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AI Retirement Information Centre

Edward Tam and Abarren Chen
June 2025

Presented at the 2025 All Actuaries Summit

The Actuaries Institute acknowledges the traditional custodians of the lands and waters where we live and work, travel, and trade.

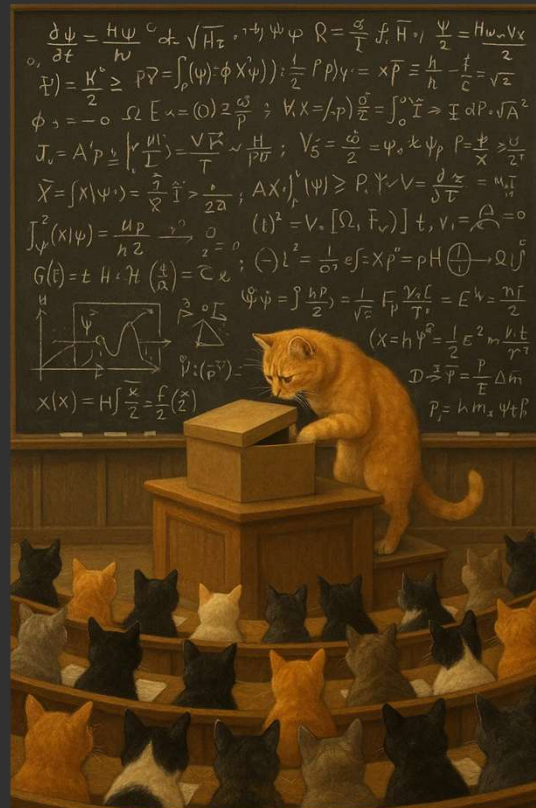
We pay our respect to the members of those communities, Elders past and present, and recognise and celebrate their continuing custodianship and culture.

Agenda



• Background	01
• Demo - Retirement Income calculator without AI	02
• How AI can be used in Retirement Planning	03
• Demo – AI Assisted Retirement Calculator	04
• Demo - AI Retirement Information Centre	05
• AI Data Security and Privacy	06
• Current Limitations and Future Improvements	07
• Conclusion	08
• Questions	09

Background



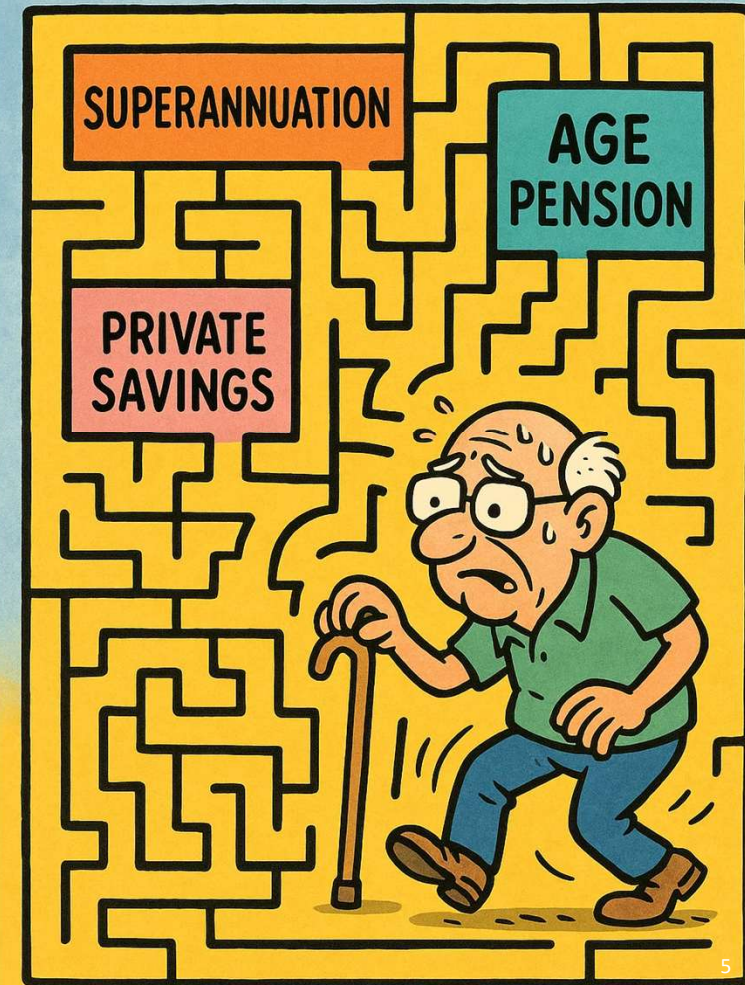
01

Australia's Super & Retirement System

- Australia's superannuation and retirement system is **complex**.
- It is **difficult** to find consistent, trustworthy and easy to understand information

Where can members find retirement information?

COMPLEXITY OF AUSTRALIAN RETIREMENT ARRANGEMENTS



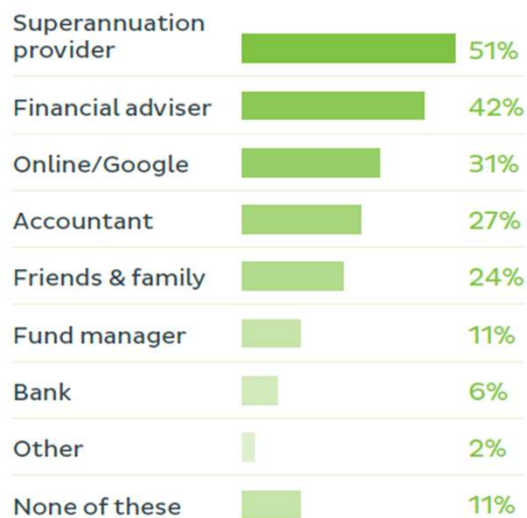
Where do members find retirement information ?

The two most common retirement information sources were:

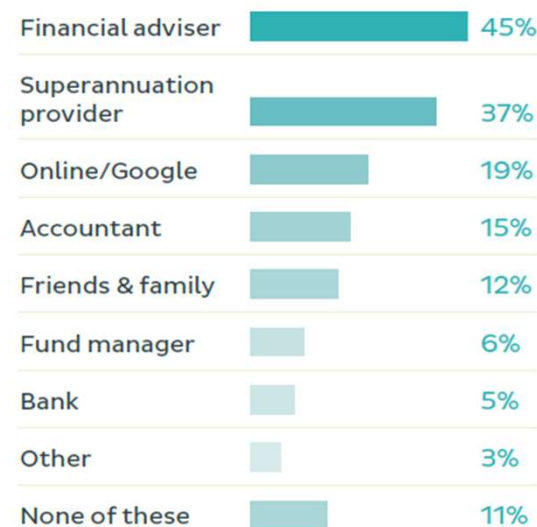
- Superannuation providers and financial advisers.

What is the issue?

PRE-RETIREEES

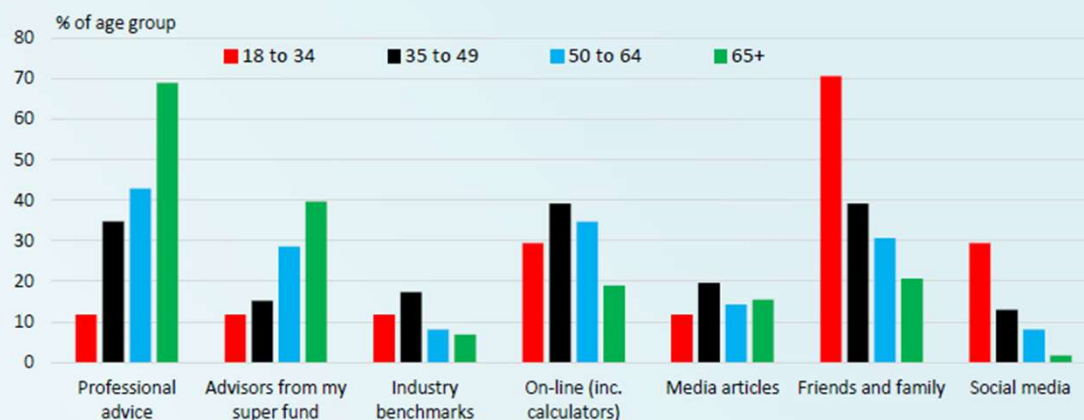


RETIREEES



Source: What I wish I knew about retirement - TAL

Chart 2: For those who consult information, the percentage who have consulted each type



Source: ASFA Survey on superannuation and retirement

Financial Advice Gap



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Financial Advisers Shortage

- Over 5 million Australians are at or approaching retirement, yet only 16,000 advisers were practicing (2023)



Lack of Financial Literacy

- Only 1 in 3 Australians feel confident making financial decisions.
- Less than one-third understand superannuation products and retirement income options.



Barriers to Financial Advice:

- **Cost:** 51% cite high fees as a barrier
- **Perceived lack of need:** 27% believe they don't require financial advice.
- **Trust issues:** 20% don't trust financial advisers
- **Access:** 15% find it difficult to locate a reliable adviser

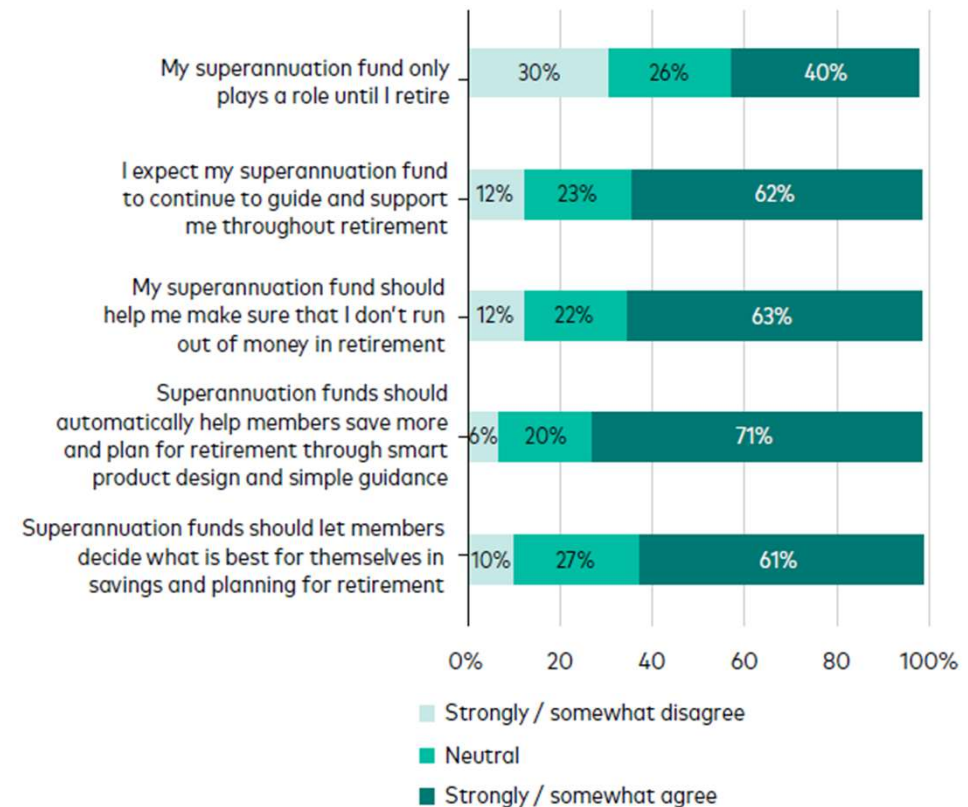
Source: Vanguard Report How Australian Retires June 2024

Roles of Superannuation Fund

- 2 in 3 Australians believe their super fund should ensure they don't run out of money in retirement.
- Almost 3 in 4 Australians believe their super fund should automatically help them save more and plan for retirement through smart product design and simple guidance.
- Retirement Calculators
- Regulator's findings

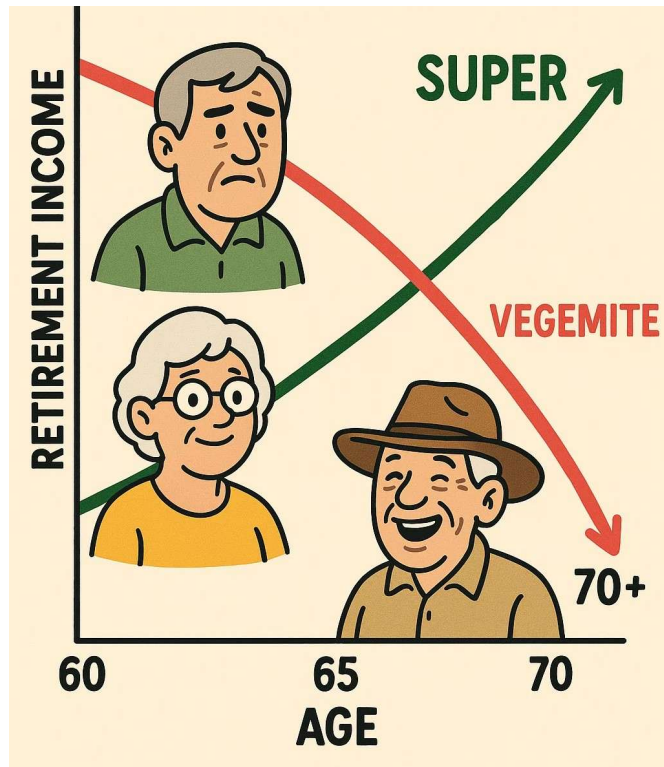
What is the issue with the retirement calculators in the market?

Expected role of super funds amongst all respondents



Source: Vanguard Report How Australian Retires June 2024

Current Retirement Income Calculators – What are the issues?



There are currently **two** main types of calculators:

Simple Calculators

- Easy to use
- Arbitrary assumptions on spending and retirement income
- Less accurate results

Complex Calculators

- Detailed calculations
- Considers budget and member's own circumstance
- Require members to fill pages of inputs before results

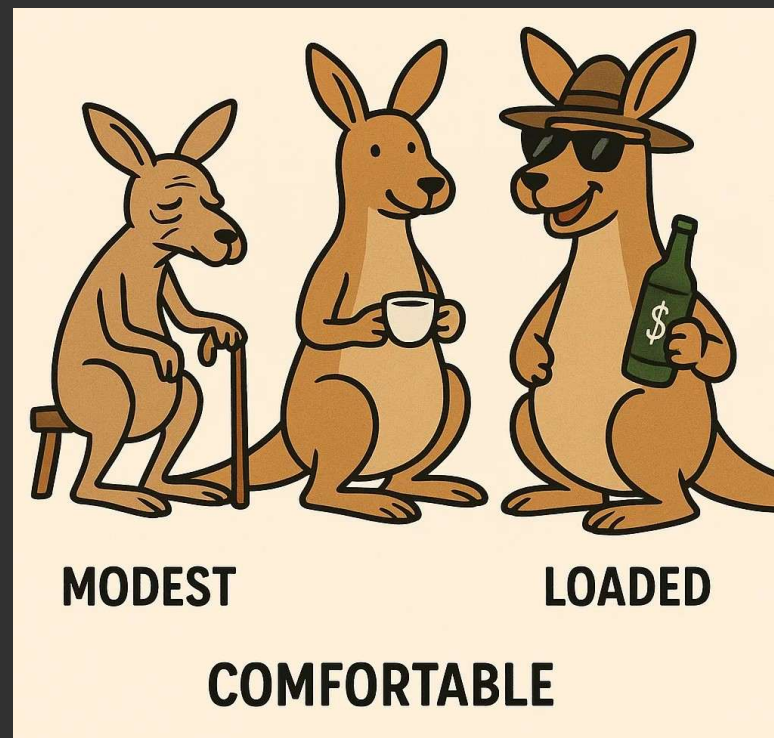
Calculator projections has **large variations** (42%) with the same input
– Reducing Trust

Low Engagement with members – Too many questions with too little support/example of inputs

Is there a solution that can incorporate the benefits of the two main types of calculators?



Demo - Example Retirement calculator with No AI



02



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Demo of Example Retirement calculator - No AI



Superannuation Calculator - DatalyRetire

Manual Calculator Mode

About you

Your age:
 Your expected salary (\$):
 Employer contributions (%):
 Current super balance (\$):
 Gender:
 Relationship status:

Planning

Management

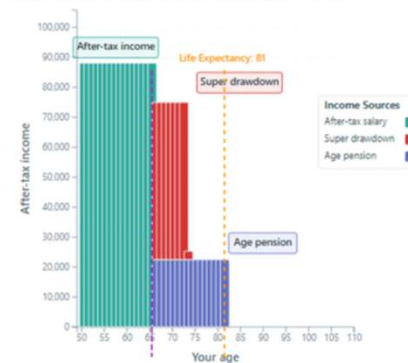
Scenario Analysis

Disclaimer and Assumptions

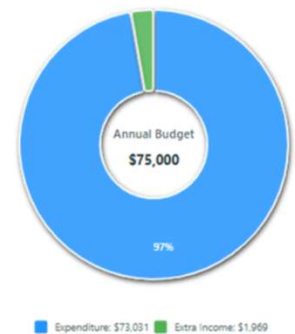
Your Super Fund Growth Over Time



Your Retirement Income Sources Over Time



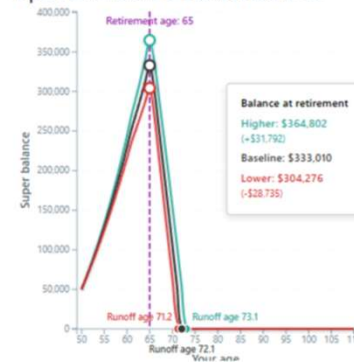
Total Annual Budget Breakdown



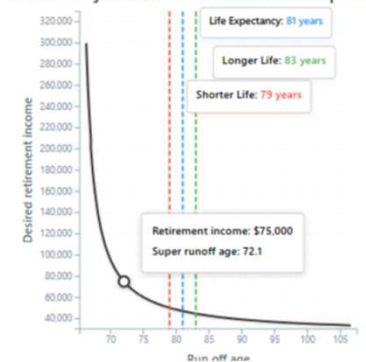
Balancing Retirement Income and Life Expectancy



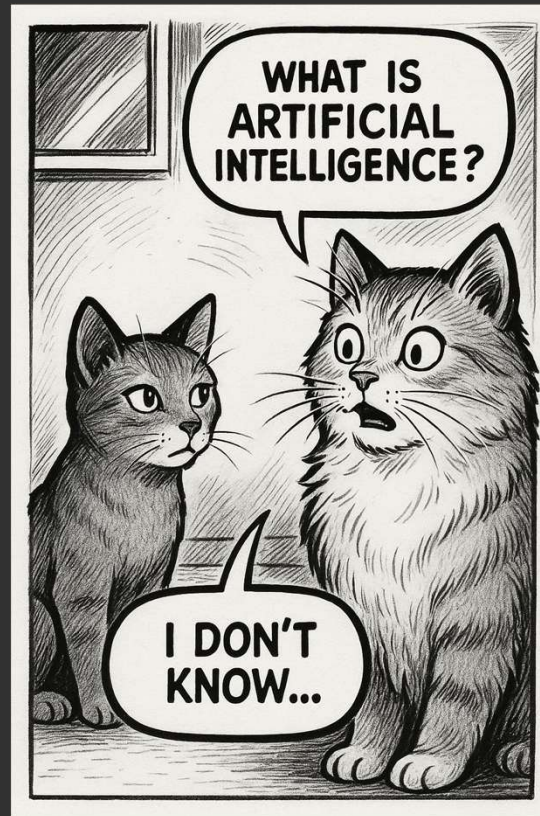
Impact of Different Stress-Test Scenarios



Income Adjustments for Extended Life Expectancy



How AI can be used in Retirement Planning



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AI Retirement Income Information Centre

Purpose:

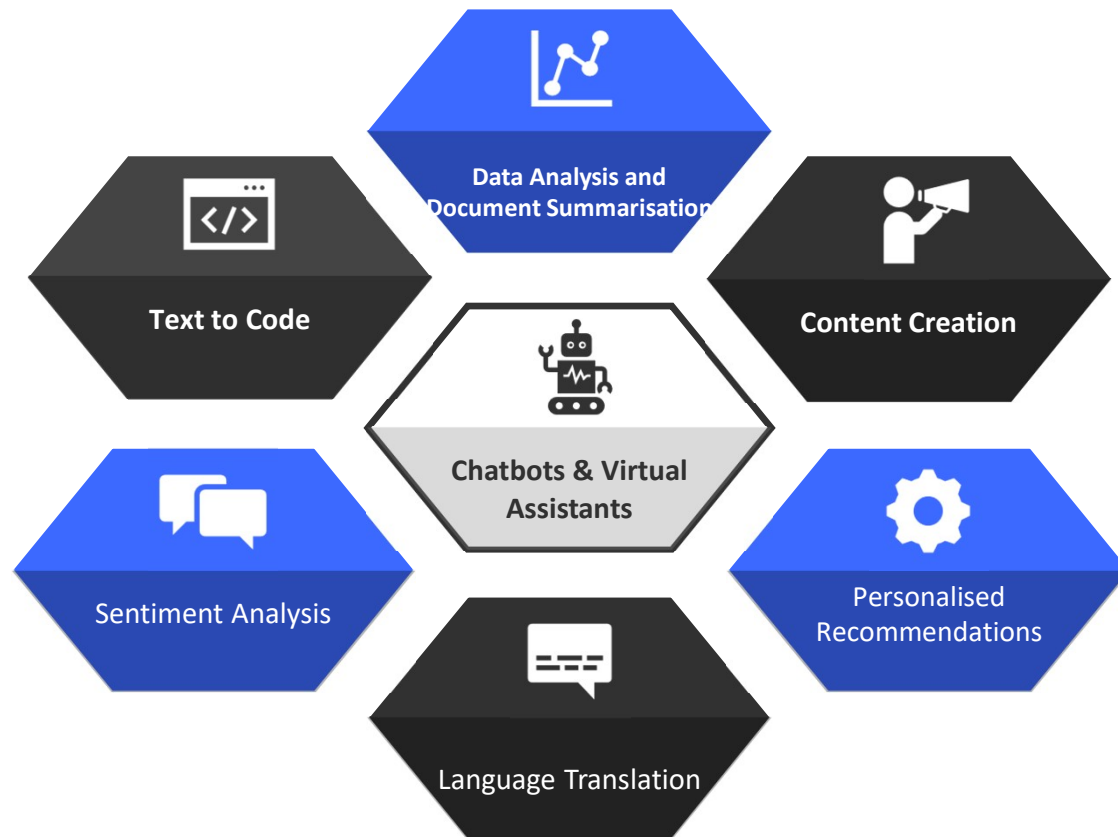
- Help members without access to a financial planner and allow member to find accurate and up-to-date retirement information in one place
- Educate members on retirement via AI interactions and suggestions
- Assist Superannuation funds collect information on member's needs
- Encourage member engagement with the superannuation fund
- Not to provide financial advice



Incorporating AI does not necessary require a long and costly project, it can be incorporate into current tools provided by superannuation funds.

This live demo is one example how AI can be incorporated into superannuation funds retirement income calculator.

How AI can improve member engagement, education and access to information



Demo of AI-Assisted Retirement Calculator



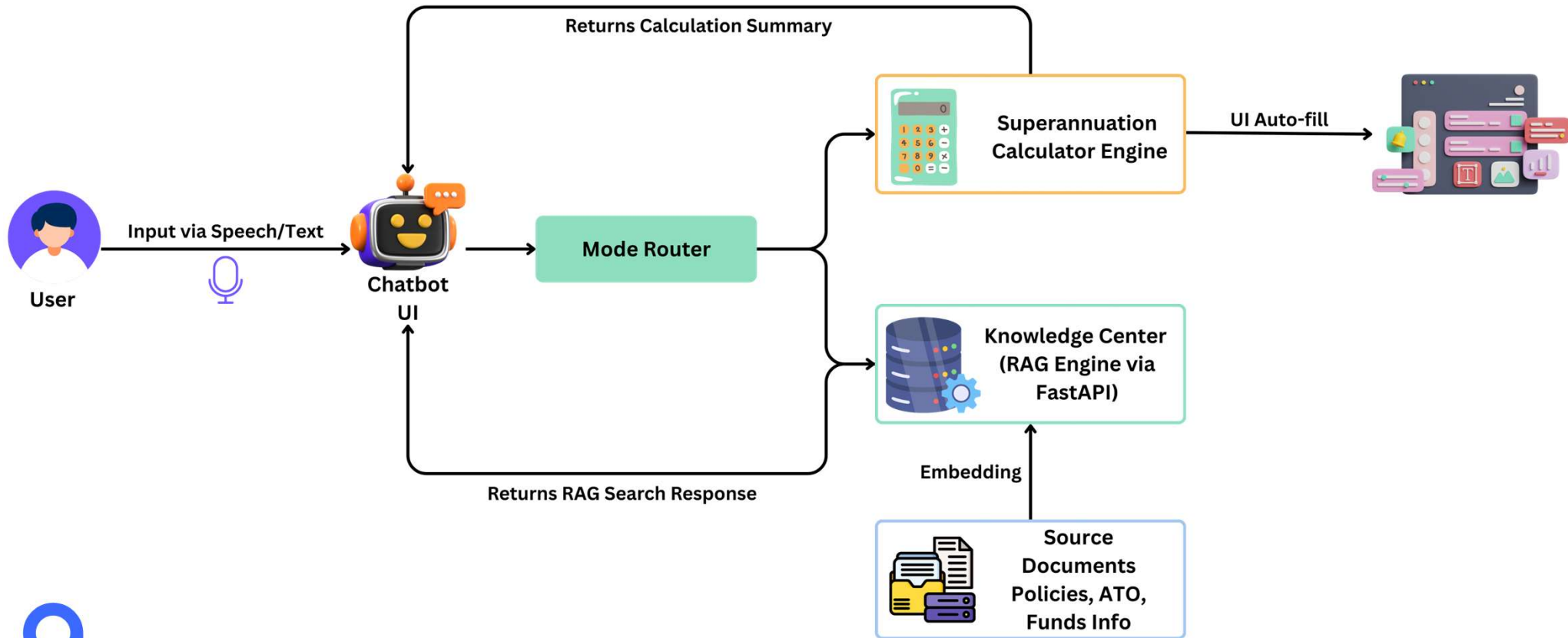
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High-Level System Architecture Diagram



Demo of AI-Assisted Retirement Calculator



Superannuation Calculator - DatalyRetire

Assisted Calculator Mode

About you

Your age:

Your expected salary (\$):

Employer contributions (%):

Current super balance (\$):

Gender:

Relationship status:

Planning

Management

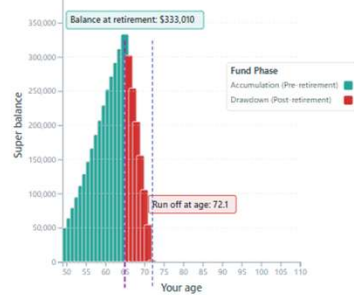
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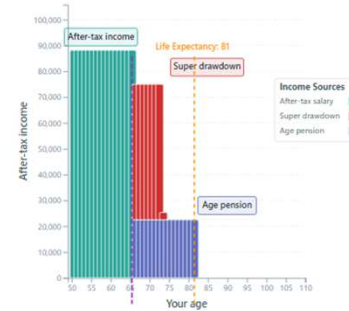
Basic Superannuation Visuals

Advanced Superannuation Visuals

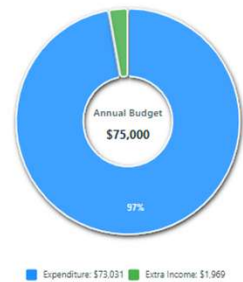
Your Super Fund Growth Over Time



Your Retirement Income Sources Over Time



Total Annual Budget Breakdown



DatalyRetire

Welcome to the Dataly Retirement Income Calculator!

I'm DatalyRetire, your smart superannuation assistant here to estimate your retirement income. Just share key details—like age, salary, contribution rate, or gender—and I'll crunch the numbers for you! Here are some examples of what you can enter:

- ✓ "I am 45 years old" → My age is 45
- ✓ "My salary is 100000" → My annual income is 100000
- ✓ "My current super balance is 250000" → My current super balance is 250000
- ✓ "I want to retire at 65" → My retirement age is 65

Tip: Just enter your details, and I'll handle the rest! 🤖

Ask anything about Superannuation

Calculator

Knowledge Center



Send

Demo of AI Retirement Information Centre



05



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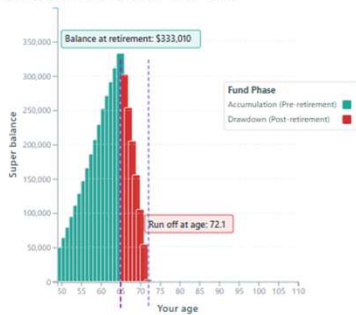
Demo of AI Retirement Income Information Centre



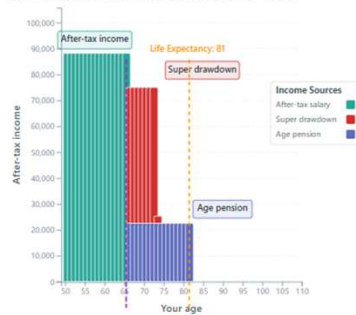
Superannuation Calculator - DatalyRetire

Autonomous Calculator Mode

Your Super Fund Growth Over Time



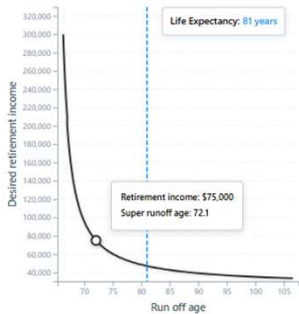
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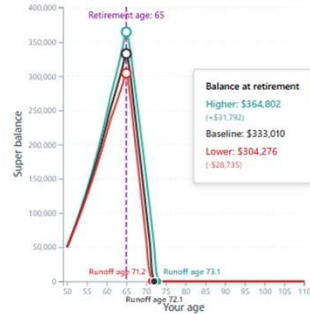
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Balancing Retirement Income and Life Expectancy



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Ask anything about Superannuation

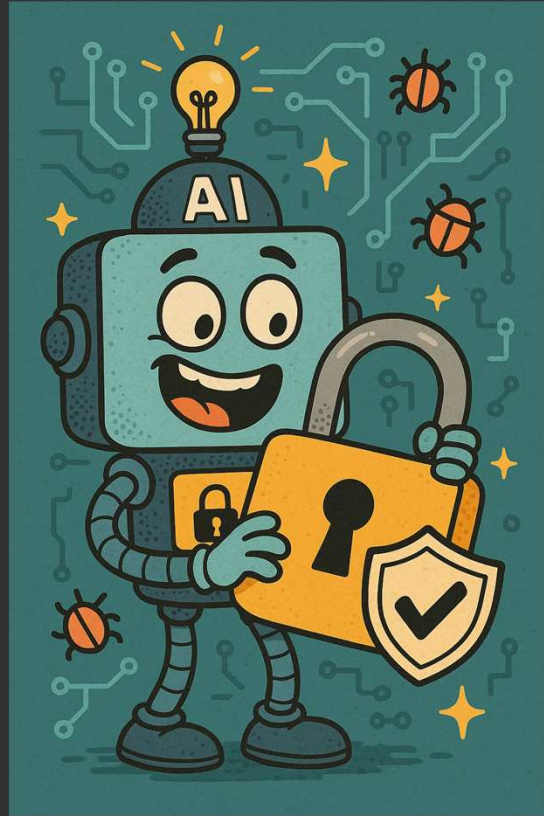
Calculator

Knowledge Center



Send

AI Data Security



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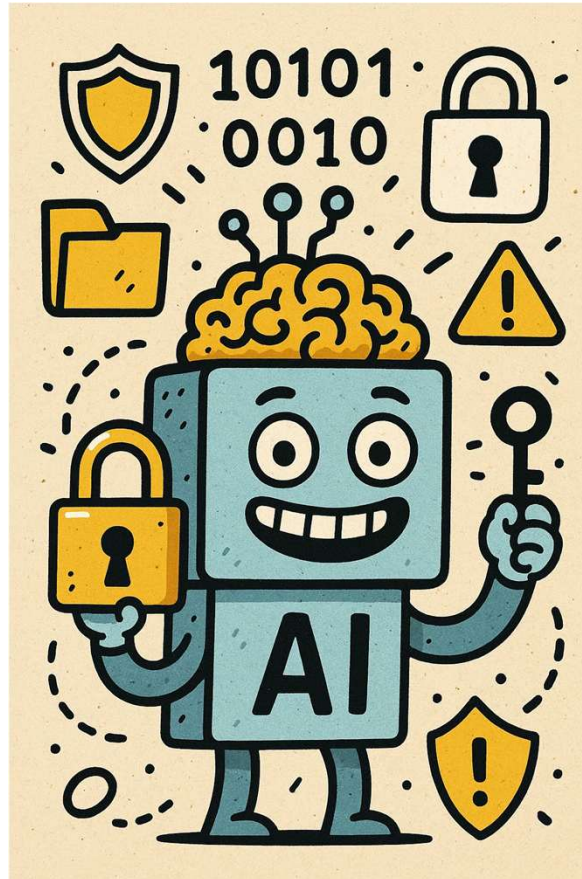
AI Data Security and Privacy

Local Processing & Secure Storage

- User inputs to the calculator are processed locally or stored in a dedicated secure database.

Controlled Knowledge Access (RAG)

- The RAG engine uses a curated vector database built from static, publicly sourced documents.



No AI Training on User Data

- User data is strictly excluded from any AI training processes.

Transparent Voice Integration

- Speech is converted using encrypted cloud-based APIs.
- Voice input is always user-controlled and clearly indicated — no background recording.

Current Limitations

Basic Memory Management

- The chatbot currently does not retain long-term conversation context.

Limited Personalisation

- The calculator doesn't yet adapt based on user history, income changes or life events. No user preference storage.

Fixed Knowledge Base

- The RAG system relies on a manually curated set of documents.

Deployment Constraints

- Currently hosted in a demo/local environment.

Future Improvements

Persistent User Sessions & Memory

- Enable per-user chat memory to provide context-aware assistance.

Smart Personalisation Engine

- Allow the chatbot to adapt projections based on user-specific goals, income, age group, and savings behavior.

Live Document Sync for RAG

- Connect the vector database to live ATO, fund websites, and regulatory feeds.

Cloud-Ready & Enterprise Deployment

- Support containerised deployment (Docker/Kubernetes).
- Add role-based access control, audit logs, and multi-tenant architecture.

Conclusion

- **Real-World Example:** This live demo shows how AI can improve retirement income tools, making complex concepts more accessible to members.
- **Fast Turnaround:** This project was developed in about 1 month, showing that AI adoption doesn't require years of investment or massive budgets.
- **Plug into What You Already Have:** AI can be layered on top of existing infrastructure and tools — no need to start from scratch.
- **No Need for Deep Tech Teams:** With today's platforms and APIs, business teams can collaborate with developers to implement AI solutions — no need for a large AI department.
- **AI Demystified:** AI is no longer experimental — it's part of everyday life everywhere (e.g., voice assistants, copilot, autocomplete). Integrating it into business tools is just as straightforward.
- **Safe by Design:** AI tools can be designed with strict data privacy controls, making them compliant and safe for member-facing applications.
- **Actuaries** are well placed to support business to take advantage of the opportunities created by AI.

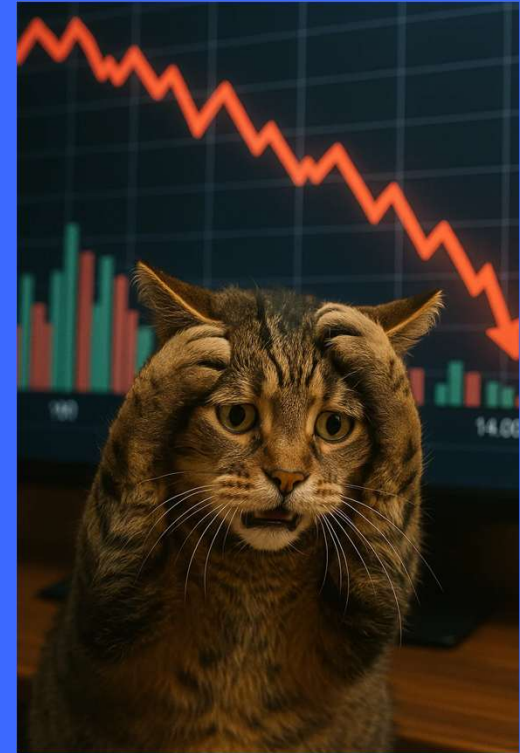




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Questions

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Thank you

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Please contact me if you would like us to run another demo for your team or if you like to access the AI Retirement Income Information Centre from the secure Dataly website.

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The Actuaries Institute is the peak professional body for Actuaries in Australia. The Institute provides expert comment on public policy issues where there is uncertainty of future financial outcomes.

Actuaries have a reputation for a high level of technical financial expertise and integrity. They apply their analytical and risk management expertise to allocate resources efficiently, identify and mitigate emerging risks and to help maintain system integrity across multiple segments of the financial and other sectors. This unrivalled expertise enables the profession to comment on a wide range of issues including life, general and health insurance, climate change, superannuation and retirement income policy, enterprise risk management and prudential regulation, the digital economy, finance and investment and wider health issues.

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