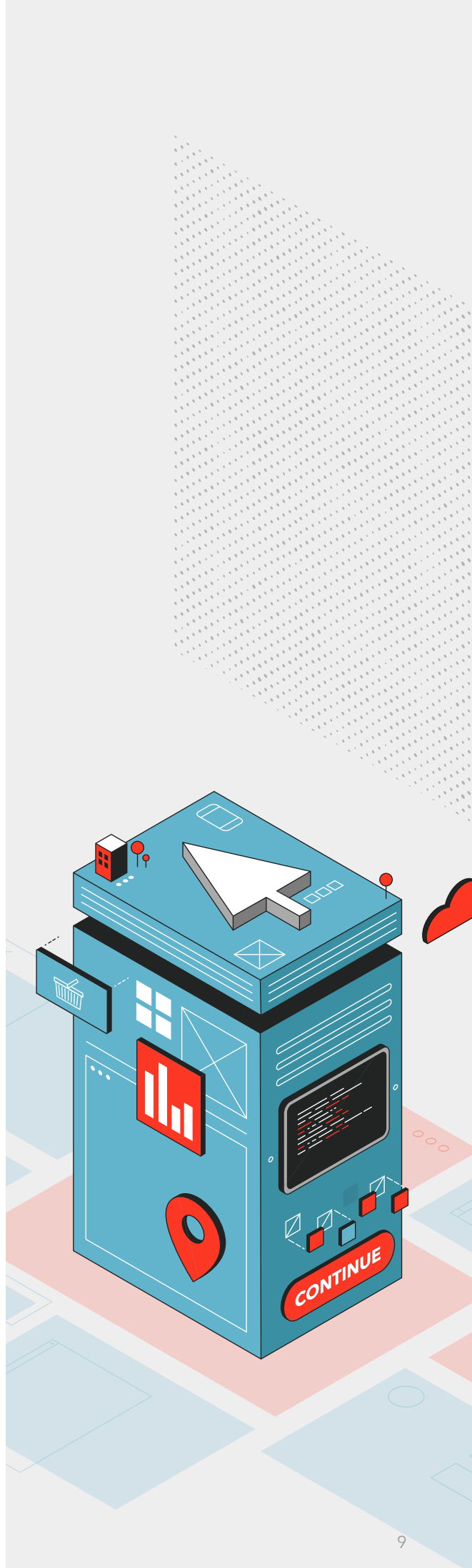
While a growing number of businesses are adopting AI, fewer than 4 in 10 current users have embedded it strategically, suggesting many are still in early stages of adoption and may need further time, resources or confidence before committing to deeper integration.

Overwhelming confidence in AI's future role

A combined 72% (very or quite likely) of those companies, who use AI, but not strategically, do expect AI to become a core part of business strategy, underscoring the strong momentum toward deeper integration.

Minimal outright resistance

Only 7% of current AI users (who do not yet use it strategically) expressed doubt (possibly not or very unlikely) that AI will become a core part of their business strategy. This suggests that while their current use may be tactical or experimental, outright rejection of AI's future strategic importance is rare.



PERCEIVED BENEFITS OF AI

Northern Ireland businesses see AI primarily as a driver of efficiency, creative productivity and better data use, with cybersecurity (16%) emerging as the leading technical application.



INSIGHTS AND COMMENTARY

Efficiency is the dominant AI driver

With just over one in three businesses citing workflow automation as a benefit, it's clear that companies in Northern Ireland view AI primarily as a productivity enabler. From finance to scheduling, there's a strong appetite for tools and solutions that reduce repetitive work and free up employee capacity.

Creative productivity is a close second

Marketing content generation (34%) ranks almost as high as automation. Businesses are looking to AI for assistance with the production of high quality content - whether that is for customer communications, brand collateral or idea generation.

Data quality and insights are a significant secondary driver

The third most common theme is improving data quality (34%) and making better use of information. The results suggest that businesses recognise the competitive advantage of having accurate and quality data.

Cost savings and technical applications remain niche, but security is emerging

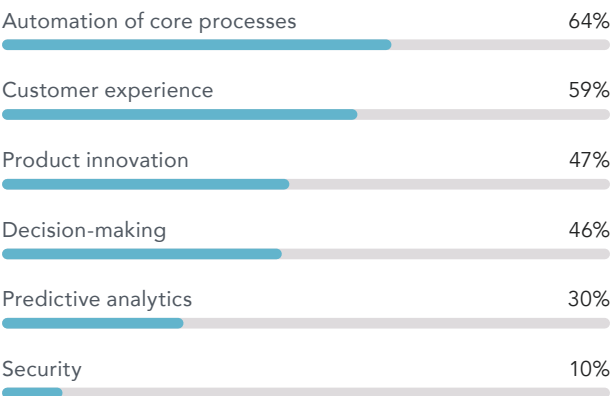
Technical AI applications are less common than operational and marketing uses, with one clear exception - cybersecurity. 16% see improving security networks / debug systems as a benefit, making it the leading technical use case, well ahead of others like writing code (8%).

Strategic Use & Impact

STRATEGIC USE CASES AMONGST ADOPTERS

Among the 39% of businesses in Northern Ireland that have adopted the technology strategically, usage spans a variety of business critical areas:

Areas of strategic implementation



INSIGHTS AND COMMENTARY

Automation leads strategic AI adoption

The most common strategic use is automating core processes (64%), reflecting AI's role in driving efficiency and freeing up resources for higher value work.

Strong focus on customer experience and innovation

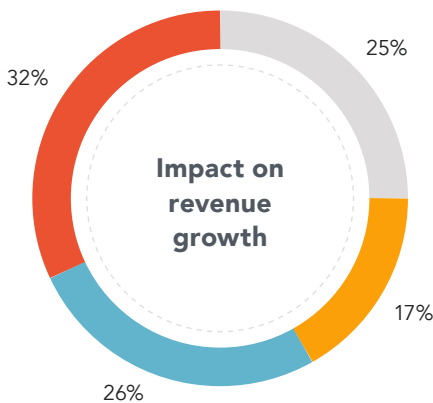
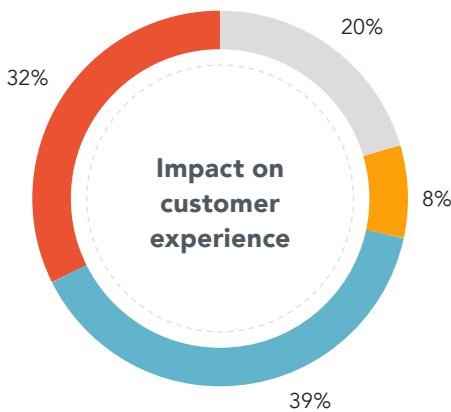
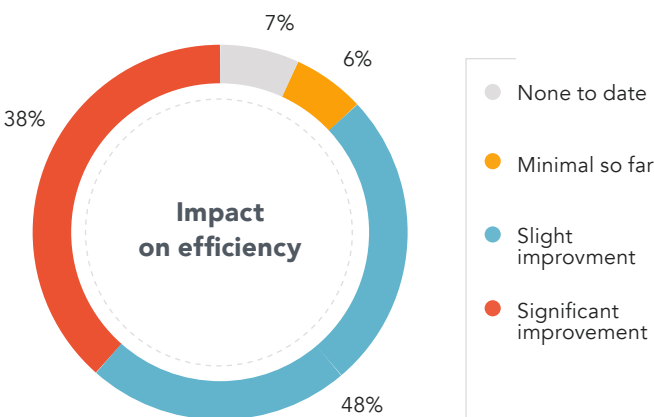
59% of strategic users apply AI to improve the customer experience, while close to half (47%) use it for product innovation, showing that AI is being deployed both to optimise operations and to enhance market offerings.

Security remains a smaller strategic priority

Only 10% of strategic AI users cite security as a current focus, despite wider interest in AI for cybersecurity across the full sample. This may reflect a tendency to prioritise growth and efficiency projects over risk management or the fact that security is often managed separately from broader AI strategies.

IMPACT OF STRATEGIC USE OF AI

Among businesses in Northern Ireland that use AI strategically, respondents reported improvements (slight or significant) across all areas of business, with 86% seeing it positively impact efficiency, 71% impact on their customer experience and 58% on revenue growth.



INSIGHTS AND COMMENTARY

Efficiency leads impact

Among strategic AI users, 86% report measurable improvements in efficiency, making it the most consistent area of impact. This likely reflects the ease of applying AI to automate repetitive tasks, deliver quick time savings and generate clear, trackable returns across all sectors.

CX shows strong upside

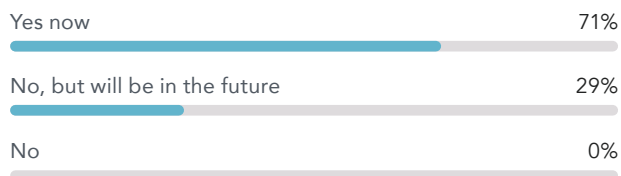
A clear majority report better customer experience, underscoring the value of AI enabled personalisation and responsiveness.

Revenue benefits already evident

A majority (58%) of strategic adopters are seeing measurable improvements in revenue. This indicates that AI is not only being used effectively but is already influencing bottom line growth, even at a relatively early stage of adoption.

AI AS PART OF BUSINESS STRATEGY

A clear majority (71%) of strategic AI users view AI as a core part of their business strategy.



INSIGHTS AND COMMENTARY

AI has reached the strategic agenda

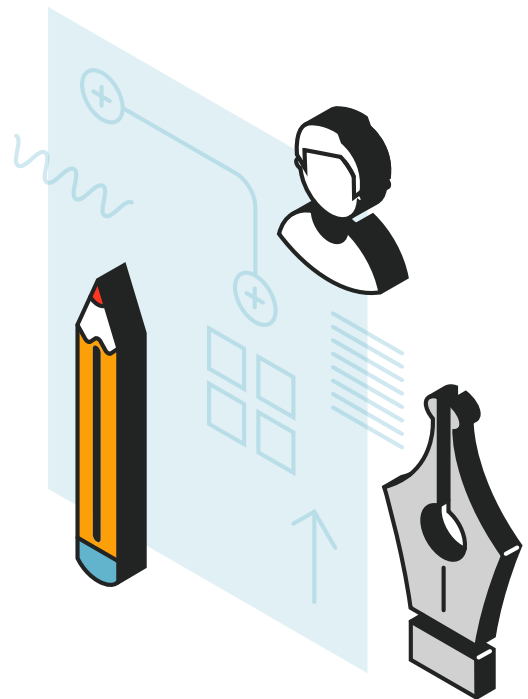
AI is being treated as a strategic priority rather than a peripheral tool by 71% of strategic AI users.

Future focused momentum

The remaining 29% expect AI to become a core element in future plans, highlighting forward looking intent, even among those earlier in their journey.

No rejection of AI's strategic role

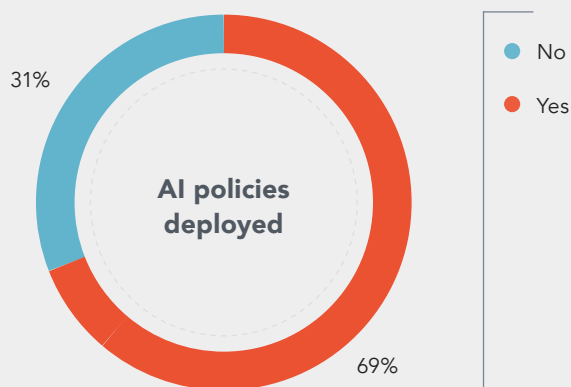
The absence of any respondents saying "No" underlines that all strategic users view AI as strategically relevant, marking a shift from experimentation to mainstream acceptance among adopters.



AI is being treated as a strategic priority rather than a peripheral tool by 71% of strategic users

AI POLICIES & PROCEDURES

69% of strategic adopters have policies for responsible AI use, but one third still operate without formal governance.



INSIGHTS AND COMMENTARY

Governance is being prioritised

The majority of strategic AI users (69%) have already introduced policies and procedures to guide responsible use. This reflects an awareness that AI adoption requires structure and oversight, not just experimentation.

A significant minority without policies

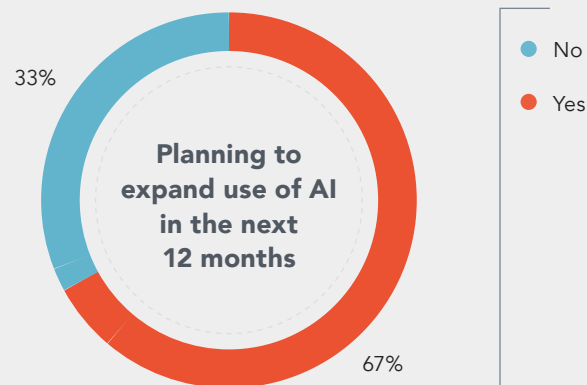
Almost a third (31%) of strategic adopters lack formal governance. This highlights an important gap that could expose organisations to risks around compliance, ethics and consistency of use.

Policy development is a marker of maturity

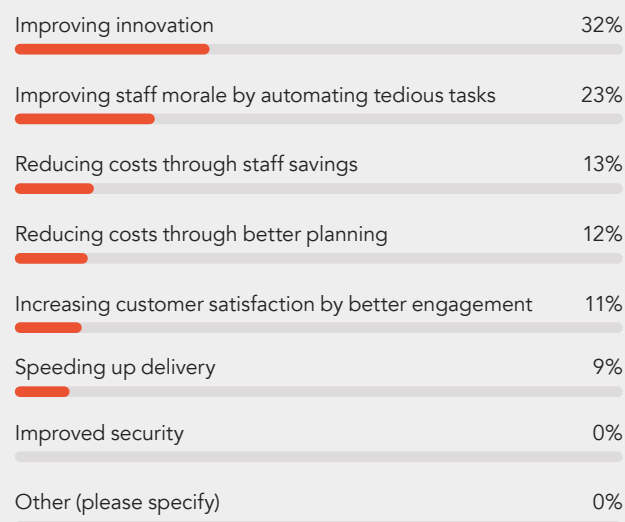
The data suggests that businesses treating AI as a core part of their strategy are also beginning to formalise how it is managed. Establishing governance frameworks will likely become an increasing expectation as adoption deepens.

PLANS TO EXPAND USE IN 12 MONTHS

67% of strategic adopters plan to expand AI use in their business in the next 12 months, with the aim to drive innovation (32%), cut costs (25%) and improve employee experience (23%).



Business objectives driving plans to expand AI use



INSIGHTS AND COMMENTARY

Growth trajectory is strong

Over two thirds of strategic adopters intend to broaden their use of AI in the year ahead, showing clear momentum and ambition to deepen adoption.

A minority remain steady

One third are not planning further expansion in the short term, which may reflect satisfaction with current use, resource constraints or a focus on consolidating existing deployments.

Innovation leads adoption

A third of strategic AI users, who plan to expand their use of AI within the next 12 months, see innovation as the top business objective, underlining AI's role in creating new products, services and approaches.

Cost is a major driver

25% see cost reduction, through efficiencies or better planning, as a key reason for further adoption. This shows that efficiency and financial sustainability remain core to strategic adoption.

Employee experience is also a focus

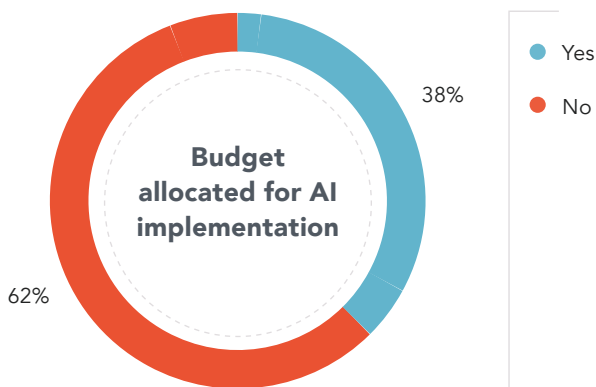
Nearly a quarter highlight improving staff morale by automating repetitive work, showing how AI is being positioned to free employees for more valuable tasks.

Security is not yet a strategic objective

No respondents cited security, reinforcing the view that AI in cybersecurity is seen as a technical application rather than a board level driver at this stage.

BUDGET ALLOCATION

62% of strategic adopters have no dedicated funds for AI implementation.



INSIGHTS AND COMMENTARY

Formal budgeting is limited and adhoc

Only 38% of strategic adopters have dedicated funds for AI, suggesting that many implementations are still being resourced ad hoc rather than through structured investment.

Potential barrier to scaling

Without clear budget lines, businesses may struggle to scale AI projects beyond pilots or isolated use cases, limiting long term impact.

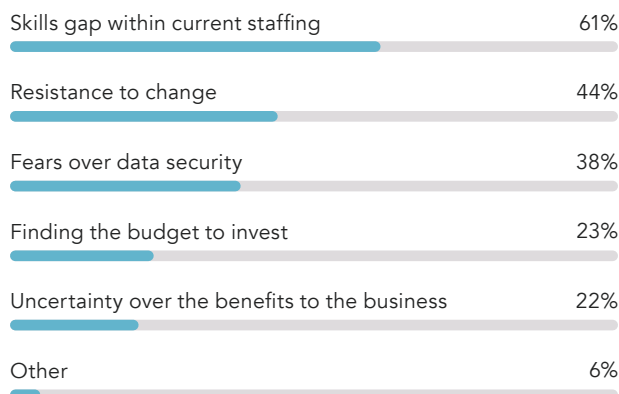
Signs of early-stage maturity

The lack of widespread budgeting reflects AI's position as an emerging investment area, where companies may still be testing impact before committing ongoing resources.

Challenges & Skills Gap

CHALLENGES EXPERIENCED WHEN ADOPTING AI

Lack of inhouse skills (61%) and resistance to change (44%) are the most common challenges experienced when strategically implementing or adopting AI.



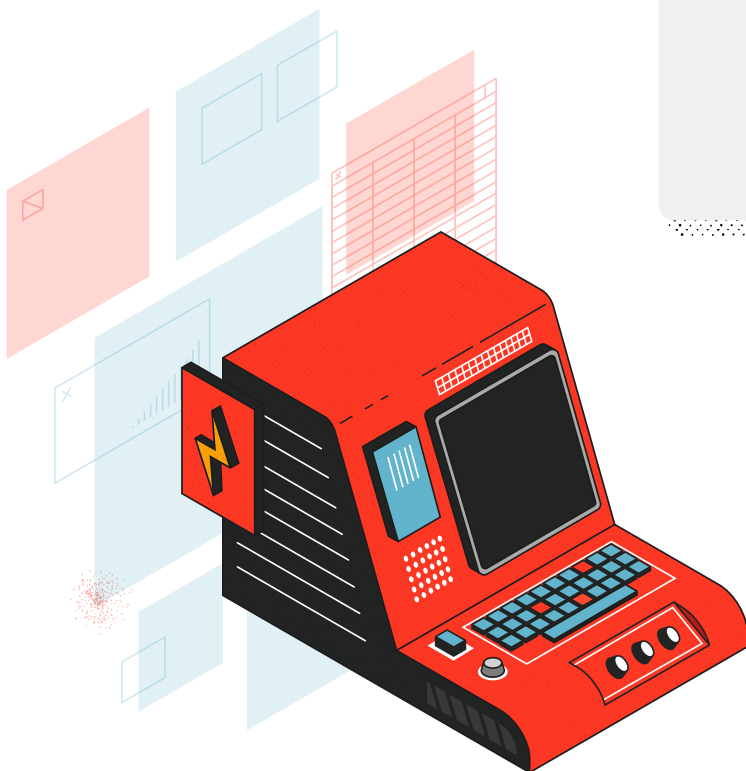
INSIGHTS AND COMMENTARY

Skills shortages and culture hurdles block strategic AI

The most common challenge experienced when strategically adopting AI was lack of inhouse skills (61%), followed by resistance to change (44%). This shows that success depends not only on technology investment but also on developing skills, managing change and securing leadership buy-in across the organisation.

Security concerns persist

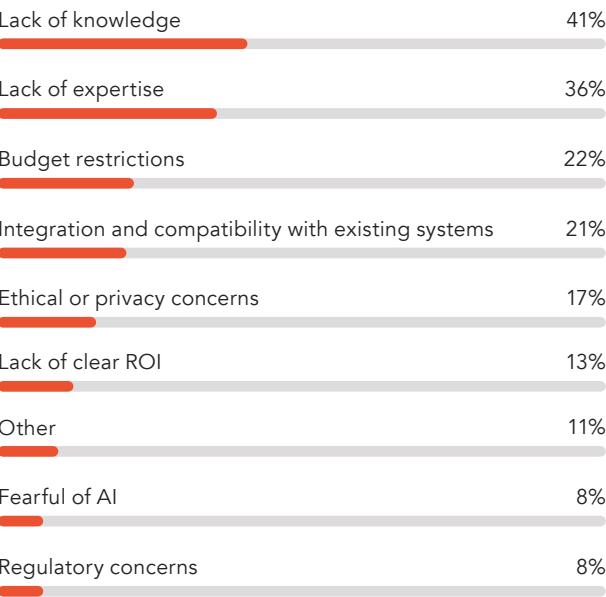
More than a third (38%) remain cautious about data security, showing that trust and governance are ongoing hurdles to broader adoption.



Barriers to Adoption

BARRIERS PREVENTING AI ADOPTION

Those businesses not using AI strategically, or at all, cite lack of knowledge (41%) and expertise (36%) as the main reasons they have not implemented or adopted the technology.



INSIGHTS AND COMMENTARY

Knowledge and skills are the biggest barriers

The top two obstacles are lack of knowledge (41%) and lack of expertise (36%), highlighting a significant capability gap that is slowing adoption. It suggests that many organisations simply don't feel equipped to understand, evaluate or implement AI effectively.

Cost and integration challenges also weigh heavily

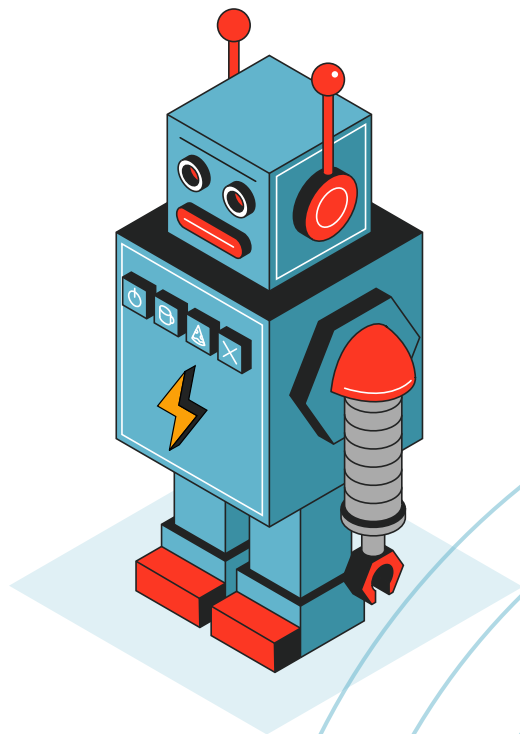
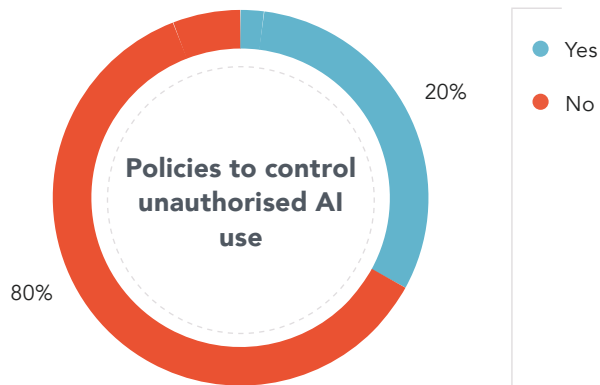
Budget restrictions (22%) and integration with existing systems (21%) show that financial and technical constraints remain practical hurdles.

Trust and governance concerns are notable, though smaller

Ethical/privacy issues (17%), regulatory concerns (8%) and fear of AI (8%) underline that confidence and trust are still issues for some companies, though less widely cited than capability or cost.

POLICIES TO CONTROL UNAUTHORISED AI USE

Among companies not using AI, or using it only tactically, just 20% have policies in place to manage employee use.



INSIGHTS AND COMMENTARY

Most organisations lack governance safeguards

Only one in five businesses, outside of strategic adoption, have implemented controls around AI use. This means the majority could be exposed to unmonitored or informal use of AI tools by employees.

Shadow AI is a risk

With no oversight, employees may already be experimenting with AI in ways that raise issues around data security, compliance or quality control. This highlights a governance gap between strategic adopters and the wider business base.

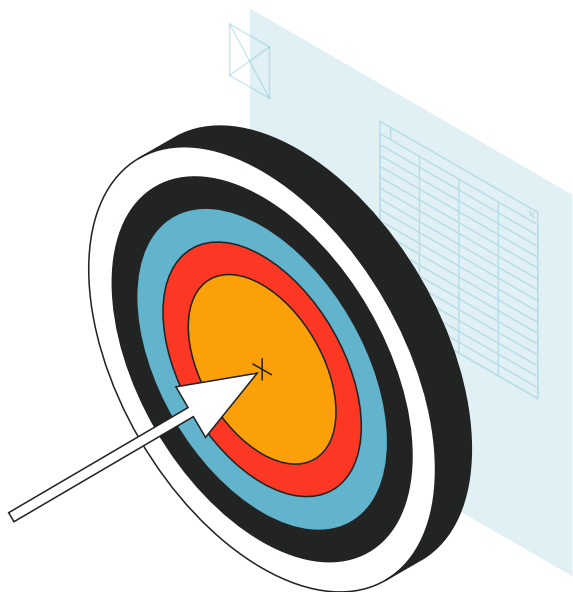
Policy maturity mirrors adoption maturity

The findings suggest that companies not yet adopting AI strategically are also less likely to invest in governance frameworks. This underlines how policy development often lags adoption until AI is seen as a core business tool.

Preparations & Future Outlook

ACTIONS TO PREPARE FOR STRATEGIC ADOPTION OF AI

The leading preparatory actions for strategic AI adoption are setting aside budget for future investment (56%), monitoring competitors (53%) and researching options (46%).



INSIGHTS AND COMMENTARY

Financial preparation is the leading step

More than half (56%) of the companies who use AI, but not strategically, are already setting aside budget for future AI investment, signalling clear intent to expand and scale adoption.

Competitive awareness is strong

53% are tracking what competitors are doing, showing that AI is increasingly viewed as a strategic differentiator, where lagging behind peers is a concern.

Learning and exploration are common

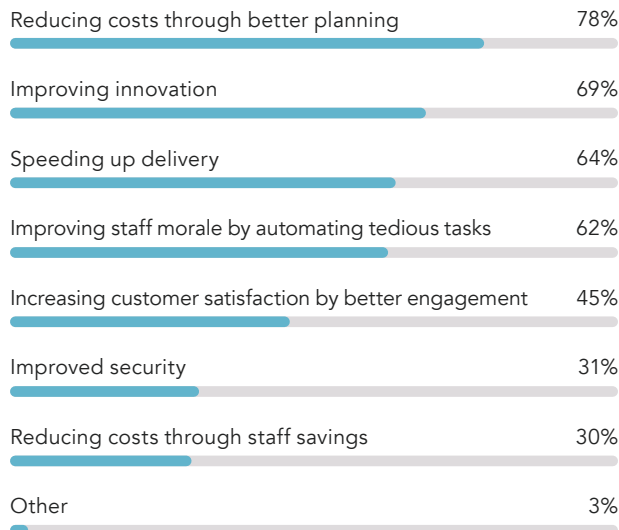
Almost half (46%) are researching options and 19% are seeking training, reflecting an active process of building knowledge and reducing uncertainty before scaling.

Skills gaps are being addressed

39% are turning to external expertise, while 30% are recruiting IT staff, underlining that many businesses recognise capability as a barrier to more strategic adoption.

AI IN THE NEXT 5 YEARS

Over the next five years, businesses expect AI to have the greatest impact through better planning and cost reduction (78%), driving innovation (69%), faster delivery (64%) and improving staff morale by automating repetitive tasks (62%).



INSIGHTS AND COMMENTARY

Cost efficiency leads expectations

More than three quarters (78%) see AI as a driver of cost reduction through better planning, making efficiency the most widely anticipated future industry impact.

Innovation is nearly as important

69% expect AI to play a significant role in industry innovation, confirming that AI is viewed not only as a tool for optimisation but also for shaping new products, services and approaches.

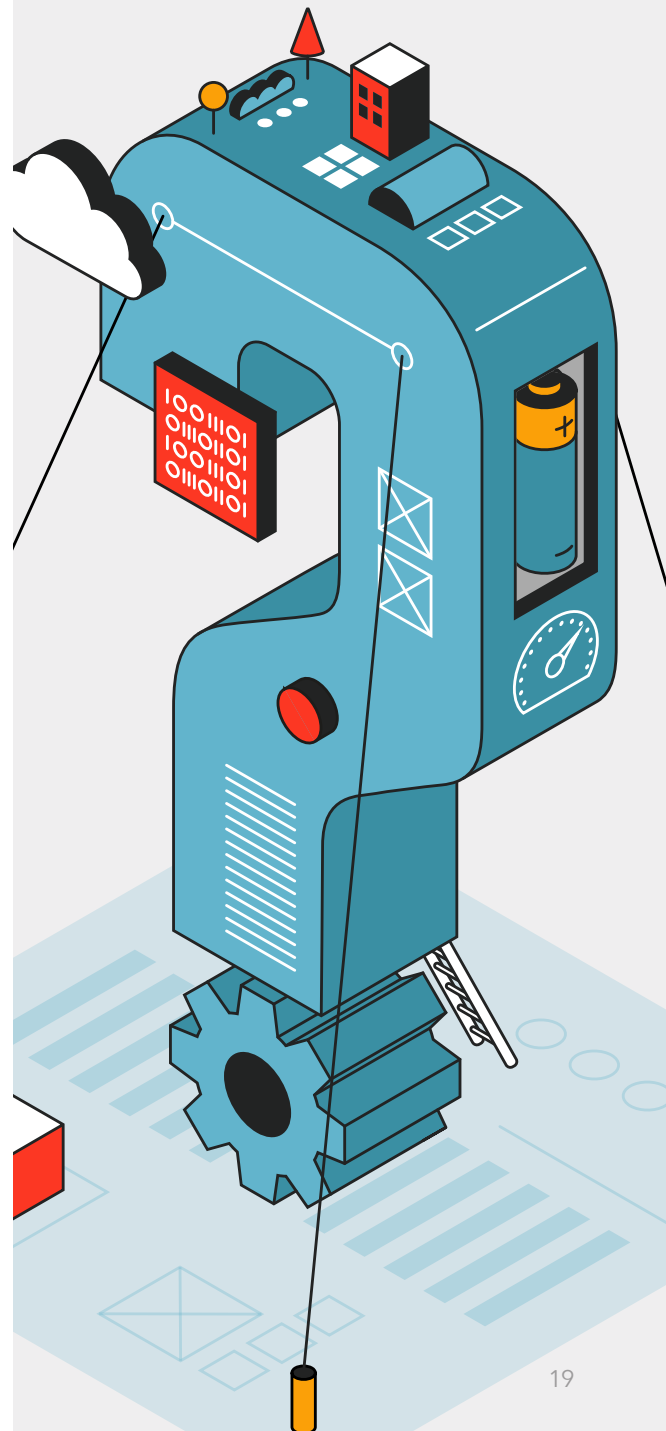
Speed and workforce benefits are close behind

64% predict AI will speed up delivery, while 62% believe it will boost staff morale by automating repetitive tasks - showing strong expectations for both operational and employee experience improvements.

Staff cost reduction is less emphasised

Only 30% see reducing staff costs as a future benefit, suggesting businesses are more optimistic about AI as an enabler of efficiency and innovation than as a tool for direct workforce reduction.

More than three quarters (78%) see AI as a driver of cost reduction through better planning, making efficiency the most widely anticipated future industry impact.



Conclusion & Recommendations

AI adoption in Northern Ireland is still at an early stage, yet momentum is building. Many businesses are planning to adopt or expand use and those that have already integrated AI strategically are reporting measurable returns in efficiency, customer experience and revenue. However, progress is constrained by skills shortages, cultural resistance and uneven governance.

The evidence suggests that the coming years will be a period of transition, from experimentation to scaling, with success dependent on investment in skills, formalised governance and alignment of AI with long-term business strategy. The organisations that act now will be best placed to capture the opportunities AI offers over the next five years.

RECOMMENDATIONS →



Bridge the capability gap:

Invest in training, upskilling and partnerships to overcome knowledge and expertise barriers.



Introduce & strengthen governance:

Establish policies for responsible AI use to mitigate risks of shadow AI and compliance failures.



Align with strategy:

Treat AI as a driver of innovation and growth, not just efficiency. Businesses must embed AI into core strategy to unlock long term ROI.



Commit to structured investment:

Establish dedicated budgets to scale adoption beyond pilots.



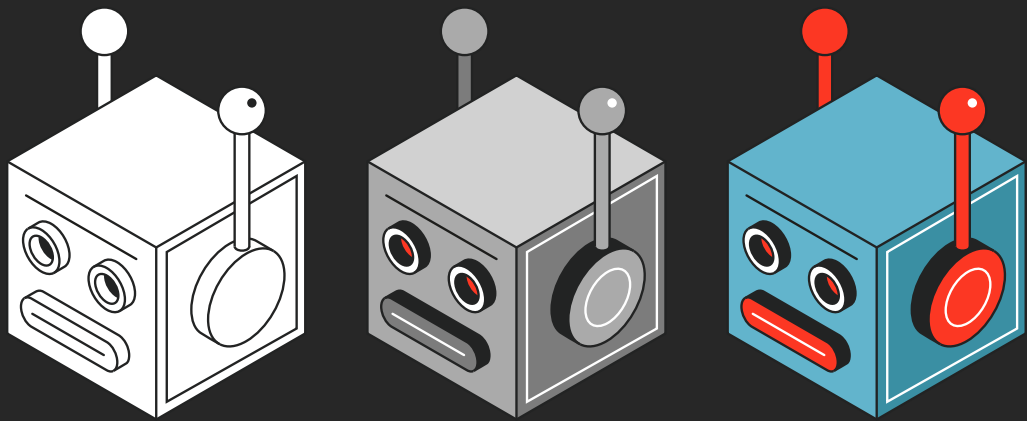
Prioritise change management:

Engage employees and provide clear leadership to overcome resistance to change.



Track competitor activity:

Monitor industry developments to maintain competitiveness as adoption accelerates into more advanced applications.



RESEARCH QUESTIONS & SAMPLE BASE

Is your company currently using AI technologies or solutions?

Sample base: all organisations n=200

Is your company currently using AI technologies in a custom or strategic way to impact your business operations (i.e., beyond general-purpose tools such as Google Gemini ChatGPT etc.)?

Sample base: current AI adopters n=39

How likely or unlikely is it that AI will become a strategic priority for your business in the future?

Sample base: non strategic adopters n= 24

What do you believe are the key benefits of AI for businesses in your industry?

Sample base: all organisations n=200

In what areas of your business have you strategically implemented AI?

Sample base: strategic adopters n=15

What, if any, measurable impact has AI had on, Efficiency, Revenue growth, Customer experience, Other business outcomes

Sample base: strategic adopters n=15

Is AI considered a core part of your business strategy now or in the future?

Sample base: strategic adopters n=15

Do you have policies or procedures in place to ensure that AI is being appropriately deployed in your business?

Sample base: strategic adopters n=15

Are you planning to expand your use of AI in your business within the next 12 months?

Sample base: strategic adopters n=15

What specific business objectives are driving this adoption?

Sample base: strategic adopters who plan to expand use n=10

Have you allocated a budget for AI implementation and development?

Sample base: strategic adopters n=16

What challenges have you experienced (or anticipate experiencing) when implementing AI at a strategic level?

Sample base: strategic adopters & likely to become strategic adopters n = 35

What are your reasons or the barriers for not adopting AI technologies, in a strategic capacity, within your business?

Sample base: non AI users & non strategic adopters n=185

Do you have policies and procedures in place to ensure that AI is not being used without your awareness?

Sample base: non AI users & non strategic adopters n=185

What actions are you taking now to prepare for adoption of AI? Sample base: likely to become strategic adopters n= 20

How do you see AI impacting your industry / sector over the next 5 years? Sample base: strategic adopters & likely to become strategic adopters n=35

ABOUT GCD

GCD is an award winning and leading innovation and technology partner working with ambitious organisations across the UK and Ireland. Specialising in custom software and next-generation technologies, including artificial intelligence, GCD helps businesses move from idea to concept, through to execution with speed and confidence. Through a blend of strategic insight, innovation discoveries, user-centred design and engineering excellence, GCD enables its clients to innovate, differentiate, and achieve measurable impact in their markets.

To discuss this report or to chat with an AI expert at GCD, please email info@gcdtech.com or call 028 3834 1205.





The State of AI in Northern Ireland Businesses: Adoption, Barriers and Strategic Impact

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