



Scottish businesses and Artificial Intelligence

November 2023

Insights and Economics

Introduction

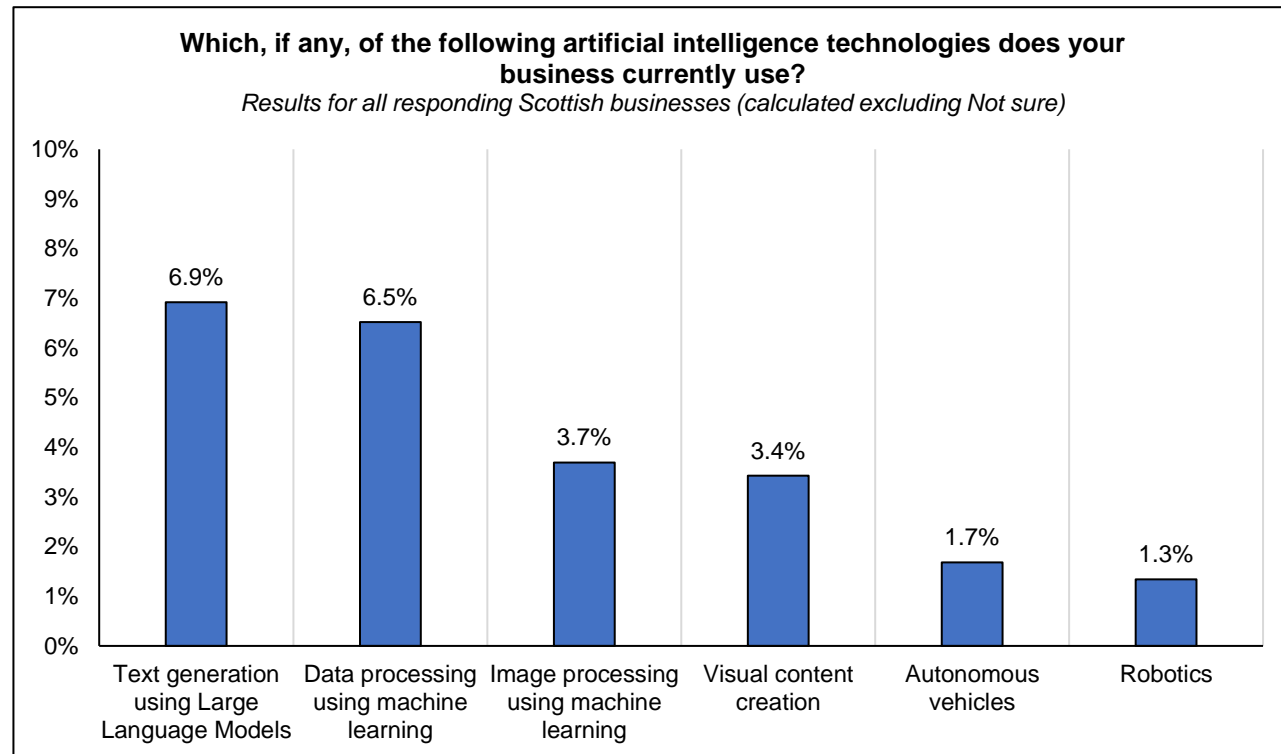
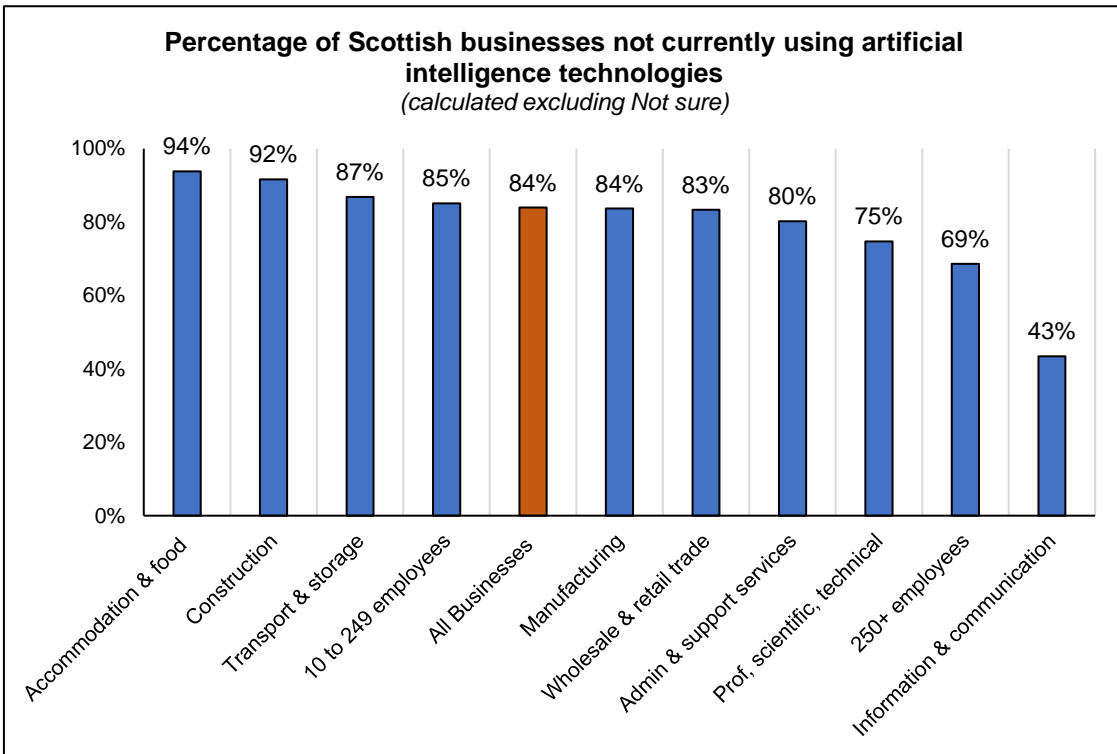
- This spotlight presents a summary of the responses from businesses in Scotland to the Office for National Statistics [Business Insights and Conditions Survey \(BICS\)](#), which is comprised of approximately 1,000 small, medium and large Scottish businesses.
- The survey covers a wide array of questions on business performance, and as such should not be assumed as completed by experts in fields such as Artificial Intelligence.
- For the purposes of this spotlight, 'Not Sure' and 'Not Applicable' responses have been removed and figures recalculated to give as most accurate a picture as possible into the emerging area of Artificial Intelligence, and its use.
- The questions analysed here are being tracked in the BICS going forward, and these will feature in our Insights carousel, which is available [here](#).

Main findings

- **16% of businesses are using**, and 84% of businesses are **not currently using AI**.
- 60% of businesses currently using AI technologies are doing so to **improve their business operations**.
- 58% of those who are AI active, have incorporated it **through the purchase of software**.

- The highest use of AI is through utilising large language models for text generation (6.9%) and machine learning for data processing (6.5%).
- Improving business operations is a greater driver for future AI use, and this is predominantly driven by small and medium businesses with 82% planning to use AI for this purpose (vs just 27% using it for this, at present), with 83% of large businesses seeing this as an objective for AI use.
- Small and medium size (10-249 employees) businesses are more likely than large businesses (250+ employees) to be using AI to provide or personalise products/services (35% vs 27%).
- Despite nearly half of Scottish businesses giving a response to the question about why they would seek to use AI technologies in future, the vast majority are not anticipating incorporating any AI into their business in the next three months.

Current use of AI



Source: Scottish Government, Business Insights and Conditions Survey (BICS) weighted Scotland estimates – Wave 92 (September to October 2023). Not sure responses removed from results. Respondents can select multiple options in this question.

- The majority of businesses in Scotland responding to the ONS BICS survey are currently **not using AI technologies**.
- The sector with the highest uptake of AI is Information and Communication, where 57% of businesses are currently using AI technologies. This is the only industry with over half of those responding (excluding those responding with Not Sure) currently using AI.
- Excluding Not Sures, the highest use of AI across all responding businesses was through utilising large language models for text generation (6.9%) and machine learning for data processing (6.5%).

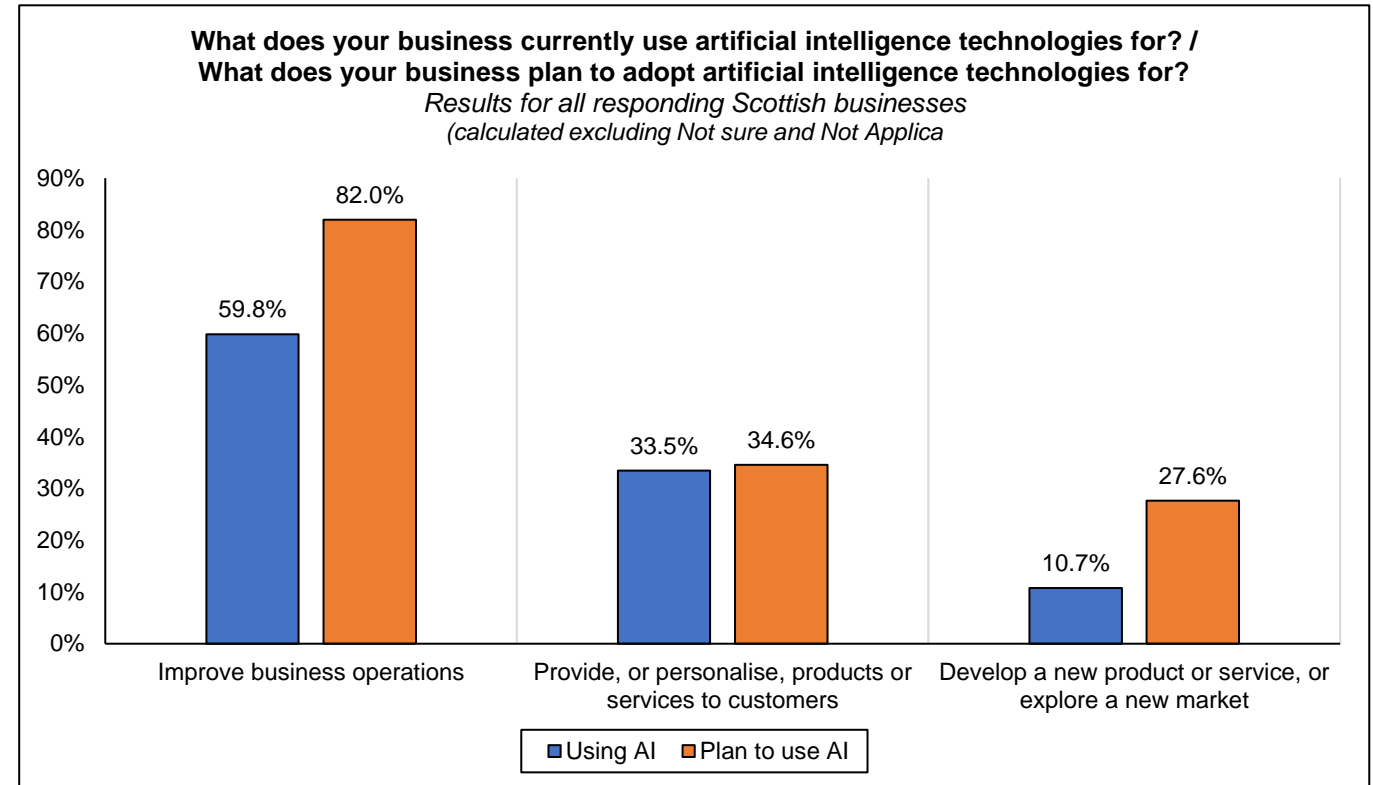
Reasons for using AI amongst early adopters and those planning to

Currently using AI technologies

- Of the low proportion of responding businesses using AI technologies at presents, the **majority are using it to improve their business operations.**
- One in three have adopted AI to provide or personalise products/services, to enhance their customer service.
- 11% are currently using AI to develop a new product or service, or to explore a new market.
- **Small and medium size (10-249 employees) businesses are more likely than large businesses (250+ employees) to be using AI to provide or personalise products/services (35% vs 27%).**
- **Large businesses are considerably more likely to be using AI to improve business operations (88% to 56% for small and medium).**

Planning to use AI technologies

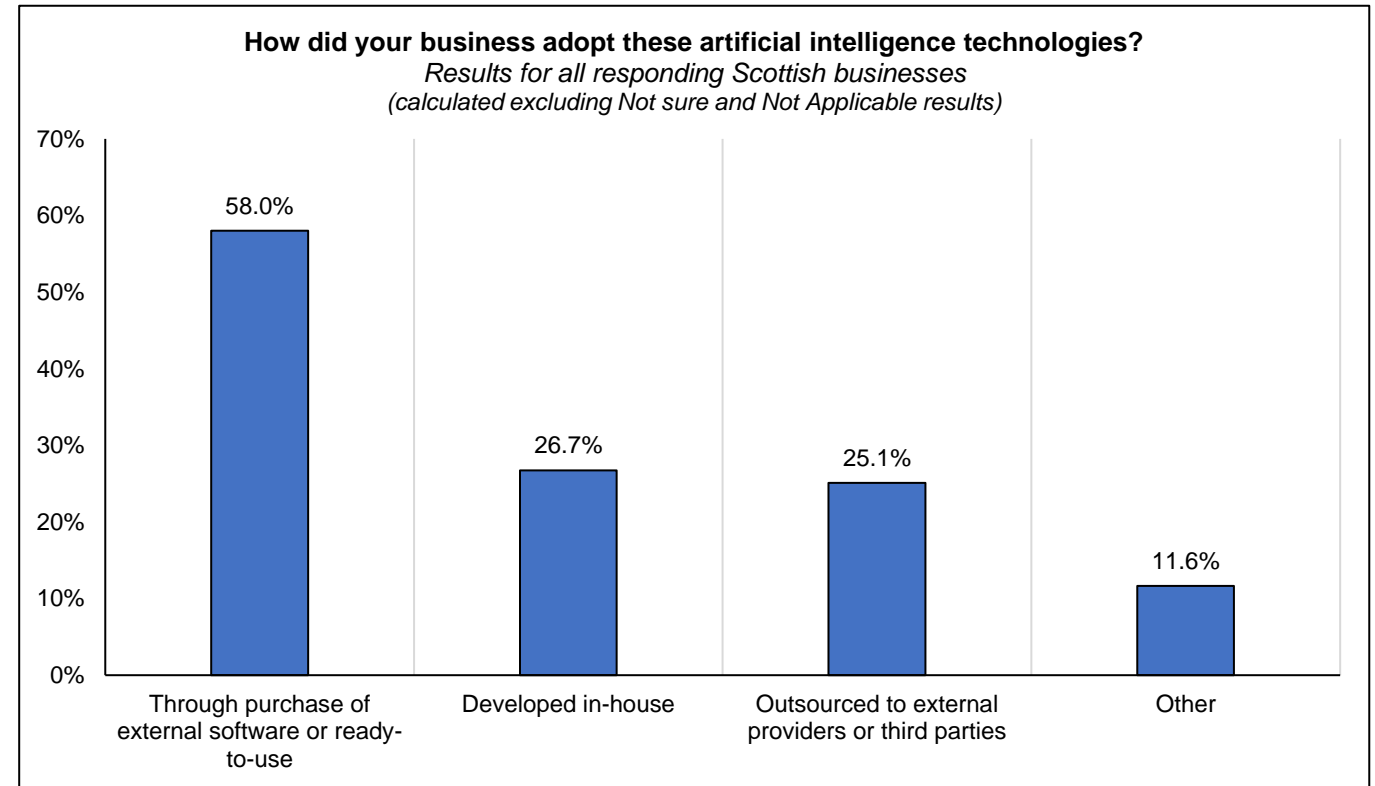
- 44% of businesses responding to the survey in Scotland, gave insight into what their business plans to adopt AI technologies for (but without any specific timescale for this).
- Improving **business operations is a greater driver for future AI use**, and this is predominantly driven by small and medium businesses with 82% planning to use AI for this purpose (vs just 27% using it for this, at present), with 83% of large businesses seeing this as an objective for AI use.



Source: Scottish Government, Business Insights and Conditions Survey (BICS) weighted Scotland estimates – Wave 92 (September to October 2023). Not sure and Not Applicable responses removed from results. Respondents can select multiple options in this question.

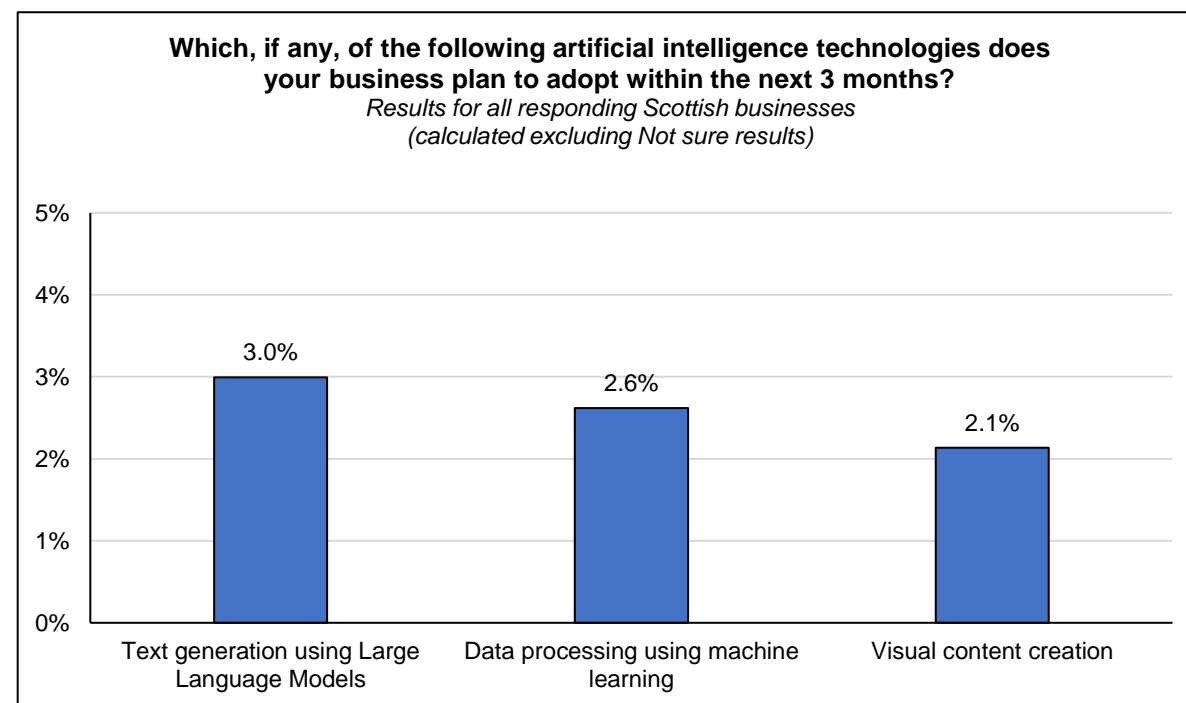
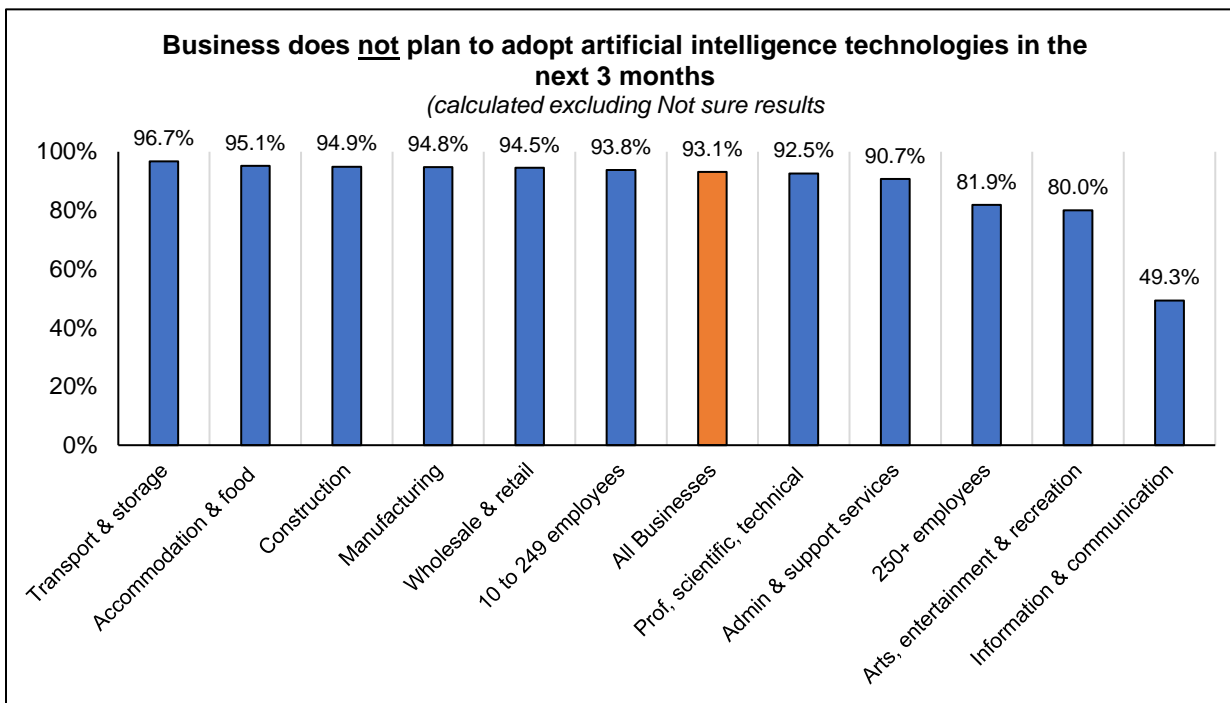
How AI was incorporated amongst early adopters

- Over half of businesses (58%) who are AI active, have incorporated it through the purchase of software.
- **Only one in four have developed their AI capabilities in house.**
- Small and medium businesses are more likely than their larger counterparts **to have purchased external** or ready to use software.
- In contrast, **large businesses are twice as likely to have developed their AI in-house** (48% to 24% for small and medium), and more than twice as likely to have outsourced their AI needs to external/third parties 48% to 21%).



Source: Scottish Government, Business Insights and Conditions Survey (BICS) weighted Scotland estimates – Wave 92 (September to October 2023). Not sure and Not Applicable responses removed from results. Respondents can select multiple options in this question.

Future plans – next three months

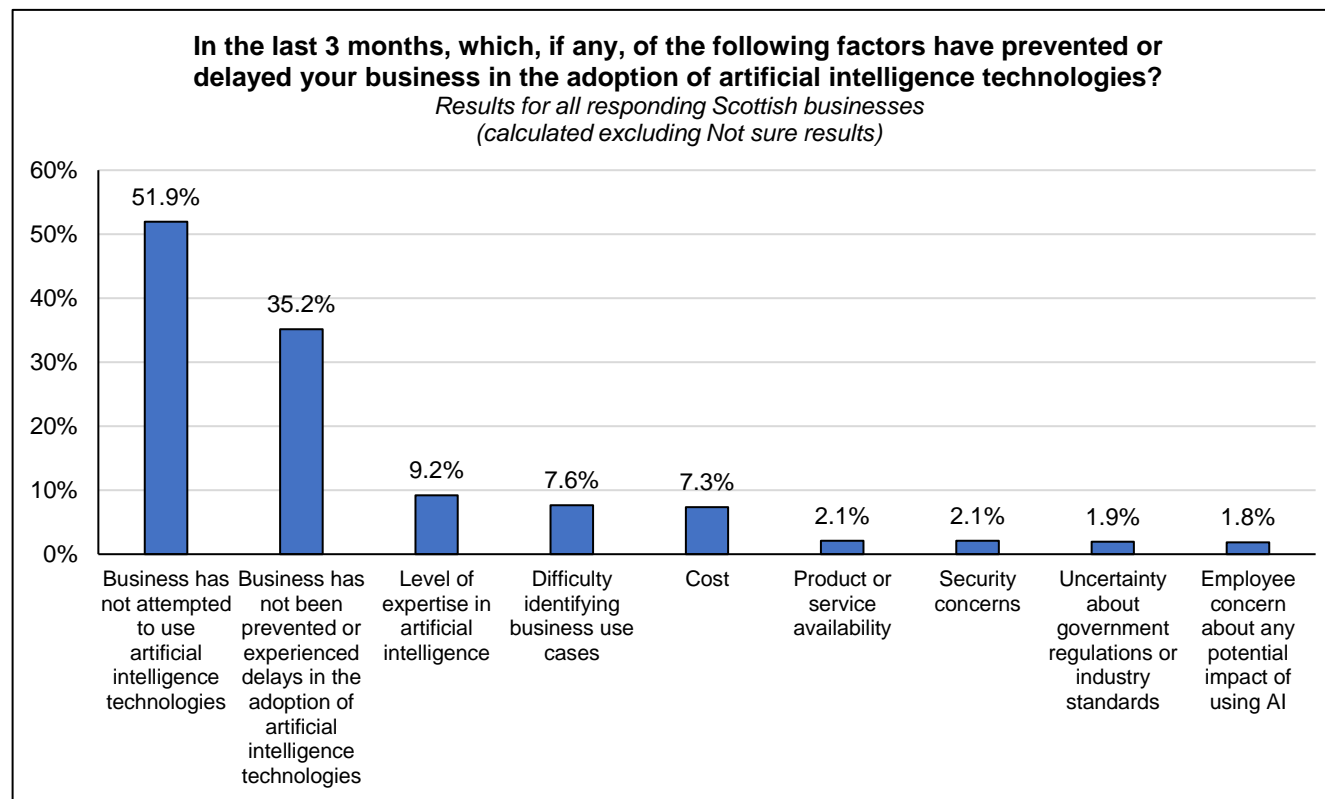


Source: Scottish Government, Business Insights and Conditions Survey (BICS) weighted Scotland estimates – Wave 92 (September to October 2023). Not sure responses removed from results. Respondents can select multiple options in this question.

- Despite nearly half of Scottish businesses giving a response to the question about why they would seek to use AI technologies in future, the vast **majority are not anticipating incorporating any AI into their business** in the next three months.
- Of those who are, the types of AI technology they are planning to incorporate reflects the types currently most used amongst businesses responding to the survey. Of those with plans for the next three months:
 - 33% of Information and Communication businesses are planning on incorporating text generation, with 29% also planning on incorporating data processing.
 - 16% of Arts, entertainment and recreation businesses anticipate adopting visual content creation into their operations.

Barriers to incorporating AI

- 52% of all responding businesses (excluding the 20% who are Not Sure) have not attempted to introduce any AI technologies in the last three months, and therefore have not faced any barriers.
- 35% say they have not been prevented or had delays in adopting AI technologies, reinforcing that while many businesses have ideas and plans to eventually introduce it, very few have, or plan to in the short-term.
- Of those who have, approximately **one in ten report a lack of expertise as a barrier**.
- The lack of expertise as a barrier is highest (23.9%) in Information and Communication, highlighting this industry as the leader in Scotland for existing and immediate AI activity, and suggesting that activity rates would be higher if these barriers could be overcome.
- Within industries, a difficulty in identifying business case uses are highest in:
 - Information and Communication (16%)
 - Manufacturing, and Administration & Support Services (both 12%).



Source: Scottish Government, Business Insights and Conditions Survey (BICS) weighted Scotland estimates – Wave 92 (September to October 2023). Not sure responses removed from results.