Tableau response to Discussion paper "Superannuation Data Transformation – Publications and Confidentiality"

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Introduction

Tableau is pleased to respond to this discussion paper. As a leading analytics platform, used by a number of superannuation funds such as Commonwealth Superannuation Corporation and Telstra Super. Tableau supports the granular collection of data for enhanced analytics and insights into the super annulation industry.

This document discusses the requirements as specified in the Discussion paper "Superannuation Data Transformation – Publications and Confidentiality" and outlines how Tableau could help APRA achieve its objectives around reporting and dashboarding.

Tableau's understanding is that APRA's Superannuation Data Transformation (SDT) project aims to drive better industry practices and improve member outcomes by significantly enhancing the comparability and consistency of reported data. The project will make it easier to scrutinise and reliably compare fund and product performance, especially in the choice segment of the market.

Given the scale and complexity of the project, APRA has divided the consultation into three phases:

- Phase 1 (Breadth) addressed the most urgent data gaps required to support APRA, the industry and other stakeholders in assessing member outcomes through industry operations and performance.
- Phase 2 (Depth) will explore new and better approaches to data reporting, across all areas of RSE licensee operations, including governance and risk management; and
- Phase 3 (Quality) the final stage of the SDT, will review and address any issues with the new quality and consistency of reporting framework after the completion of Phases 1 and 2.

Source: https://www.apra.gov.au/consultation-on-apras-superannuation-data-transformation

This response focusses particularly on approaches to data reporting, across all areas of RSE licensee operations, including governance and risk management.

APRA Proposal Summary

Ensure that RSE licensees, government, regulatory agencies, superannuation members and other interested stakeholders have access to high quality and consistent data to assess industry performance and the outcomes delivered for superannuation members. APRA identified the need to address gaps in the coverage and quality of the superannuation data collection and commenced the Superannuation Data Transformation (SDT) project in 2019.

APRA is proposing to publish new aggregate industry-level, fund-level and product-level statistics containing key metrics, and where relevant employing representative approaches to

enable comparison across complex fee and cost structures or insurance design. In addition to the style of publication users of APRA's superannuation statistics are familiar with, APRA is also proposing to introduce machine readable datasets of these key metrics, as well as a more granular version of the dataset, to better facilitate users conducting analysis using their own reporting.

Tableau's Role in Financial Services

As the market-leading choice for modern financial business intelligence, the Tableau platform is known for taking any kind of data from almost any system and turning it into actionable insights with speed and ease. Getting started is as simple as dragging and dropping. Our industry-leading enablement resources, training, and global data community offer unparalleled support for our customers and their analytics investments. Tableau's mission is to help people see and understand data. Tableau goes beyond our technology platform to ensure customer success by helping our customers build a data culture by utilising our best practices Blueprint Guides.

Tableau provides efficiencies of scale to streamline governance, security, compliance, maintenance, and support with solutions for the entire lifecycle as the trusted environment for superannuation data and analytics from connection, preparation, and exploration to insights, decision-making, and action.

Tableau Recommendation

Tableau is the analytics platform of choice for Financial Services organisations.

95% of Fortune 500 Financial Services Organizations, over 90% of the largest 50 global banks and 25 insurers are all using Tableau.

- **Tableau enabled the** transformation of 900 branches into digitally focussed service centres for **Grantai BBVA**
- Tableau helped reduce reporting time within **JP Morgan** from months down to weeks
- Tableau allowed **Charles Schwab** to empower 1,200 financial consultants to fully customise client offerings
- Tableau provided ABN AMRO the ability to monitor and analyse over 40,000 settlements per day

Tableau's recommendation is that Tableau be used as the platform of choice for disseminating superannuation data and analysis to stakeholders in a secure, efficient, and consistent manner.

- Tableau to provide connectivity and curated, governed access to certified data sources.
- Tableau to build and deliver rich, interactive reports to stakeholders without the need to write code.
- Tableau for industry and stakeholders to build and explore their own reports.

Tableau's flexibility and built-in array of graphical charts and displays will allow APRA to quickly build and deploy a variety of dashboards and analysis capabilities for virtually all envisioned use cases. Tableau includes a wide variety of optimized data connectors, making Tableau the ideal choice for environments where multiple data sources are required in order to bring clarity on a given business problem.

Tableau supports and works in conjunction with standard security mechanisms, assuring only those with appropriate access can interact with specific projects, dashboards and reports. As the leading visual analysis software company, the Tableau solution has been built on the principles of ease of use for all knowledge workers. Everyday users should not be encumbered by or limited by the capacity of the IT team to develop and provide data analytics. Tableau's products are built on breakthrough technologies that allow users to quickly create visually compelling ways to see and understand one's data.

Response to Discussion Paper Questions

#	Topic		Question	Response
1	General	a)	Of the proposed suite of publications (super facts, key metrics publication, key metrics datasets and granular datasets, which, if any, do you intend to use? Please outline any intended use of these publication types.	Tableau will enable APRA to share publications with wider audience by publishing it to Tableau Server or Tableau Online. After it's published, stakeholders and end users can access data/visualisation through a web browser or the Tableau mobile app. Publishing data sources can also help to centralize data management. Reference: https://help.tableau.com/current/pro/desktop/en-us/publish_overview.htm
		b)	Where more granular data is provided, what information would be most useful to you?	Users can leverage Tableau to generate data and analyse at many different levels of granularity. Granularity is the level of detail of the data. At the same time, Tableau also provides multiple methods of aggregation. Aggregation is a mathematical operation that takes multiple values and returns a single value: operations like sum, average, count, or minimum. This changes the data to a lower granularity. Reference: https://www.tableau.com/about/blog/2018/6/data-prep-101-what-aggregate-function-and-how-do-you-combine-aggregated-data-89244#:~:text=Aggregation%20and%20granularity%20are%20complementary,a%20higher%20level%20of%20detail).

| 2 | File format | a) | For downloadable datasets, what file types other than CSV would be desirable? | Tableau enables the Download of data in multiple formats and supports all of the following:

Image: Downloads an image of the view in .png format. Any filters, parameters, or selections currently applied in Tableau are reflected in the downloaded image.

Data: Opens a new tab in the browser window and displays the view's data in summary and detail. You can then download the data as a comma-separated value (.csv) file.

When downloading from a dashboard, first click the specific sheet with data you want.

Crosstab: Opens a dialog window to select download options. If viewing a dashboard, select a sheet from the dashboard to download. Under Select Format, select .csv or Microsoft Excel .xlsx.

For dashboards, all sheets will be listed, including hidden sheets.
Any filters, parameters, or selections currently applied in Tableau are reflected in the downloaded crosstab.

PDF: Opens a dialog window to select download options. Under Include, select the part of the workbook you want to download. Select this view, specific sheets from a workbook or dashboard, or select all. Select Scaling to control the image's appearance on the PDF. Select Paper Size and Orientation.

If you're downloading a dashboard to PDF format, web page objects aren't included.

PowerPoint: Downloads selected sheets as images on individual slides in a PowerPoint presentation. For untabbed views, you can select only currently |

				visible content. However, hidden sheets visible in a dashboard can be selected if you choose Specific sheets from this workbook. If you select a story sheet, all story points export as separate slides. Any filters, parameters, or selections currently applied in Tableau are reflected in the exported presentation. The generated PowerPoint file includes a title slide with the name of your workbook and the date the file was generated. The title is a hyperlink that opens the workbook in Tableau Online or Tableau Server. Tableau Workbook: Downloads a workbook you can open with Tableau Desktop. (As an alternative, you can select Server > Open Workbook in Tableau Desktop.) Any filters, parameters, or selections currently applied in Tableau are reflected in the downloaded crosstab. PDF: Opens a dialog window to select download options. Under Include, select the part of the workbook you want to download. Select this view, specific sheets from a workbook or dashboard, or select all. Select Scaling to control the image's appearance on the PDF. Select Paper Size and Orientation. Reference: https://help.tableau.com/current/pro/desktop/en-us/export.htm
3	Metrics	a)	Are there any additional metrics beyond those in Attachment D that APRA should consider including in its publications?	With Tableau users can work with multiple metrics as dimensions or measures
		b)	Of the proposed metrics in Attachment D, should APRA consider changing how any of these are calculated?	Tableau believes this question is best addressed by RSE licensees.

		a)	Are there alternative approaches or impediments to the proposed segmentation of products outlined in section 2.8? (i.e., segmentation by product phase (accumulation, retirement), product type (MySuper, choice and defined benefit)	Tableau platform is flexible to accommodate different segmentations of data sources. With a rich set of functionalities such as functions and parameters, Tableau allows users to efficiently analyse data, and compare different segments.
4	Segmen tation	b)	Are there alternative approaches APRA should consider to the proposed segmentation of multi-sector investment options outlined in section 2.8 (by TDP and other)?	Tableau believes this question is best addressed by RSE licensees.
		c)	Is it useful for multi-sector options to be segmented for publication, for example by risk measures such as volatility or by brackets of estimated allocation to growth-asset weights?	Depending upon user requirements, tableau can accommodate different levels of segmentation in data.
		d)	Are there alternative approaches APRA should consider to segment single-sector investment options?	Depending upon user requirements, tableau can accommodate different levels of segmentation in data.
		e)	Are there any additional approaches to segmentation APRA should consider?	Depending upon user requirements, tableau can accommodate different levels of segmentation in data.
5	Fees and costs arrangeme nts	a)	Are there impediments to APRA publishing all fees and costs arrangement combinations reported under SRS 705.0 and SRS 706.0in the Excel publication instead of only the standard fees and costs arrangement?	Tableau believes this question is best addressed by RSE licensees.
		b)	Should a representative member balance be applied to illustrate the fee arrangements, and if so, what balance/s should be applied?	Tableau believes this question is best addressed by RSE licensees.

6	Perform ance	a)	What alternatives, if any, should APRA consider to its proposal to publish reported net returns for each investment option in key metrics publications based on the investment pathway with the highest fees and costs charged (taking into account fee caps) for a representative member, noting that APRA proposes to include data for all investment pathways in the granular dataset.	Tableau believes this question is best addressed by RSE licensees. Tableau supports APRA's proposal to include data for all investment pathways.
		b)	APRA invites comment on the proposal to publish risk-adjusted returns using the Sharpe Ratio.	With rich set of functionalities such as functions, calculated fields and parameters, Tableau enables users to build complex calculations easily. Here is an example of Sharpe Ration published in Tableau Public by ▮▮▮ ▮▮▮ . ▮▮▮▮▮▮▮▮ ▮▮▮▮▮
		c)	APRA invites comment on the proposal to publish the return objectives (i.e. return measurement, return objective, return margin and investment horizon) reported under SRF 705.1 Table 1 for TDP investment options.	Tableau platform allows you to publish content to Tableau Server or Tableau Online with a few simple clicks. There, other people can view it, interact with it, and even edit it if their server permissions allow.
		d)	APRA does not propose to publish 'Return Objective Target Return' collected in SRF 705.1 Table 2 at this stage. APRA invites feedback on the potential for publication of this data in the future.	Tableau believes this question is best addressed by RSE licensees.
7	Asset allocation	a)	APRA invites comment on the proposed asset class categories in the Key metrics publications. Should APRA consider any additional combinations of sector, listing, domicile, international economy type and hedging, noting that all combinations	Tableau platform allows you to publish content to Tableau Server or Tableau Online with a few simple clicks. There, other people can view it, interact with it, and even edit it if their server permissions allow.

			will be included in the granular dataset?	
		b)	APRA seeks feedback on any additional asset class characteristics that would be of public interest to publish on an aggregated industry-level or fund-level basis?	With an easy to use and intuitive user interface, Tableau enables users to aggregate data in many ways (Example: sum, average, count, or minimum) and also drill down into segments at many levels of granularity.
		c)	APRA invites comment on the proposal to publish the estimated allocation to growth assets and the use of this metric to segment multi-sector investment options into categories (0-40 per cent; 40-60per cent; 60-75 per cent; 75-90 per cent; and 90-100 per cent).	With Tableau you can create a group to combine related members in a field. Groups are useful for both correcting data errors (e.g., combining CA, Calif., and California into one data point) as well as answering "what if" type questions (e.g., "What if we combined the East and West regions?). This capability will enable APRA to group and segment multi-sector investment options into categories
8	Insuran ce	a)	In the draft Insurance publication, APRA is proposing to calculate insurance fees as the difference between premiums collected from members and premiums paid to insurers. Should APRA consider an alternate method of calculating this amount? Please refer to 2 and 2a of the Key metrics Publication mock-up for insurance for more information.	Tableau Calculated fields allow you to create new data from data that already exists in your data source. When you create a calculated field, you are essentially creating a new field (or column) in your data source, the values or members of which are determined by a calculation that you control. Using these capabilities, APRA can easily calculate insurance fees using different methods and compare them on the fly.

		b) APRA invites comment on the proposal to publish data on default insurance cover design and cost for representative members (male and female non-smoker) in the Key metrics publications.	Tableau visual best practices that are key to designing dashboards and storyboards and developing informative visualizations that drive your audience to act. Reference: https://help.tableau.com/current/blueprint/en-us/bp_visual_best_practices.htm

The Tableau Platform

Tableau is the market leader for financial visual data analysis and reporting and offers an excellent fit for the visual data analysis enhancements described in this discussion paper.

Tableau offers a full data management platform that includes: Tableau Desktop, Tableau Prep Builder and Tableau Server. Tableau Server can be hosted on your infrastructure, via web service providers such as AWS, or via Tableau Online, which is Tableau's own hosted offering.

Tableau Desktop - Tableau Desktop is Tableau's authoring tool. It is used to analyse data, create dashboards, reports and other visualizations. It empowers users of any skill set to create rich visualizations and dashboards with an intuitive, drag-and-drop interface. End-users can easily answer their own questions 10-100x faster than traditional BI tools. Tableau's built-in ease-of-use will allow all users to operate with minimal reliance on support from the central IT department. However, IT centrally maintains and enforces data security, ensuring that only those given proper permissions are allowed to access the information.

Tableau Prep Builder - Tableau's data preparation tool. Tableau Prep changes the way traditional data prep is performed in an organisation. By providing a visual and direct way to combine, shape and clean data, Tableau Prep makes it easier for analysts and business users to start their analysis, faster.

Tableau Server - will allow the [customer name] to publish dashboards and reports to their end users via a web browser, portal or mobile devices, and to secure and govern the application. It enables users to interactively access a single version of the truth to answer their own questions. With appropriate permission, users can even edit and create new dashboards directly on the web. Tableau Server is a web repository providing IT with centralized security, authentication, data governance, provisioning, policy, and control.

Data Management Add-on **-- Available for Tableau Server and Tableau Online**

The Data Management Add-on is a collection of features and functionality that helps customers manage Tableau content and data assets in their Tableau Server or Tableau Online environment. Key components are Tableau Prep Conductor and Tableau Catolog.

Tableau Prep Conductor provides data preparation scheduling and tracking

Tableau Catalog delivers data discovery, curated data assets, push down data quality warnings, perform impact analysis, and trace the lineage of data used in Tableau content.

Tableau Prep Conductor

Schedule flows created with Tableau Prep Builder to run in a centralized, scalable, and reliable server environment so your organization's data is always up to date. Give administrators visibility into self-service data preparation across the organization. With Tableau Prep Conductor, you can manage, monitor, and secure flows using your Tableau Server or Tableau Online environment. Learn more.

Tableau Catalog

Manage your analytics with a complete view of the data in your Tableau environment. Empower all users to find, understand, and make use of trusted data with powerful search, data dictionary, lineage, and impact analysis. Integrate with your existing metadata systems using the Metadata API, exchanging valuable metadata with Tableau to surface where people are performing analysis. Learn more.

For more information on the Data Management Add-on, please visit:
https://www.tableau.com/products/add-ons/data-management

Tableau Platform Benefits

Enhanced User Experience

Tableau will provide APRA with the following functionality:

- Enable users to ask their own questions of the data without requiring IT assistance
- Connects to all major data sources (databases, Big Data, cubes, text, desktop data, etc.)
- Requires no fixed data model, cube, universe, or meta layer and no modelling exercise
- Easily create simple or complex calculations plus stats integrations (R, SAS, SPSS)
- Flexible architecture supports direct connection or optimized extract queries
- Include built in visualization best practices
- Drill down into transactional data
- Collaborate with colleagues by sharing modified content or entering commentary
- Allows users to seamlessly blend or integrate data from disparate sources
- Publish dashboards, reports, visualizations to web browsers, mobile devices and web portals
- Editing and creation of worksheets and dashboards over the web
- IT has centralized security, authentication and governance
- Leverage CAC Card, Active Directory, SSO, Kerberos and PKI security methodologies
- Supports multi tenancy so multiple divisions or teams can use a single Tableau Server

The Tableau platform gives organizations everything they need to empower everyone securely with trusted data – deployment flexibility and choice, extensive data access,

powerful data prep capabilities, content and data governance to keep data in the right hands, powerful analytics, collaborative tools to bring data to the center of every conversation, and even the flexibility to interact with your data in any way you'd like – via the desktop, the browser, a mobile device, or even embedded into other applications.

Simplified content management and migration

Simplify and streamline your workbook and data source content workflows with the Tableau Content Migration Tool. Manage the movement of content between projects, sites or Tableau Server environments. Build your migration plan visually, and then set it to a schedule. You can remap data sources and perform other workbook transformations.

Leverage cloud services for better reliability and scalability

For large deployments hosted on AWS, customers can choose to host their Tableau Server metadata repository externally, with Amazon RDS Postgres. This approach provides increased scalability and high availability for organizations with large amounts of Tableau metadata.

For more information on the Server Management Add-on, please visit:
https://www.tableau.com/products/add-ons/server-management

Security & Compliance

Tableau's approach to keeping your data safe and secure at scale is to leverage all your existing technology standards so you can use the same security protocols consistently across your landscape. This keeps your data and content safe and also simplifies the management task required from IT. From authentication and authorization protocols like Active Directory, SAML and Kerberos, to data and network security with SSL and permissioning, we provide the methods to implement security. We also maintain a comprehensive set of IT controls and audits to ensure we are meeting core compliance regulations.

Security & Compliance

Leverage existing technology standards to securely manage the platform

Authentication	LOCAL	ACTIVE DIRECTORY	SAML/KERBEROS/OPENID	TRUSTED TICKETS
Authorization	SITE ROLE	DEFAULT & CUSTOM PERMISSIONS	INHERTITANCE & OVERRIDE
Data Security	DATABASE USER & SERVICE ACCOUNT	CONTENT PERMISSIONS	TDE BINARY
Network Security	CLIENT-SERVER SSL	DATABASE DRIVERS	STRINGENT TRUST MODEL
Compliance	SARBANES-OXLEY	SOC 2 REPORT	EU-US PRIVACY SHIELD

Governance

Tableau helps IT build, manage, and share data centrally through Tableau Server. Specific data sources can be certified by the data experts to ensure users are using the right data for their analysis, and that the organization is working with accurate and reliable data to drive their decisions. Permissions can be handled at the data source level to ensure only the right people can see the right information. You also get a wealth of information as to who is using what data source for what analysis, so you can continue to shape and improve on what is being offered to the business.

Governance

Choice & Flexibility

Tableau gives you more flexibility than any other analytics platform allowing you to leverage your technology investments, but it also ensures that you can rely on Tableau as a constant as your data environment continues to shift and grow.

We give you the choice of deployments – on premise, in the public cloud like AWS, GCP or AZURE, or in a fully hosted environment with Tableau Online. You can choose to deploy on Windows, Linux or Mac, depending on your platform of choice. You can interact with tableau securely via the browser, mobile device, or even embed your analytics into other applications. You can connect to your data easily – either files, databases, big data, cloud based data or other application data, no need to move your data. And you can choose to query that data live or by extract, depending on its nature, usage and how you want to optimize performance of your environment.

Extensibility & APIs

Tableau uses industry-standard programming languages and data-interchange formats to extend the platform. We provide pre-built data connectors at no additional cost to more than 70 data sources. If there isn't a specific connector Tableau also provides an ODBC connector. New connectors are constantly being added at no additional cost to the user.

Extensibility & APIs

Use industry-standard programming languages and data-interchange formats to extend the platform

JavaScript API
REST API
Document API
Data Extract API
Web Data Connector
ODBC Connections

HTML
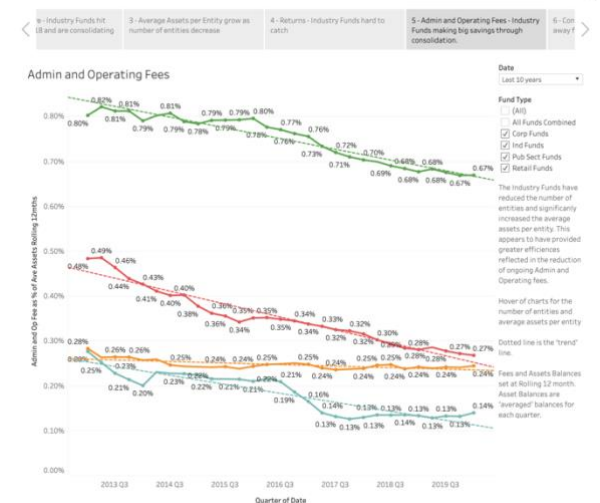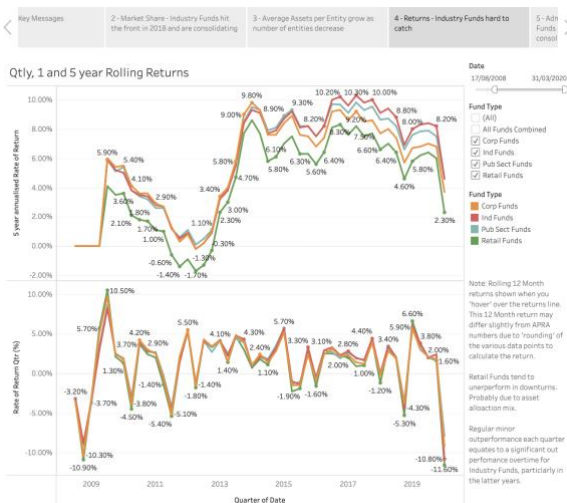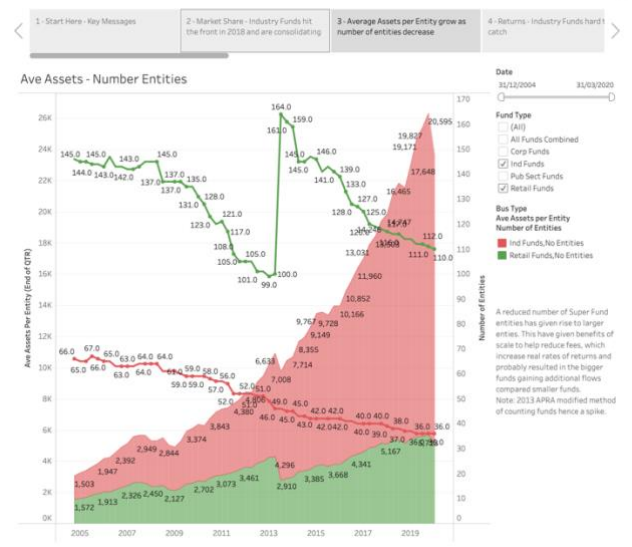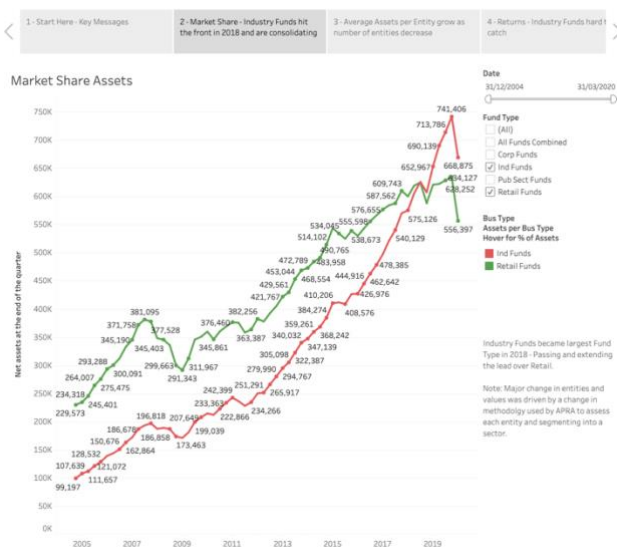JavaScript
CSS
Python
XML
JSON
ODBC

In addition to connecting to these data sources, Tableau also provides:

- Direct integration with R, Python and Matlab – send data to this platform to process and instantly visualize results in Tableau
- Use of any WMS server to supplement Tableau's out of the box mapping
- Directly connect to Shapefiles for mapping

Examples of Visualisations using APRA data

Tableau Public is a free platform to explore, create and publicly share data visualizations online. With the largest repository of data visualizations in the world to learn from, Tableau Public makes developing data skills easy. Advance your career in analytics by learning from limitless data inspiration and creating an online portfolio of work.

The following are example screenshots of Visualisations based on APRA data authored by ████████████████████ consulting and posted to Tableau Public.

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Superannuation Industry Case Study

Telstra Super Bolsters Business Intelligence Capabilities with Tableau Software

Case Study Link : https://www.tableau.com/about/press-releases/2012/telstra-super-bolsters-business-intelligence-capabilities-tableau-software

Australia's largest corporate super fund visualizes data to gain deeper insights into stakeholder data and behaviours

Telstra Super, Australia's largest corporate superannuation fund, has fully adopted Tableau Software's rapid-fire business intelligence, bringing advanced analytics and rapid reporting to help shape the fund's product innovation and service delivery.

With a membership base of 100,000 people across Australia and more than $11 billion in assets, Telstra Super has been gathering data about its members and their behaviors for more than 22 years. Tableau has allowed its internal business intelligence unit to centralize, analyse and interact with member and transactional data like never before.

"Tableau has allowed us to build on our unique segmentation model and access the massive amounts of member data collected throughout our history. We've been able to bring a large and diverse membership demographic to life in ground-breaking visual ways," said ████ ████████████████████████████ at Telstra Super.

"With the Australian retirement savings industry in a prolonged state of government-driven reform, these deepened insights are essential to helping us make informed product development and member service decisions, as well as developing more meaningful relationships with our stakeholders."

████████ said that Tableau's visualizations and dashboards better enable Telstra Super to analyse:
•Member analytics and segmentation in support of marketing and communications activities
•Member profiling to enable new business and product strategy and development
•Service and fund performance analysis to facilitate market and competitor benchmarking
•Management reporting and KPI dashboards to business stakeholders

"Australian companies like Telstra Super are accumulating huge volumes of data and need ways to see and understand it better," said ████████████████████████ for Tableau. "Tableau's fast, easy, self-service analytics can help to get a better picture of business intelligence and identify issues and opportunities that might pop up before they even happen."