Generative AI In Banking:
A Progress Report

HOW BANKS IN AUSTRALIA AND NEW ZEALAND ARE SUSTAINING MOMENTUM IN ENTERPRISE-WIDE DEPLOYMENT OF GENERATIVE AI

SIMPLUS
an Infosys company

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FOREWORD

Banks must build trust to reap the benefits of Generative AI deployment

Generative AI has been widely touted as the next frontier for business, enabling organisations to dramatically scale their customer interactions and build new digital experiences. Throughout the last year, the excitement around this rapidly evolving technology has reached fever pitch. An expanding set of use cases is changing expectations for how business teams can operate - from sales, marketing and customer experience, through to software engineering, risk and compliance - and organisations are in a rush to capitalise on these opportunities.

The term Generative AI refers to deep-learning models that can generate high-quality text, images, and other content based on the data they were trained on.

Already, a third of organisations are using Generative AI within at least one business function and this number is set to soar over the next 12 months. Widespread adoption of these tools is expected to drive a 7% (or almost $US7 trillion) increase in global GDP and lift productivity growth by 1.5 percentage points over a 10-year period.

Without doubt, Generative AI presents an enormous opportunity for businesses, not least banks and financial services organisations. Think about any of the major strategic priorities for banks over the next five years – be it customer experience, operational efficiency, Open Banking, skills, cryptocurrency, sustainable finance, or cyber security and fraud detection - and there is not a single one where Generative AI technology could not play a transformational role.

But with all emerging technologies, the hype surrounding future possibilities can often drown out the realities of real-life application today. Generative artificial intelligence (AI) was positioned on the Peak of Inflated Expectations on the Gartner Hype Cycle for Emerging Technologies, 2023, and there is still huge uncertainty about how Generative AI technology will evolve over the next few years. For many business leaders, there remain question marks about the extent to which the technology is truly enterprise-ready at the start of 2024.

Solid progress on the path to enterprise-wide Generative AI deployment

Against this backdrop, this paper explores the current state of Generative AI adoption within the banking sector in Australia and New Zealand, and attitudes and expectations towards this new technology amongst business stakeholders over the short to medium term.

Significantly, the research finds that most banks and financial institutions are already well underway with their initiatives to implement Generative AI, and many have made strong progress. Leaders in these organisations have identified a wide range of potential opportunities that Generative AI opens up – for customer experience, cost efficiencies, accelerated innovation, enhanced fraud detection and security, and increased automation, to name but a few.

Crucially, many banks are now moving beyond one-off implementations of Generative AI technology within individual business units, and scaling the technology across their organisations. And as a result, some leaders are reporting extremely positive results from these programs, particularly those operating in larger banks in the region.

Throughout the research, the findings indicate that larger banks, with asset sizes above $50 billion, are further along their journey to enterprise-wide implementation of Generative AI technology than smaller banks.

Divergent to the strong trend in the United States, where smaller banks tend to be early adopters of new technologies, our research shows that it is bigger banks that are leading the way in deployment of Generative AI in Australia and New Zealand. This aligns with recent developments in the sector, where large banks have identified exciting new use cases for the technology and accelerated their adoption programs.

79% of banks in Australia and New Zealand have now moved beyond the infancy stage of Generative AI adoption, and 19% have already reached an advanced stage, where the technology is fully embedded across the organisation.

The challenges of scaling Generative AI

However, while progress is being made, the research also exposes the breadth and scale of challenges that many banks are encountering as they ramp up their adoption of Generative AI. Legacy IT, a lack of knowledge and skills, operational silos, and difficulties in defining compelling use cases are all serving to slow down progress in implementation of the technology.

More than anything, the research highlights the extent to which data sits at the heart of successful Generative AI deployment, and the challenge that this is posing for leaders. Whether it is banks not having sufficient data, or not being able to verify the accuracy and relevance of the high frequency data required to build robust AI models, data represents the biggest obstacle to effective deployment of Generative AI.

Data security, privacy and governance are therefore viewed as critical by all banking leaders, irrespective of the size of their organisations. They recognise the increased potential for data exposure and leakages, and how the use of inaccurate data has the potential to cause catastrophic damage to customers, revenue and reputation.

Faced with these myriad barriers to progress, it is not surprising that banking leaders are not seeing the results that they expected from some of their Generative AI deployments. This is particularly the case when it comes to regulatory compliance and fraud detection.

Banking leaders are optimistic about future prospects for Generative AI

Banks and financial services institutions in Australia and New Zealand, already operating in an uncertain and rapidly evolving marketplace, are ultimately having to balance the advantages of early adoption of Generative AI with challenges associated with enterprise-wide deployment of this rapidly evolving technology.

Encouragingly, most banking leaders believe that their organisation has the vision, strategy and skills to find this balance and scale Generative AI in a seamless, secure and effective way.

The research identifies the critical success factors that leaders will be focusing on as they scale up their deployments.

Without doubt, trust and transparency are paramount. Banks need to mitigate risk at every step and consistently demonstrate to customers that they are deploying Generative AI safely and securely. That starts with ensuring data is in check and putting in place strategies to make sure AI solutions are being trained and updated with only the most accurate and compliant data, to eliminate bias and data pollution.

With this focus on data accuracy, and by identifying and plugging current capability gaps, banks can ensure they are able to harness the game-changing potential of Generative AI at an enterprise-level. They can continually optimise customer experience to build trust and loyalty, while driving efficiencies and accelerating innovation to create genuine competitive advantage.

RESEARCH METHODOLOGY

Simplus, an Infosys company, commissioned comprehensive independent research among senior stakeholders within banking institutions in Australia and New Zealand.

The research entailed:

- 100 interviews (70 in Australia, 30 in New Zealand).
- In Australia, all respondents worked for organisations with financial assets over $500 million for the last fiscal year, of which 49% worked for organisations with more than $5 billion.
- In New Zealand, all respondents worked for organisations with financial assets over $500 million for the last fiscal year, of which 63% worked for organisations with more than $5 billion.
- Respondents worked at senior levels within their organisations, including C-Level, VP and Senior Director.
- Respondents worked across a range of business functions – marketing, customer services, sales and HR.
- All research was conducted in October 2023.

Notes: *Totals in charts/ tables for single coded questions sometimes add up to more or less than 100% due to rounding. Where comparisons are made between larger and smaller banks in this paper, 'larger banks' refers to institutions with asset sizes above $50 billion in the last fiscal year, and 'smaller banks' refers to institutions with asset sizes below $5 billion in the last fiscal year.*

INTRODUCTION: GENERATIVE AI AND A NEW WORLD OF OPPORTUNITIES

The research uncovers the extent to which banking leaders believe that Generative AI presents a wide and growing range of opportunities for their organisations. From enhanced regulatory compliance and fraud detection through to optimised customer experience, increased automation and cost efficiencies, most banking leaders are overwhelmingly positive about the potential benefits of enterprise-wide implementation of AI technologies.

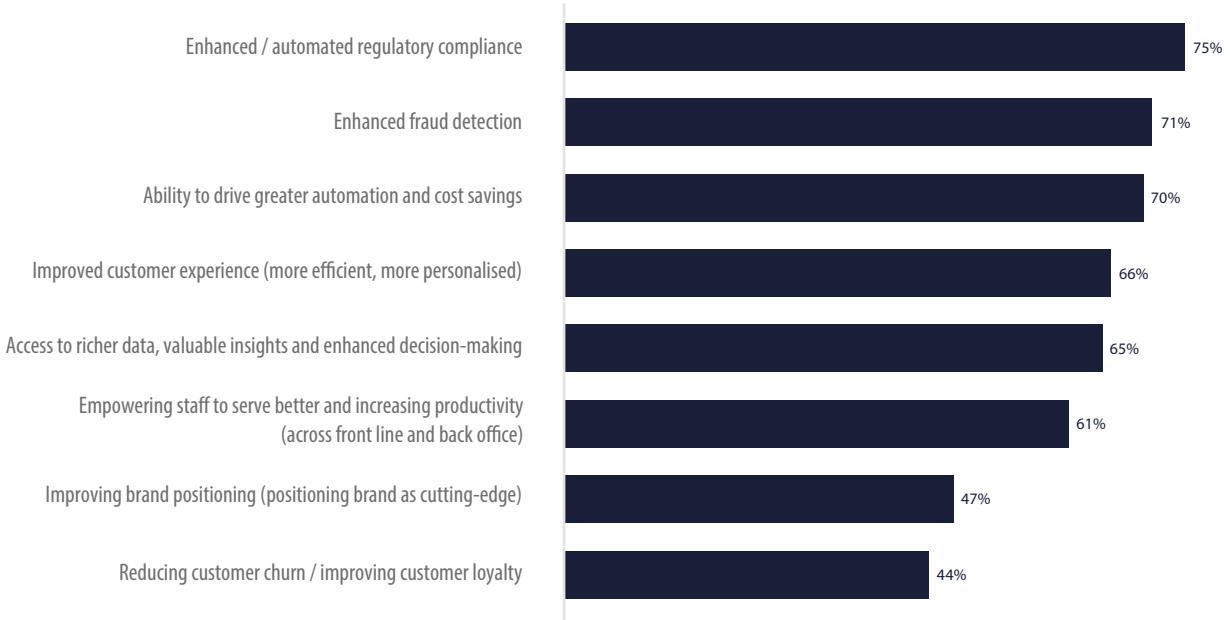
Other perceived benefits of AI include generating access to richer data and insights to improve decision-making, increased productivity across the workforce, and enhanced brand reputation as a result of organisations being viewed as innovative due to their deployment of AI technologies.

75% of banking leaders point to enhanced regulatory compliance as a benefit of enterprise-wide implementation of Generative AI technology, while 71% cite improved fraud detection as a potential benefit.

"The significance of Generative AI deployment in customer experience is substantial given the holistic impact of diverse customer facing activities and applications."

Craig Harris, Associate Vice President, Senior Manager, AI and Automation Practice, Infosys

Figure 1: The perceived benefits of enterprise-wide implementation of Generative AI technology



Q. What do you think are the benefits to your bank for implementing Generative AI technology enterprise-wide?

STRONG PROGRESS ON THE PATH TO EFFECTIVE GENERATIVE AI DEPLOYMENT

For all of the excitement and hype surrounding the use of Generative AI, the reality is that these technologies are still relatively nascent and, in many cases, use cases of effective deployment at scale are still being defined. Therefore, it would be reasonable to assume that most banks and financial institutions are still at the very earliest stage of their implementation programs.

However, the research finds that while banks in Australia and New Zealand are undoubtedly moving at different speeds on their journey towards enterprise-wide deployment of Generative AI technology, most have already made significant progress.

Only a fifth of banks are still in the infancy stage of Generative AI adoption, where they are only using the technology in pockets, in a small number of distinct areas of the business.

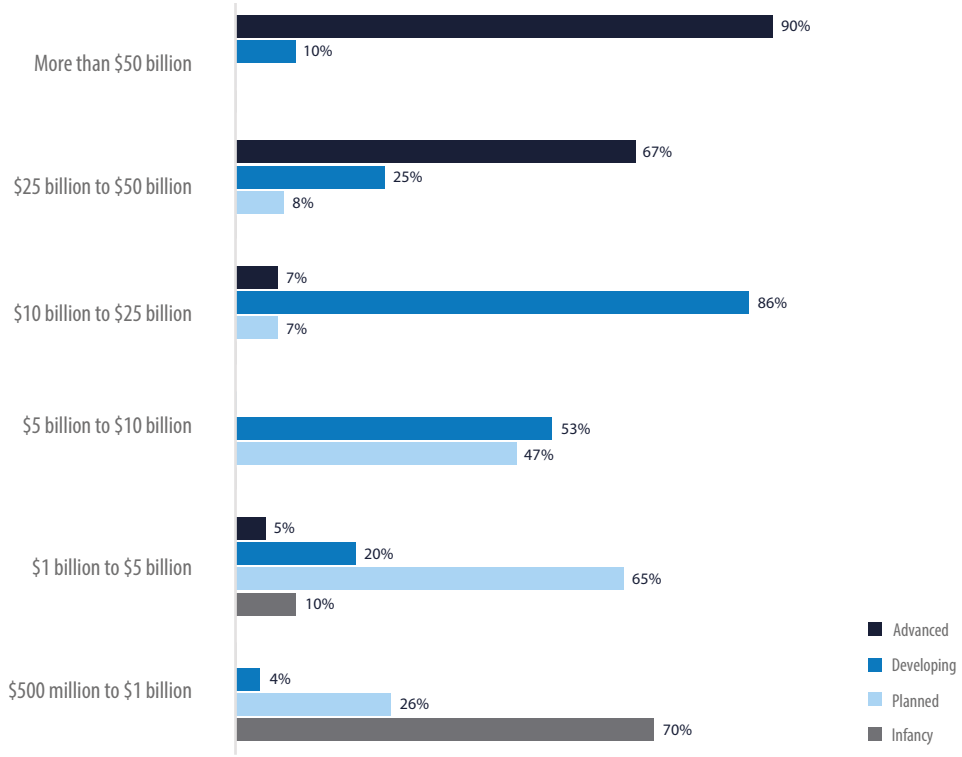
The majority of banks have already reached the mid-point of their journey towards wide scale implementation of Generative AI, operating at the planned or developing stages. This is where organisations define use cases for deployment of Generative AI technology on a larger scale across the enterprise or where they are enabling this technology across various business areas or functions.

Remarkably, almost one fifth (19%) of banks in Australia and New Zealand are already operating at an advanced stage of Generative AI implementation, with Generative AI technology embedded right across the organisation and used consistently across business operations.

Figure 2a: Progress on the path to enterprise-wide deployment of Generative AI technology

Q: Where do you think the bank you work for is on the path to adopting Generative AI technology across the entire organisation?

Figure 2b: Progress on the path to enterprise-wide deployment of Generative AI technology according to bank asset size



Q: Where do you think the bank you work for is on the path to adopting Generative AI technology across the entire organisation?

The research finds that larger banks and financial institutions, with asset sizes above $50 billion in the last fiscal year, are opening up a gap on smaller competitors when it comes to effective use of Generative AI. The vast majority of big banks are already operating at a developing or advanced stage of implementation, while smaller rivals with asset sizes below $5 billion are far more likely to still be at the earliest stages of their Generative AI journey.

MIXED OUTCOMES FROM GENERATIVE AI DEPLOYMENT TO DATE

The research shows that banks are achieving mixed results from their deployment of Generative AI technology thus far.

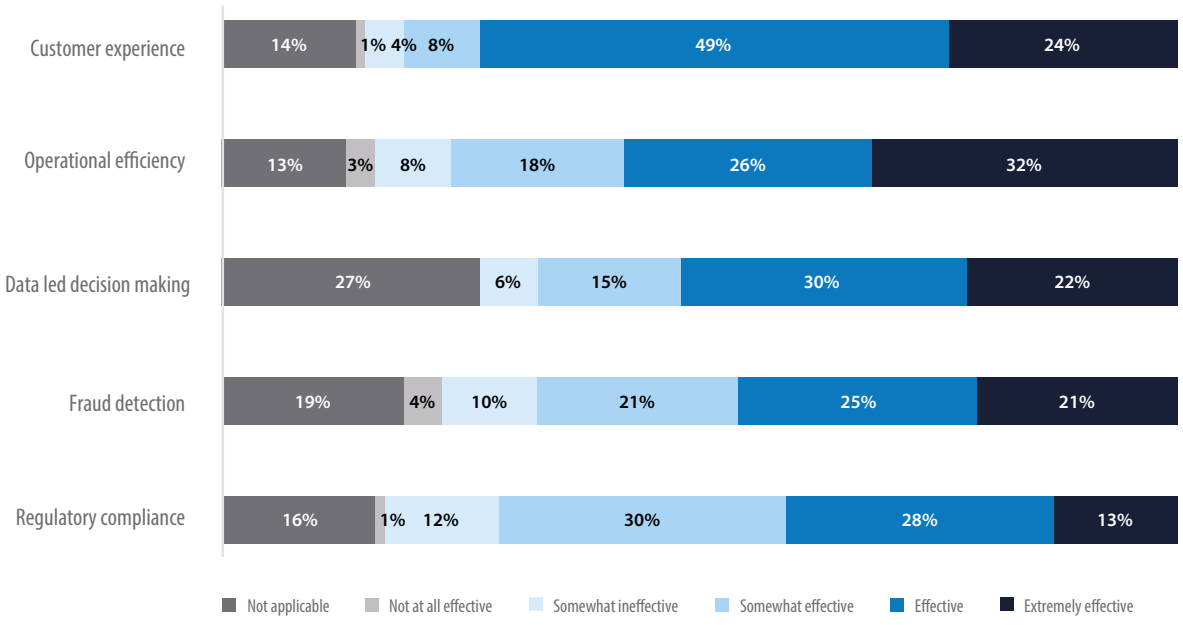
The area where banks have enjoyed the best outcomes from leveraging Generative AI is customer experience, where 73% of banking leaders acknowledge significant improvements. Behind this comes operational efficiency, where 58% report positive outcomes.

However, in other areas, banking leaders are less satisfied with the results they have achieved from Generative AI deployment. Only 41% state that their organisation has been effective in leveraging Generative AI technology to improve regulatory compliance, and only 46% point to improvements in fraud detection.

Significantly, the research shows that while banking leaders believe that regulatory compliance and fraud detection are the two areas where Generative AI presents the biggest opportunities for their organisations, these are currently the areas in which their banks are seeing the weakest results.

Evidently, banking leaders see scope for improvement in their use of Generative AI in these areas, as well as data-led decision-making, where only around a half are reasonably satisfied with their current level of performance.

Figure 3: Effectiveness of current Generative AI deployments across the organisation



Q. How effective has your bank been in leveraging Generative AI to improve the following aspects?

WIDE-RANGING CHALLENGES IN SCALING DEPLOYMENT OF GENERATIVE AI

As with any major business transformation initiative, banking leaders are under no illusions about the complexity involved in enterprise-wide adoption of Generative AI.

Almost two thirds (63%) report that it is proving a challenge for their bank to deploy Generative AI technology across the entire business, while as many as 37% state that scaling is extremely challenging.

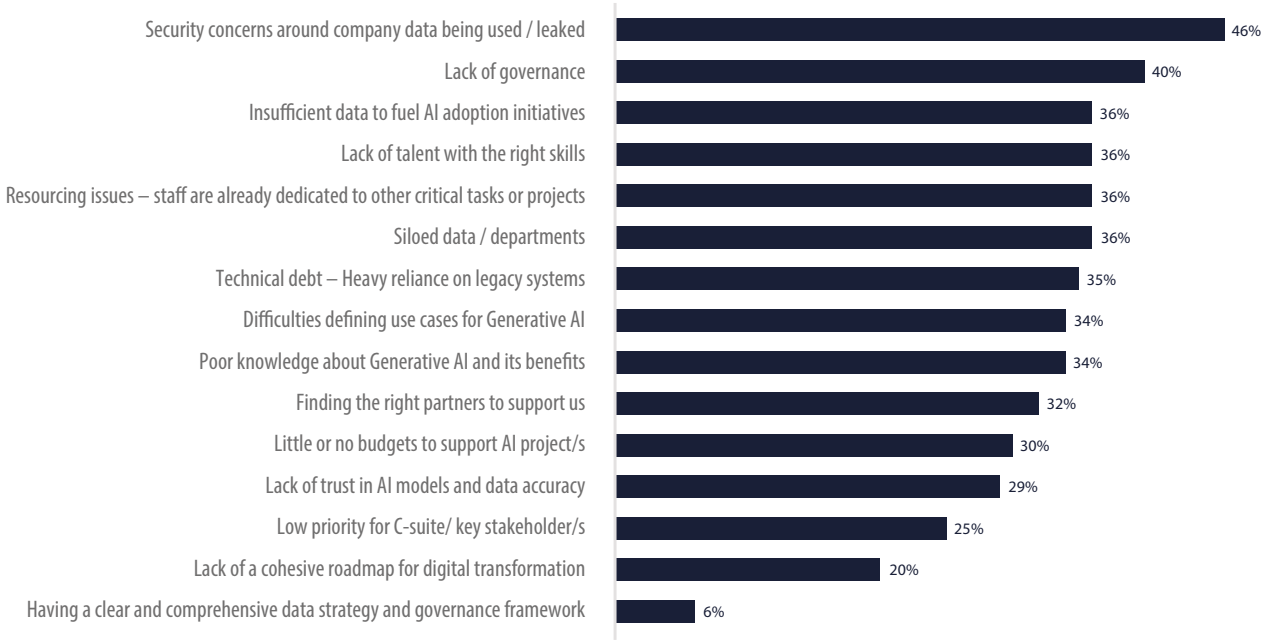
Indeed, the research uncovers the wide range of barriers to progress that banks are encountering in their Generative AI programs.

Most of all, banking leaders point to data security, governance, inadequate data, and a lack of skills as the biggest obstacles to successful wide-scale deployment of Generative AI technology.

Other challenges include operational and data silos, legacy IT systems, an inability to define compelling use cases for Generative AI, and a lack of knowledge about these technologies and their potential benefits.

Unfortunately, significant numbers of banking leaders are having to address these complex and constantly evolving challenges, while also dealing with limited budgets and a lack of support from C-Level executives, and without the right strategic partners to provide support and solutions.

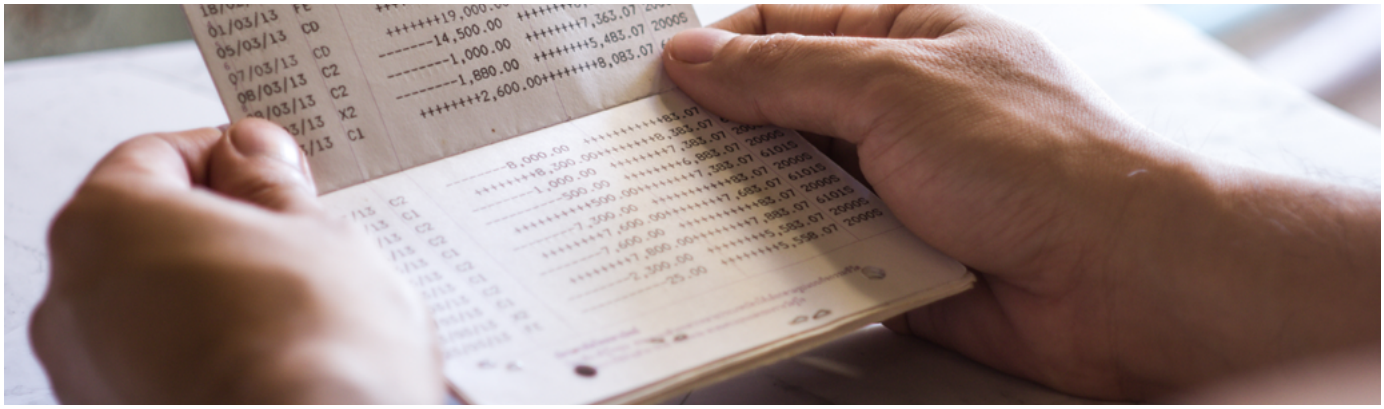
Figure 4: The many obstacles to successful implementation of Generative AI technology at scale



Q: Which of the following are obstacles for your bank to successfully implement Generative AI technology across the entire business?

"Security, governance and data concerns are genuine obstacles that must be navigated with a blend of technology, operational and business planning. Addressing these obstacles requires a multi-faceted approach that includes alignment and transparency across technical innovation, risk appetite, business governance structures and external support."

Craig Harris, Associate Vice President, Senior Manager, AI and Automation Practice, Infosys



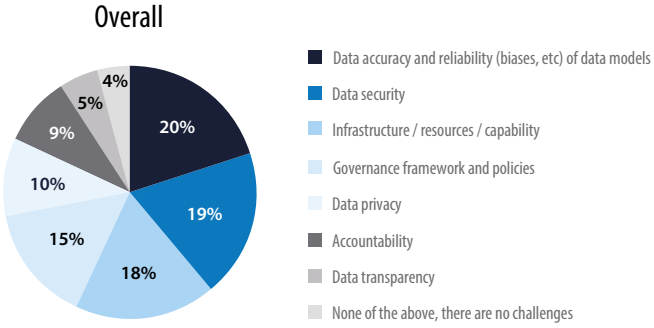
A study from Infosys, Data+AI Radar – Financial Services Industry, found that many banks and financial services institutions are still struggling to overcome problems caused by their legacy IT estates, and this is severely hampering their efforts to scale AI deployment. Outdated technology makes it incredibly difficult for banks to generate, consolidate and maintain the accurate, robust data on which AI models must be built. Without the right IT and data infrastructure in place, it is impossible for banks to deploy Generative AI technology in a sustainable, compliant and effective way.

With data being such a key component of any successful AI implementation program, the research drilled down into the specific challenges that banks and financial institutions are facing in their use of data within Generative AI. And interestingly, banking leaders are relatively split when it comes to determining the greatest data-related challenge.

The accuracy and reliability of data models, data security, and infrastructure, resources and capabilities are identified as the three most prominent challenges for banks when it comes to using data within Generative AI deployment.

Elsewhere, banks are also encountering challenges around data governance frameworks and policies and data privacy within their use of Generative AI.

Figure 5: The biggest data related challenges within deployment of Generative AI



Q: Thinking about data, what do you think is the biggest challenge for your bank when it comes to using Generative AI?

Organisations know that many **consumers remain sceptical about the accuracy and trustworthiness of Generative AI**. And business leaders are right to be seriously concerned about the potential for bias in Generative AI, particularly when large sections of the workforce admit that they **do not have the necessary skills to effectively and safely use AI**.

Banks should be putting trust at the centre of their Generative AI strategies. That means gathering data with transparency and consent, training algorithms on diverse data sets, and storing customer information securely and compliantly at all times. Crucially, banks need to lean on partners to put in place clear, robust and ethical principles around the use of Generative AI technology and to embed the right values and behaviours across their organisation.

CRITICAL SUCCESS FACTORS FOR EFFECTIVE GENERATIVE AI DEPLOYMENT

Despite the many challenges they face, banking leaders remain largely optimistic about their organisation's prospects when it comes to reaping the benefits of Generative AI.

More than half (54%) of banking leaders are confident that their financial institution has sufficient capabilities to effectively deploy Generative AI technology at scale, and this figure rises beyond 70% amongst those whose banks are already operating at a developing or advanced stage of Generative AI deployment.

Encouragingly, the research shows that banking leaders have firm ideas about what is required to successfully deploy Generative AI at scale.

Figure 6a: Levels of confidence around deployment of Generative AI technology at scale

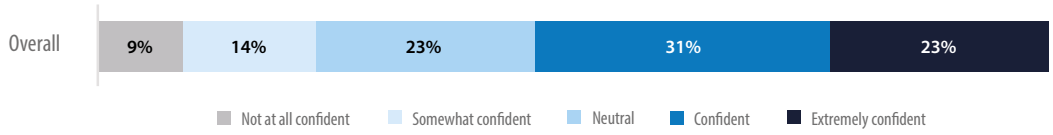
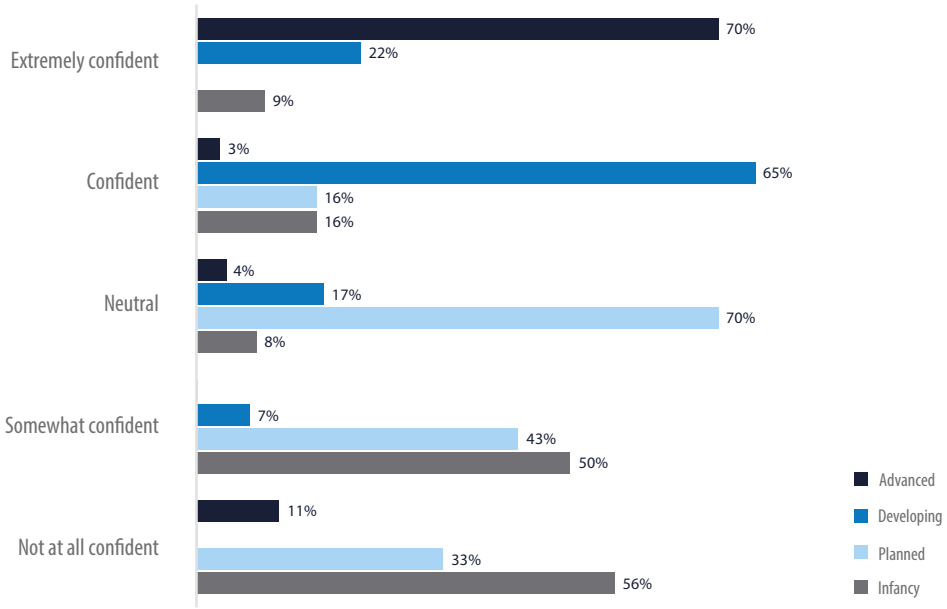


Figure 6b: Levels of confidence around deployment of Generative AI technology at scale depending on stage of adoption

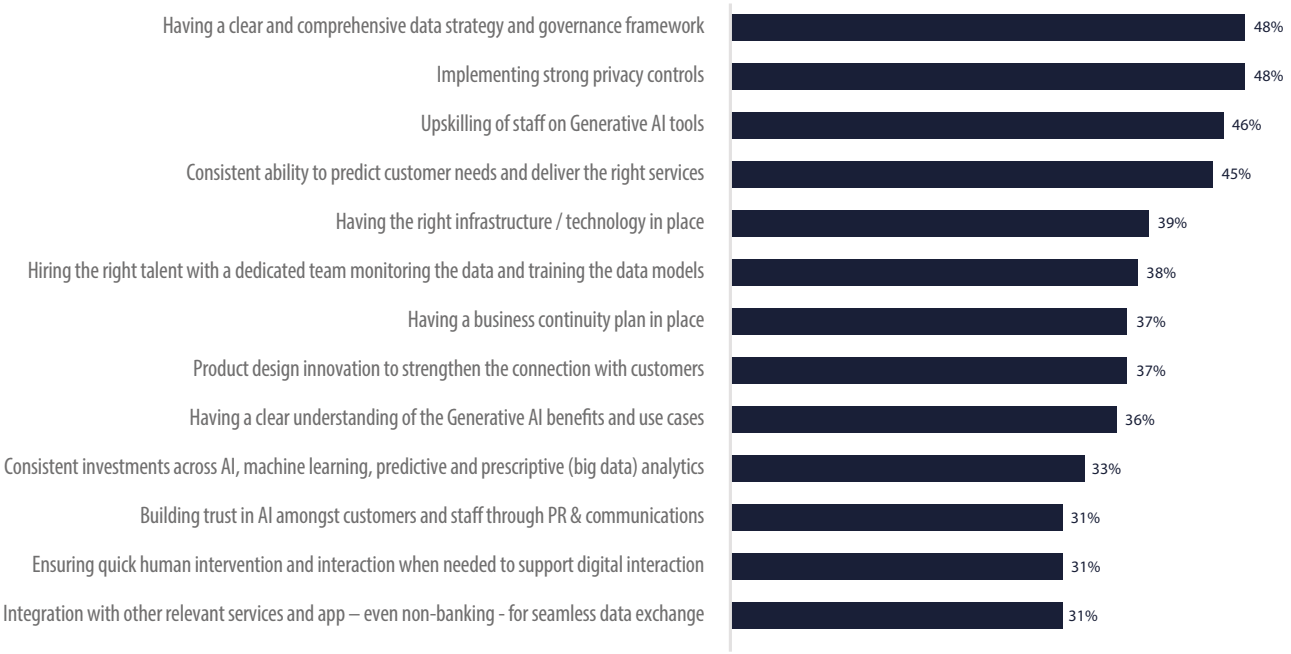


Q: How confident are you that your bank has sufficient capability to deploy the use of Generative AI technology at scale?

Most of all, banking leaders believe that organisations need a clear and comprehensive data strategy and governance framework, and strong privacy controls for effective enterprise-wide implementation of Generative AI technology.

Other critical success factors include upskilling staff on Generative AI tools, having robust infrastructure and modern technology in place, and being able to effectively predict and respond to customer needs.

Figure 7: Critical success factors for deploying Generative AI at scale



Q: What key factors do you believe are critical for deploying Generative AI at scale?

ACCELERATING THE JOURNEY TO EMBED GENERATIVE AI

While there is now increasing urgency within banks to ramp up implementation of Generative AI technologies in order to drive efficiencies and generate competitive advantage, the research indicates that there is also a widespread understanding that successful and sustainable deployment of Generative AI is a lengthy and complex process.

71% of banking leaders believe that it will take at least 12 months for their organisation to fully embed Generative AI into its digital strategy and roadmap, and reach an advanced stage of adoption. And 43% state that this process will take more than two years.

Once again, the research exposes marked differences between larger and smaller institutions. Within smaller banks, with asset sizes below $5 billion, more than 90% of leaders report that it will take at least 12 months to reach an advanced stage of adoption, and most of these predict that it will take more than two years.

On the other hand, within larger banks with asset sizes above $50 billion, the majority of leaders (60%) report that they have already fully embedded Generative AI into their digital strategy and a further 30% expect to do so within the next year.

Figure 8a: Timeline for banks to fully-embed Generative AI into digital strategy and roadmap

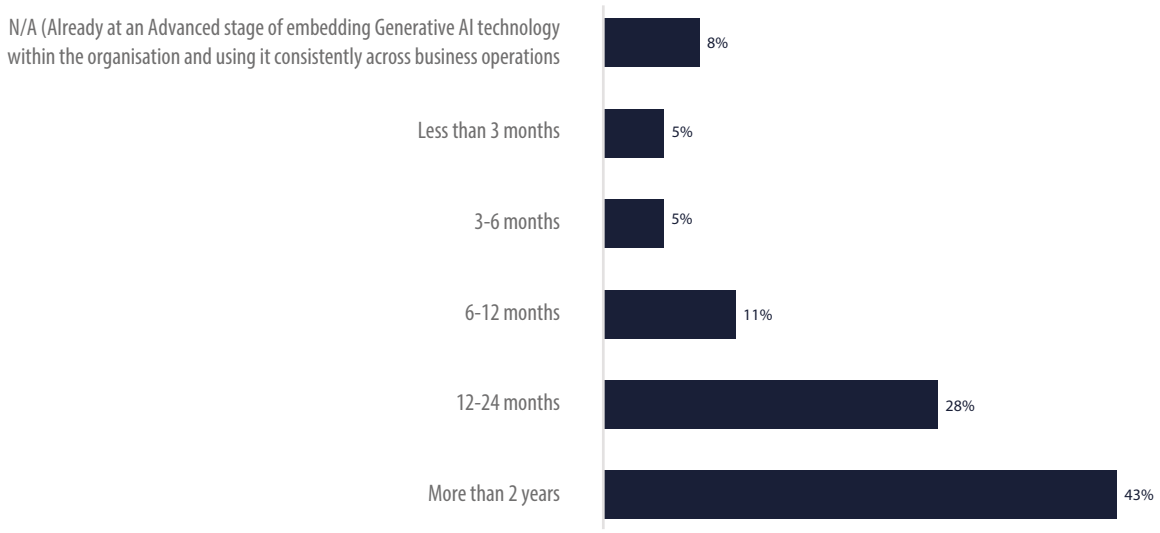
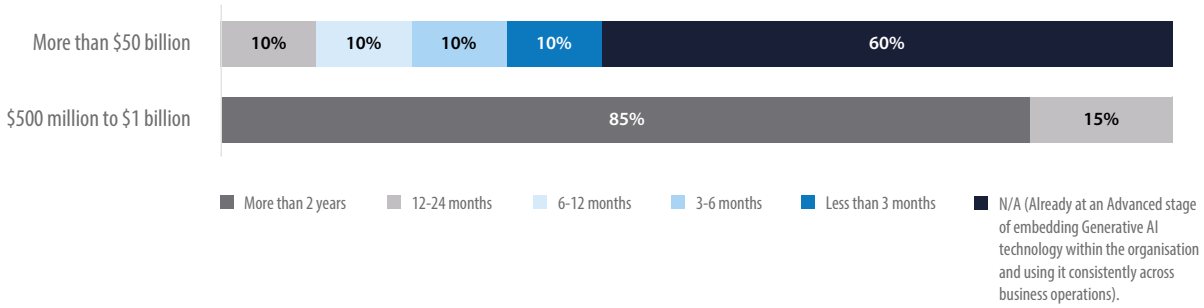


Figure 8b: Timeline for banks to fully-embed Generative AI into digital strategy and roadmap of larger and smaller banks



Q: By your estimation, how far is your company from having Generative AI fully-embedded into its digital strategy and roadmap?

CONCLUSION

Excitement is building around Generative AI within banks in Australia and New Zealand. Leaders recognise the transformational benefits that this technology can deliver across every corner of their business operations. In particular, they point to the huge potential to harness Generative AI to offer customers ever-more intuitive, personalised and secure digital experiences. And alongside this, banking leaders see huge scope for Generative AI to drive cost efficiencies and minimise risk through cyber security and fraud detection.

Perhaps what is most surprising about this research is the amount of progress that many banks in Australia and New Zealand have already made in implementing Generative AI, given the relative nascence of this technology.

The majority of banks are already nearing or are at the mid-way point on the path to fully embed Generative AI across their organisations. This indicates that leaders understand that in order to realise the full benefits, banks will need to move beyond one-off, tactical deployments and focus on enterprise wide implementation of the technology. This means re-thinking business processes, re-evaluating organisational structures and re-imagining operations and go-to-market strategies.

Encouragingly, significant numbers of banking leaders are already reporting positive results from their early deployment of Generative AI, especially for use cases focused on enhancing customer experience and improving operational efficiency.

The research does, however, suggest that the shift towards Generative AI across the banking industry in Australia and New Zealand is becoming two paced. Notably, it is larger, established banks that are stealing a march on the competition, with significant numbers already operating at an advanced level of implementation, with Generative AI firmly embedded across their entire business operations.

As a result, pressure will be growing on other banks, large and small, to accelerate their Generative AI programs and ensure they do not get left behind. However, in their haste to rapidly increase Generative AI technology deployment, leaders must not overlook the critical need to take a considered and strategic approach.

This research reveals the complexity that banks are encountering as they move towards enterprise-wide implementation of Generative AI technology. From legacy IT and skills and knowledge gaps through to operational silos and difficulties in defining use cases for Generative AI, banks are encountering challenges but are confident in their capability to deploy Generative AI technology at scale.

Most of all, banking leaders are concerned about the ability of their organisations to gather, store, secure and utilise data in an effective, ethical and compliant way. They recognise the critical need for accurate data within AI models, to eliminate bias and instil trust and transparency into their use of Generative AI.

Overall, however, the research paints a highly positive picture of adoption of Generative AI within the banking sector in Australia and New Zealand. Banks have identified major opportunities and they are largely confident that they will be able to realise them over the coming months and years.

Crucially, banking leaders are aware of the inherent risks that come with Generative AI deployment, and they are committed to overcoming challenges and implementing new technologies in an ethical and sustainable way. In order to do this, they will need to ensure they have the right skills and tools at their disposal, and to lean on partners to create robust policies and frameworks for data governance. Balancing this effectively, banks in Australia and New Zealand can use Generative AI as a platform for future growth and innovation.

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