Data and Technology in Superannuation

Quarter 2 2023

Novigi

The data and technology partner
to the financial services industry

CONTENTS

Executive Summary

In this report we look to discuss current market and industry trends, both specifically in the superannuation sector, but also in the broader technology sector. Our hope is that Novigi's role as a firm operating at the intersection of technology and superannuation affords us a valuable (and hopefully interesting) perspective.

1. **Geopolitical Instability Market Impacts**
   The continuing collapse of major banks has created an atmosphere of uncertainty in the global financial market. At home, the interest rate rises over May and June will, in combination with high core inflation, continue to impact Australians. Those with mortgages will be significantly impacted by the rate rise, with Australians paying an average interest rate of 6.12%. Similarly, average rent prices across Australian capitals have risen by 10%, impacting living affordability for those that don't own their own homes. With real wage growth still stagnating, financial hardship for many low income earners is likely.

2. **Mergers and Acquisitions**
   Mercer Super Trust has completed SFTs with both BT Super and HESF, forming a $63 billion fund. ART also continues to grow inorganically, completing 2 SFTs and another 3 in progress. HESTA has reached the million member mark. Continued industry consolidation will likely see the number of funds reach the million member milestone increase, changing the competitive landscape.

3. **The Changing Administration Landscape**

   HESTA have announced their intention to transition to Grow as their administrator. This represents a major disruption to the administration landscape. Iress is refocusing on being a software provider, the industry landscape in administration services will shift significantly and require attention.

4. **Regulatory Changes**

   Introduction of payday super is a significant change. Employers will have until 1 July 2026 to comply. This shift has the potential to reshape the fund-employer relationship, and presents opportunities for both employer and member engagement. Funds should consider how to support employer groups with compliance and engagement. Other regulatory changes over the last quarter have focused on consolidating prudential guides and standards around operational and financial resilience.

5. **Enforcement Action**

   Significant fines were issued to AMP and OnePath for misconduct. Highlighted in these cases were systemic failures of processes, procedures, technology and data to ensure member outcomes were met in accordance with legislative requirements. Similarly, AustralianSuper self-reported a compliance breach resulting from similar issues in technology and data.

6. **Data Quality in Focus**

   Data quality continues to be a major hurdle in the industry as revealed by the recent compliance breaches and ongoing SFT activity. As such, data quality and governance have been a key focus area for uplift.

7. **Super Entitlements for Gig workers**

   HESTA CEO Debby Blakey renewed calls to extend superannuation to gig workers that may not be entitled to SG payments under current legislation. Consultation on “Employee-Like - Forms of Work” closed in May, with the Government seeking to fulfil an election promise to protect gig workers through reforms of the Fair Work Act 2009. Platforms that facilitate gig work may be reclassified as employers and create opportunities for superannuation funds to form default arrangements.

8. **Quality of Advice Response**

   The Government’s response to the Quality of Advice Review focuses on implementing 14 of the 22 recommendations either in full or in principle. The changes are focused into 3 streams; removing regulatory red tape, expanding access to retirement income advice, and exploring new channels for advice. Funds should consider how scaled advice could be provided to members under this new model, and how digital tools could be used to facilitate this.

9. **PwC Tax Scandal**

The PwC tax scandal highlights the continued need for vendor management, particularly where it relates to sharing of confidential information. This extends to the mechanisms by which information is shared such as file sharing and system access. Legal and technology protections should be considered to ensure suitable protection from any confidentiality breaches.

10. **Generative AI Adoption**

Generative AI technology continues to rapidly evolve, and its adoption and use in the corporate setting is becoming more widespread. There are a number of opportunities for its use in superannuation including member engagement, financial advice, structuring data and sentiment analysis. Caution should be applied to these technologies as they are still in the early stages of widespread use and issues may not be immediately apparent. Considerations to bias, accuracy, intellectual property rights, cyber security and fraud, as well as transparency need to be considered when implementing these technologies.

11. **Technology Workforce in Demand**

A shortage in technology professionals continues to impact the industry as a whole. In demand skills impact funds' ability to deliver technology outcomes for members. Alternative operating models could be considered to alleviate this shortage, and allow funds to focus on key strategic capabilities that deliver better member outcomes.

12. **Zero Trust Architecture**

Cyber security continues to be a focus as the threat vector landscape continues to evolve. Attacks to service providers over the last quarter have impacted the big 4 banks, PwC and EY. The appointment of Australia's first National Cyber Security Coordinator will likely see Australia improve cyber security and response. Zero trust architecture is an approach in which no device, service, or system is explicitly trusted. Continual monitoring of usage patterns and data activity will mitigate the risk of a breach.

Ash Priest
Chief Executive Officer
ash.priest@novigi.com.au

Key Contributors

Raymond Lam
Senior Consultant

Nidhi Tyagi
Analyst

1. Superannuation Industry Trends and Recent Developments

1.1. Geopolitical Impacts

The global financial services sector has continued to experience uncertainty as First Republic Bank recently collapsed. Its remaining assets have been sold primarily to JPMorgan Chase at the behest of the FDIC. This follows the collapse of Credit Suisse, Signature Bank and Silicon Valley Bank in the previous quarter. Direct impact to the Australian financial market has not been felt, but does continue to highlight the need for financial resilience. Legislation and regulation in both the United States and Australia introduced following the 2008 financial crisis continue to demonstrate their effectiveness at preventing a major market collapse.

At home, the RBA raised interest rates by 0.50% over the last quarter following a pause in rate rises in April. The interest rate of 4.1% is intended to assist with combating the continued inflation, currently sitting at 7%. While this measure may help to curb inflation over the long run, the immediate effect has been a drastic increase to mortgage interest rates. On average, Australians are paying 6.12% on their mortgages, a significant increase from the low of 3.02% this time last year. In tandem with this, the rental market has also inflated, with unit/apartment rental prices increasing a staggering 10% on average across all Australian capitals in the last quarter alone. While the Wage Price Index has increased to 3.7%, roughly aligning to the interest rates, real wage growth continues to stagnate owing to the continued increase in cost of living. Compassionate release of super as a result of increased financial pressures may erode retirement benefits for the most vulnerable Australians.

The pressure on household budgets for Australians resulting from the combination of increasing accommodation cost and stagnating real wages may result in financial hardship for many. For older Australians who may be approaching retirement but are still paying off a mortgage or paying rent, retirement outcomes will be front of mind with superannuation playing a major factor in their decision making. Support for these members during this time will help ensure their retirement needs are met.

1.2. Mergers and Acquisitions

Over the last quarter, Mercer Super Trust has completed SFTs with both BT Super and HESF, reaching $63 billion FUM. ART has also continued to grow inorganically, having completed their SFT with Oracle Superannuation Plan, Woolworths Group Super, and with 2 further SFTs still in progress. The rapid industry consolidation continues to expose underlying data quality issues as successor funds grapple with legacy data that may be inaccurate. In combination with some recent events in the industry (see Enforcement Action), this continues to highlight the need for data governance throughout the industry to ensure members' best financial interests.

HESTA has also recently crossed the milestone of having over a million members. Further industry consolidation is likely to see a number of funds cross this milestone, creating further competition between these large funds for both organic and inorganic growth. Mercer Super Trust's recent SFTs have seen it increase to over 850,000 members, with ongoing activity indicating they may soon reach this same milestone.

Table 1. Superannuation Fund Mergers

MERGING FUNDS	MERGED FUNDS	DATE EXPECTED / COMPLETED	CURRENT STATUS
Hostplus Maritime Super	Hostplus	September 2023	In progress
Resolution Life - AMP AIA	Resolution Life	Feb - August 2023	In progress
Cbus EISS Super	Cbus	May 2023	Completed
Mercer Super Trust BT Super	Mercer Super Trust	April 2023	Completed
ART AvSuper	ART	2023	In progress
ART Oracle Superannuation Plan	ART	April 2023	Completed
ART Woolworths Group Super	ART	May 2023	Completed
ART CBA Group Super	ART	-	In progress
ART The Alcoa of Australia Retirement Plan	ART	-	In progress
Mine Super TWUSUPER	-	Early 2024	In progress
Active Super Vision Super	-	Mid 2024	In progress
Mercer Super Holden Employees Superannuation Fund (HESF)	Mercer Super	June 2023	Completed
Spirit Super CareSuper	Spirit Super	Late 2024	In progress

1.3. The Changing Administration Landscape

HESTA has announced they will be switching administration providers, moving away from Link Group to Grow. HESTA is the first major fund that will leverage Grow's services and represents a significant disruption to the industry. HESTA expects the transition to be completed by the end of 2024.

Iress have also announced their intention to move away from providing administration services, focusing instead on development and innovation of their core software offerings. These shifts in the administration space mean funds should remain informed on options on the market in order to plan for a potential future state, particularly as the regulatory and technology landscapes continue to change.

1.4. Regulatory Changes

The Government has continued to roll out regulatory changes in response to a number of ongoing concerns. Chief among these are financial and operational resiliency. In addition to these concerns, enhancing member outcomes continues to be a core focus for the Government.

1.4.1. Prudential Standard CPS 230

A version of Prudential Standard CPS 230 Operational Risk Management — created to improve the management of operational risk by all APRA-regulated businesses — was published by the APRA. CPS 230 will require funds to:

- **Be prepared for risk events:** Entities must make sure that processes are in place that support the management of risk occurrences and how they are handled in order to minimise their impact.
- **Be resilient:** The ability to go on operating while continuing to deliver essential services to consumers is a requirement for entities.
- **Protect the entity and the community:** Intensive preparation and business continuity training are required to ensure that the impact of disruptions is minimised and made acceptable.

Continued tracking of operational risks in a centralised tool like Archer will be critical for operational preparedness. Use of technology solutions to address risks is one approach, but should be tempered by the risks inherent in technology. Identifying new tools or capabilities required to address these risks may be necessary to comply with these new standards. Ensuring suitable metrics for each risk that can be monitored and reported on will ensure operations are maintained within acceptable tolerances.

1.4.2. Prudential Standard CPS 190

Prudential Standard CPS 190 was finalised by APRA in December 2022, and will be enforceable for RSEs from 1 January 2025. This Standard seeks to ensure financial resilience across the financial services sector, including superannuation. The Standard will require RSEs to have both recovery and exit strategies in the event of financial instability.

The recovery strategy will require funds to ensure sufficient liquidity is available to continue operations and to recover financially within a reasonable timeframe. For trustees, this will require a detailed understanding of where assets could be made liquid and continued monitoring of potential assets that could be leveraged as part of the recovery strategy. The Standard also requires trustees to define when the recovery strategy will be executed. Having the right data available in a format easily consumed by business stakeholders will be necessary for data-driven decision making and triggering of the recovery strategy.

The exit strategy will require funds to have a plan for orderly withdrawal from regulated activity. For many funds this is likely to be accomplished via SFT, tying into the existing SPG227 guidance.

1.4.3. Inventory of Transparency and Disclosure

ASIC released Information Sheet 278 which consolidates superannuation trustee transparency and disclosure obligations. The obligations fall into four main categories, each of which has a number of subcategories:

- **Transparency:** Compensation and payments, product dashboards, yearly member results, target market analysis, yearly member conferences, fund and product records, and retirement income strategy.
- **Member focused disclosure and communications:** Product Disclosure Statement, Financial Services Guide, fund information, & annual report.
- **Other notices to members:** Periodic statements, notices of major events, confirmations of transactions, notices of inactive insurance, and notifications of reportable situations.
- **Disclosure on request:** Details for RSE auditors, employer sponsors, and other interested parties.

Note that no new obligations have been introduced as part of INFO 278. This new Information Sheet is a cleanup of ASIC guidance, and does not constitute legal advice by the regulator.

1.4.4. Introduction of Payday Super

From 1 July 2026, employers must pay employees' superannuation at the same time as their paychecks and earnings rather than quarterly. The delayed enforcement date is intended to enable employers and funds to prepare for the change. The Government hopes to reduce the yearly estimated $3.4 billion in outstanding super by switching to payday super. According to the Treasurer, synchronising super payments with salary payments would simplify employers' payroll management and ensure fewer liabilities building up in their finances.

While generally considered to be beneficial to members, the switch to payday super may create issues for small employers. The Council of Small Business Organisations Australia (COSBOA), a small business advocacy group, suggested that the increased cost related to software, transaction fees and processing times may become a burden to small business owners. Although the Small Business Superannuation Clearing House remains free, small businesses that do not qualify will be required to use a paid clearing house service, either fund sponsored or independent.

For larger businesses, the increased frequency of super payments may result in administrative overhead unless automated super payments can be made. Clearing houses that support integration with payroll platforms will be advantageous to large employers that may have a number of concurrent payment schedules.

Superannuation funds should ensure small businesses are not disadvantaged by the higher payment frequency required by the new legislation, such as through transaction fees or other manual processes. Simultaneously, they should look to implement solutions that will enable direct payroll integration to streamline the payment process for larger employers.

1.5. Enforcement Action

1.5.1. AMP Fined for Misconduct

The Federal Court has found AMP guilty of charging life insurance premiums and advice fees for deceased customers, ordering it to pay $24 million in fines. While 4 AMP subsidiaries were found guilty, only AMP Life and AMP Financial Planning are liable to pay fines. This ruling concludes one of the proceedings against AMP opened as a result of the Haynes Royal Commission in 2018.

In the Federal Court Ruling, the Judge cited disjointed systems as one of the core reasons for the contravention. Disparate workflow, administration and complaints systems that did not communicate resulted in members being charged fees and premiums inappropriately. The lack of integration and centralised systems meant member advice was not appropriately propagated throughout the ecosystem. Manual handling and adjustments were used to address the lack of system integration. The Judge also cited AMP's systemic inability to perform system upgrades to address system deficiencies, even where these upgrades were required to address legislative or regulatory requirements.

Taken together, these highlight the importance of having robust and integrated solutions to effectively manage members and their money, as well as having robust processes to ensure critical upgrades are performed where deficiencies are identified. The importance of streamlined orchestration and integration are highlighted by AMP's inability to properly service its members. Ensuring integrations are well planned and fit for purpose will ensure Fund ecosystems do not become disjointed.

1.5.2. AustralianSuper Self-reports Overcharging Members

AustralianSuper has self-reported overcharging fees and insurance premiums to 100,000 members, and will refund a total of $70 million to those impacted. Under Section 108A of the Superannuation Industry (Supervision) Act, funds are required to annually review and identify members holding multiple accounts, and whether it may be appropriate to merge these accounts.AustralianSuper has indicated it would review its technology and processes, and make adjustments to identify relevant members.

While the underlying issue may relate to poor data quality and inappropriate processes, caution must be taken when identifying relevant members. Some members may elect to hold multiple accounts for various reasons, including for tax purposes, insurance, or because of legacy arrangements. As such, it is not always appropriate to merge members in all circumstances. Careful consideration of how members are identified and engaged is needed to ensure members are supported through these processes.

As one of the largest super funds in Australia, it may be of value for other funds to review whether there may be similar cases in their own membership. However, care should be taken where members have deliberately opened multiple accounts.

1.5.3. Future Super Self-reports Historical Greenwashing

Future Super self-reported a breach of the greenwashing regulation under CPG 229. The post in question was made on Facebook in 2019 where Future Super insinuated that the entirety of their FUM at the time — totalling $400 million — would have been invested in fossil fuels if members hadn't chosen the fund. It should be noted that the breach occurred before CPG 229 was released in November 2021, and before the release of INFO 271 in June 2022. For their self-reporting of this matter, Future Super was fined a nominal amount of $13,000 by ASIC. The obvious question this raises is whether any historical information or marketing posted by funds on social media platforms should be subject to the regulation, and whether funds need to review and remove historical marketing material on social media platforms. Legal guidance should be sought on this matter.

ASIC has continued to cite greenwashing as a priority issue, and Treasury has approved an additional $4.3 million over the 2024 financial year to enable ASIC to pursue enforcement activities.

Continued monitoring of marketing material will be required to ensure compliance with CPG 229 and INFO 271. Given the development in natural language processing and generative AI technology, there is an opportunity to leverage these as tools for compliance. However, there may be implications to privacy and ethical concerns that will need to be addressed if these technologies are used.

1.5.4. Penalty & Infringement Notice against OnePath Custodians & Insignia Financial

APRA has fined Insignia Financial and OnePath Custodians $1.5 million for failing to direct member contributions to a MySuper product. Starting in 2022, APRA found 125 members whose payments were not going to a MySuper product despite the fact that the member had not specified where the money should be invested.

According to the Superannuation Industry (Supervision) Act, trustees are required to route contributions to a MySuper product where a member has not specified a product. In addition to the penalty, APRA is monitoring OnePath Custodians to ensure that any members who had a financial loss as a result of this violation are promptly and completely reimbursed.

This infringement highlights the need for streamlined processes for creating and contributing funds to new members that can be monitored. In light of this, it may be prudent to ensure fund processes and service providers are clear and compliant with legislative requirements.

1.6. Data Quality in Focus

The ongoing mergers and enforcement activities have continued to highlight the need for oversight of data quality. Novigi is aware of a number of recent ongoing and completed SFTs where data quality was a major hurdle and required significant effort to rectify. Similarly, poor data quality has been implicated as the root cause in a number of compliance breaches as noted earlier in this report. These examples highlight the importance of maintaining data quality for ongoing business operations as well as for more significant activities like SFTs. Ensuring data quality is maintained should be a priority for all funds.

Beyond compliance, having quality data remains a focus for funds as data-driven initiatives come to the forefront, particularly as AI technologies mature and become commonplace in member-facing platforms. AI tools are only as powerful as the underlying data provided to them.

Mature data governance and data practices should be a key focus for uplift. Data quality will be a key determinant of future capabilities in an increasingly data-driven world. In addition to close collaboration with service providers, ensuring roles like data stewards and data owners are distributed throughout the organisation will enable proper monitorin and management of data quality.

1.7. Super Entitlements for Gig Workers

HESTA CEO Debby Blakey has renewed calls for compulsory superannuation guarantee payments for gig workers. Gig work, semi-formal employment managed through digital platforms, currently does not qualify for SG payments. These types of employee-like forms of work are common in a number of industries, including transportation, food delivery and aged care, and are becoming increasingly common in other sectors as well. Work Safe Australia has indicated over 100 different platforms are currently available for facilitating gig work.

Under these employee-like arrangements, no formal employment agreements exist between the worker and the employer. As such, the superannuation guarantee is not applicable. Industry Super Australia have suggested that these workers may be missing out on $400 million in super contributions per year, highlighting that these individuals may be "vulnerable to poverty" in the future.

As part of their election campaign, the Albanese government flagged reforms to the Fair Work Act 2009 to broaden the definition of work to include gig work. The Government's submission period on the "Employee-Like - Forms of Work" consultation paper closed in May 2023. This consultation paper sought submissions related to employee-like arrangements, which included both independent contractors and "on-demand" workers, the government term for gig workers. The Government is seeking to set minimum standards that employers must abide by in hiring these types of workers.

A significant number of superfund members would be engaged in gig work. These types of jobs are often undertaken by new entrants into the labour market, or those whose regular occupation may not provide sufficient income. As such, it may be in the interest of funds to ensure these members' retirement outcomes are met by sufficient contributions. If implemented, these reforms may also mean members could receive SG contributions from multiple "employers". It will be in trustees' interest to be able to identify these members through clever use of data to ensure these members can be adequately supported and receive their fair share of super payments.

This change also creates opportunities for funds to engage with a broad range of platforms that facilitate gig work. These could become classified as employers under the reforms and may become targets for default fund relationships. Consideration should be made on whether partnering with these platforms aligns with the growth strategy of funds, as well as the underlying technology required given the mechanisms through which these members are paid.

1.8. Quality of Advice Response

6 months after the release of the Quality of Advice Review, the Government has released its official response as part of its Delivering Better Financial Outcomes package. The Government has elected to take on 14 of the 22 recommendations either in full or in principle. These changes will be delivered through three streams of legislative change:

STREAM 1: REMOVING REGULATORY RED TAPE

This stream of legislative change focuses on the removal of steps, processes and protections that add to the cost of provisioning advice without any benefit to the customer. The most significant change is the removal of mandatory Statements of Advice. Instead, advice will need to be provided with advice records that are fit-for-purpose, and are suitable to the customer's needs. Consultation is underway to determine what form these records will take.

Other changes under this stream include simplification of member consent forms and fees, flexibility on how the financial services guide requirements could be met, and removal of adviser protections and exemptions.

Given the changes under the Retirement Income Covenant and members increasingly seeking advice through challenging economic times, accessible financial advice will be important as one pillar of member retention and acquisition. Superannuation funds should ensure their members' advice journeys align to expectations of their broader ecosystem.

STREAM 2: EXPAND ACCESS TO RETIREMENT INCOME ADVICE

This stream of change focuses on enabling funds to provide retirement advice and information to members. Amendments to the collective charging restrictions will enable funds to provide advice at a lower fee, enabling more members to access this service. Treasury will also seek to provide legal clarity around current practices for payment of advice fees. These changes will also better allow funds to provide specific retirement advice to members, with clarity around what topics funds can advise on.

The clarity around advice topics will allow the redesign of advice journeys. In conjunction with service providers, funds should examine what advice journeys are currently in use, and how these might be adapted when the legislative changes have been clarified by the Government.

STREAM 3: EXPLORING NEW CHANNELS FOR ADVICE

In conjunction with Stream 2, the Government will explore the expansion of advice provision by other institutions within the financial services industry. Perhaps the biggest impact under this stream is the enablement of "non-relevant providers" to provide personal advice to customers. These non-relevant providers do not necessarily need to qualify as financial advisers under the current Corporations Amendment (Professional Standards of Financial Advisers) Act 2017 legislation. Minimum education standards apply, but will not be as stringent as the qualifications required for relevant providers.

When finalised, funds should identify potential non-relevant providers and ensure they are adequately trained to provide personal advice. This will expand the ability to provide service to members, particularly given the increasing need and desire for advice. These may be a combination of advice provider staff, internal staff, or staff from an insurance provider. Given the number of potential parties that may be involved in the provision of personal advice to their members, it must be ensured that advice records across various relevant and non-relevant providers can be synchronised and shared to ensure members have an omni-channel advice experience and receive consistent advice . Key to this will be integration of systems maintaining the fund as an orchestrator of service capabilities.

In addition to broadening who can provide advice, the Government is also seeking to expand the definition of personal advice and access to affordable retirement advice. Controls will also be implemented to ensure the advice provided is "good advice". This will involve the introduction of a "good advice duty", and finalisation of the "Financial Adviser Code of Ethics".

Within these three streams, funds should consider how digital advice might be implemented to enable the provision of scaled advice to members. The broadening definitions might result in personal advice being provided via digital tools. It should be considered whether this aligns to member engagement strategies, or whether there is a preference by members to speak to another person for financial advice. Regardless, digital tools will become a key factor as members increasingly seek advice, particularly during financially challenging times. Scalable solutions that integrate into the broader ecosystem should be considered.

1.9. PwC Tax Scandal

PwC has been accused by the Tax Practitioners Board (TPB) and by the Senate of using confidential information gained through consultation with Treasury to assist its clients with evading tax. These consultations were undertaken as part of Treasury seeking input on proposed legislation. These breaches occurred between 2013 to 2016. While the matter is still being investigated by the Senate committee, the TPB and the Federal Police, the evidence surfaced suggests that PwC monetised the confidential information, assisting its clients with avoiding the proposed tax laws. Further, the interim report by the Senate suggests that PwC inappropriately used claims of legal professional privilege to withhold documents requested by the ATO.

Although the matter is still under investigation, it does highlight the importance of vendor management and ensuring any information shared with third parties must remain confidential. While there may not be any immediate impacts to the superannuation industry, it may be of value to review any vendor management practices, particularly around file sharing, system access and confidentiality. Organisations will need to ensure their information is not inappropriately leveraged by its third party service providers, and that legal and technology protections are in place that allow the enforcement of confidentiality agreements.

2. Technology Trends and Recent Developments

2.1. Generative AI Adoption

Generative AI technologies are rapidly being adopted by consumers. Microsoft's Bing Chat, a production implementation of GPT-4 for search purposes, has garnered over 100 million users since its release. Similarly, OpenAI's own release of its generative AI technology has an estimated 1 billion visits per month and 100 million active users. The proliferation of these tools, as well as others racing to implement similar technologies (Google's Bard, Amazon's Bedrock and partnership with HuggingFace), means we are likely to continue to see new solutions leveraging generative AI.

OpenAI's GPT-4 is already being used professionally and in academia. Novigi has previously written about the potential uses of generative AI technology. High value, high impact uses cases include:

MEMBER ENGAGEMENT

The interactive nature of the technology means it could be used to proactively reach out to members during life events within predefined patterns. These events might trigger personalised correspondence written by the AI to prompt a member to take an action or make a decision. The generative engine could also be used as a sophisticated chatbot for engagement through websites or apps, enhancing members' digital experience.

FINANCIAL ADVICE

The proposed changes to financial advice as a result of the Quality of Advice Review may open up opportunities to use generative AI to facilitate the advice process. As clarity is provided around how digital tools could be used to provide advice, there is opportunity for generative AI tools to generate fit-for-purpose advice statements in line with the updated advice records obligations.

STRUCTURING DATA

One of the key strengths of generative AI technology is to infer information from unstructured data. Even early examples of the GPT engine were able to create structured data from unstructured text. This provides an efficient way to create new datasets based on documents, written text, and other unstructured sources. This data could be used to assist with member engagement efforts, or to optimise backend office processes.

SENTIMENT ANALYSIS

The natural language abilities of generative AI could also be used for sentiment analysis. Using a wide variety of data sources, this analysis could enable funds to develop a clearer picture of the broader sentiment of members and potential members. Marketing can then be conducted to address those outcomes should it be deemed appropriate or necessary.

However, caution should be applied as these technologies are implemented. A recent high profile case involving a lawyer in the United States using ChatGPT to generate citations for a court submission has raised concerns as to whether the technology can be "trusted". It was found that the submissions were "fake", having been generated by the AI (likely by stitching together a number of historical cases). The lawyer had not done his own research to confirm the authenticity of the precedent cases, and simply copied the outcome from the AI engine. Similarly, there are concerns in schools and universities that students may be using ChatGPT to complete assignments. Investigations have already shown that the technology has impacted student work ethic, as well as how they choose to complete their work.

The legislative framework for managing these technologies has not kept pace with technical development. As such, funds should consider their own obligations with regard to the use of this technology. The examples highlighted indicate that while the technology has the potential to be useful, it must also be used in a restrained manner. These types of generative AI technologies operate in the dark, with little transparency on why the outcomes have been presented.

The risks associated with generative AI are not new, but are rapidly being revealed as the user base expands.

BIAS

Generative AI technologies are built on historical data which is used to model human responses and present outcomes. However, given there may be historical inequities built into the data, there is a risk that these biases may be presented back to members. This was evident during the launch of the Apple credit card in 2019, where the algorithm had a bias against women, giving them far lower credit limits compared to men with the same wealth.

ACCURACY

As clearly demonstrated by the example with the lawyer in the United States, generative AI can create responses based on examples, but may end up creating a result that is not factual. ChatGPT was trained on data from the internet, which obviously contains multiple perspectives and non-factual information. The responses given by the AI engine are therefore highly dependent on the data it was trained on. Inaccuracies may result from inappropriate inputs.

INTELLECTUAL PROPERTY

Generative AI is trained on material produced by humans that may be subject to copyright. Again, the AI has no conception of copyright or plagiarism. As such, content produced by the engine may be subject to copyright that may not be immediately obvious. A key example is DALL.E, OpenAI's image generation solution. This technology takes images published to the internet, and learns how to generate art in those styles. However, the images it is trained on may have been subject to copyright, and artists noticed the AI generated images that were compositions of their own works. The legalities around this are currently unclear.

CYBER SECURITY AND FRAUD

Generative AI technologies continually learn and develop as more input is provided. However, this cycle of continued learning means the engine can be manipulated. Bing and other earlier versions of GPT could be manipulated into producing racist content, or would behave erratically if a specific series of prompts were provided. This suggests that the AI engine could be manipulated to perform actions that might otherwise not be permitted. Considerations need to be taken as to what the engine can and cannot do, and how to restrain the engine to ensure compliance.

TRANSPARENCY

Because the AI engine learns by pulling together content from numerous sources, it is not always evident why the outcome has been produced, even to those who created the system. As such, there are concerns on why a specific output may have been generated. Not being able to trace the decision may be a problem where high impact content is being produced. Ethical concerns are also raised if it is unclear what data has been used as input. Similarly, privacy concerns may arise as a result of the inputs and outputs being stored, which may result in private data being held and used by the AI engine. Again, the appropriateness of the use case and restraints will assist to ensure the technology is applied where it can produce the most good.

A survey by Gartner indicated that 38% of executives believed that generative AI technology would be useful in customer-facing use cases. The considerations herein should be used to guide how the technology is implemented. It may be that the tool is more suited to assist humans with their tasks, increasing efficiency, rather than being "let loose" and allowing it to interact with members directly.

For superannuation funds, the technology continues to hold promise, but will need to be considered carefully as we learn what it is capable of, and what pitfalls might present themselves as the technology continues to be developed and used. The rapidly evolving nature of this technology means these lessons will likely be learned quickly. Funds should start considering how this technology might be applied before the window of opportunity narrows.

2.2. Technology Workforce In Demand

A number of Novigi's clients have noted increasing difficulty in hiring in the technology space. The current boom in technology is driving a highly competitive labour market for skilled technology professionals, making it difficult to hire and retain talent. This has been driven by a number of factors, but can be summarised into the following categories:

POST-COVID RECOVERY

Projects and initiatives that were put on pause during the COVID pandemic have gained momentum and are rapidly gaining traction. Over the last 2 years, Novigi has seen technology initiatives rapidly accelerate and expand, transforming how enterprises operate. This has necessitated an increase in resourcing to enable these technology changes.

CYBER SECURITY THREATS

Cyber security has remained in focus since the Optus and Medibank breaches last year. Companies are rapidly working to uplift their cyber security capabilities and ensuring their business operations are secured against threat actors. Novigi notes that experienced cyber security resources have been a challenge to acquire and retain by our clients.

FOCUS ON DATA

Businesses are increasingly focusing on data, its applications, and finding ways to generate value from it. Data quality and management are now at the forefront of attention. Many of Novigi's clients are currently undertaking large data programmes. While data maturity varies between organisations, the capabilities required regardless of scale and maturity are similar, stretching the workforce.

CONSUMER DATA RIGHT

Novigi notes a number of organisations across financial services starting to prepare for CDR. This includes funds, non-bank lenders and insurers. Across our client-base we note various threads of conversation focusing on how the as yet undefined CDR requirements can be met given the current state of an enterprise's technology ecosystem. Again, technology capability is being recruited to prepare for CDR rather than waiting until the legislation lands.

In addition to these broad trends the momentum around industry consolidation continues, with an increasing number of funds approaching or exceeding the million member milestone. The challenge for these newly merged funds is to create ways of leveraging scale by ensuring their underlying technology platforms are efficient and minimise duplication of capabilities. Smaller funds are also looking to increase efficiency and agility if they are to remain competitive.

For the industry as a whole, challenges around member engagement and outcomes remain a high priority. With digital technology being ubiquitous in our daily lives, heightened member expectations are driving a need for funds to create ever increasing improvements in productivity and service outcomes. Of course, technology plays a critical role in achieving this through various channels, but this is only facilitated by a workforce with the relevant expertise.

In demand professional skills are shifting and driving competition for talent for key critical digital roles. COVID has changed the way we work and has caused many to reevaluate their relationship with work and the traditional office. Novigi notes that many organisations are calling for staff to return to the office, while others are retaining their remote working models. Given the challenges with talent acquisition in the technology space, there is a need for organisations to rethink their acquisition and retention strategies and to explore alternative operating models.

Outside of core internal transformation to operating models and technology platforms, there are many pathways through which funds can be augmented to enable the provision of quality member services. This may include:

- Partnering with BPO providers and outsourcing repetitive tasks, enabling focus on product development and orchestration.
- Partnering with technology providers to enhance or augment key strategic technology capabilities.
- Outsourcing the management and maintenance of specific technology platforms, allowing to focus on using deriving value from the technology.

These approaches could assist funds with ensuring the right technology capabilities are available internally while outsourcing the risk and overhead associated with lower-value commodity services. To facilitate thinking around these new operating models, the following questions should be considered:

- How is value provided to members, and what services would be most valuable as in-housed capabilities?
- What commodity services are currently supported internally that could be outsourced to an external service provider?
- How can funds incentivise service providers to drive efficiency in the services they offer?
- What key technology skill sets can funds recruit for and support internally as compared to capabilities that are better outsourced?

In considering these questions, superannuation funds will better position themselves to provide services to their members. They should ensure value can be generated through key technology capabilities given the current competition for skilled professionals.

2.3. Zero Trust Architecture

Cyber security continues to remain a high priority for all businesses. As the threat vector landscape continues to evolve, the number of attacks continues to increase. The impact of those attacks have serious consequences ranging from damage to competitive position to brand reputational impacts and public embarrassment. A poignant recent example is the ransomware attack on HWL Ebsworth, a law firm used by the Federal Government and all of Australia's big four banks. Similarly, PwC and EY were among the many companies that were recently attacked when their file sharing solution MOVEit was breached. In all these cases, some sensitive documents have already been released by the attackers, and the full impact of these attacks remains to be seen.

The seriousness of cyber security and responses to attacks can also be seen by the recent appointment of Air Marshal Darren Goldie as Australia's first National Cyber Security Coordinator following a four month cabinet selection process. In this new role, Air Marshal Goldie will be responsible for coordinating and managing Australia's cyber security preparedness and coordinating responses to attacks, both within the Government and with businesses. He will work closely with various government agencies in order to ensure efforts to shore up cyber security gaps and responses to incidents are concerted.

Zero trust architecture is one approach to addressing this evolving threat landscape. Joe Biden's May 2021 *Executive Order on Improving the Nation's Cybersecurity* requires government agencies to implement this architectural approach to secure their systems against foreign adversaries. Section 10(k) of the executive order provides a good summary of the principles encompassed by this approach. In essence, zero trust architecture takes the following approach:

LEAST PRIVILEGE

Aligning to current cyber security best practices, least privilege access is provided to users or systems in order for them to complete their jobs or tasks. This allows operations to be maintained while restricting the potential damage that might occur as a result of a breach using specific credentials.

NO IMPLICIT TRUST

No implicit trust is afforded to any device, node, service or other digital elements connected to the network or to enterprise systems. This principle assumes that the network is already breached both internally and externally. Constant monitoring of activity within the network allows anomalies to be identified and contained before further damage can be done.

DATA-DRIVEN SECURITY

A comprehensive data monitoring approach is taken to ensure operations are proceeding as expected. Movement, update, or modification of data is monitored to ensure data is protected in real-time. Access can be closed off in the event an anomaly occurs, or if malicious activity is suspected.

In order to implement these architectural principles, granular security and identity access management rules are required that define permissions for each role within each system. In this way, monitoring can be established to alert users when suspicious activity occurs. Denial of access to threat actors, both internally and externally, is critical to containing any breaches and ensuring the security of sensitive member data.

Funds should continue to prioritise the enhancement of their cybersecurity measures. However, it is crucial to acknowledge that they do not have oversight or control over customer devices. Zero trust approaches should be considered in this space to secure networks. Given the breadth of service providers within a superannuation fund ecosystem, a similar approach should also be taken here. The MOVEit breach that impacted PwC and EY highlights the potential damage that may occur from a provider incident.

Novigi

Novigi Pty Ltd | Sydney | Melbourne | Wollongong | Colombo | novigi.com.au