CELENT

QSUPER: AGILE INVESTMENT DATA ENABLEMENT PLATFORM INITIATIVE

WINNER OF CELENT MODEL ASSET MANAGER 2022 AWARD FOR TECHNOLOGY INFRASTRUCTURE MODERNIZATION

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CASE STUDY AT A GLANCE

QSuper's Enterprise Data Management platform initiative is the winner of Celent's 2022 Model Asset Manager Award for Technology Infrastructure Modernization. This strategic initiative enabled QSuper to build a modern, mature investment data management capability that acts as a flexible operational foundation to maximize member outcomes through strong investment performance.

FINANCIAL INSTITUTION	QSuper
INITIATIVE	Agile Enterprise Data Platform Implementation
SYNOPSIS	To underpin their longer term data strategy, QSuper successfully overcame significant hurdles to deliver new data enablement capabilities by leveraging a modern, flexible enterprise data platform (Matrix IDM) to accelerate time-to-value, resulting in faster data onboarding, improved data operations and quality, and more confidence in the data across user constituents.
TIMELINE	 November 2020: Project start February 2021: All necessary IT approvals granted to build a functional Matrix IDM environment March 2021: All custodian data loaded May 2021: All market data loaded June 2021: All data quality and governance implemented July 2021: All outbound feeds developed August 2021: Go live
KEY BENEFITS	 Delivery of a full "look-through" report within four weeks New data onboarding (for reports) accomplished within a two-day business turnaround Improved data operations—platform reduces EOD data processing time by 50% Frequent business feedback and the freedom to change course quickly No existing business processes disrupted or impacted from the cutover to the Matrix solution
KEY SOLUTION PARTNER	Matrix IDM

CELENT PERSPECTIVE

The Model Asset Manager Award for Technology Infrastructure Modernization is aimed at initiatives that improve the capability to innovate and experiment with new technologies. We recognize QSuper's data enablement initiative in terms of its implementation excellence to deliver quick time-to-value and to realize the benefits from a modern cloud-enabled data platform.

Celent believes that QSuper's Enterprise Data Management platform initiative is significant for several reasons, including the following:

- This initiative stood out among the competitive lineup of submissions due to the complexity in delivering a robust set of capabilities in a highly accelerated timeframe.
- This is a salient example of a combination of the pursuit of delivery excellence, a
 native cloud data platform, and a full stack of cloud tools employed, which enabled
 QSuper to totally realize the benefits of agile implementation methods and
 effective collaboration across QSuper staff, the platform vendor, and consultant
 teams. The interplay between delivery excellence and an agile-friendly, cloudenabled platform and tools was an important factor for success.
- QSuper demonstrated tangible evidence of its initiative, to not merely be quick in terms of delivery timelines, but also to translate implementation efforts into compelling business and operational outcomes. For us, the realization of benefits is balanced and spans various dimensions, with tangible outcomes from Day 1, for example:
 - Stronger data quality, confidence, and trust in the information production processes around varied data sources and complex data sets that make up complex fund structures
 - Improved efficiency and responsiveness in core data operations
 - Enhanced visualization to facilitate information-rich analysis, investment decisioning, and performance monitoring
- Achieving mid-flight transition onto a new platform with zero disruption could often be an understated outcome. In QSuper's case, the company managed to achieve no downtime to its in-house trading systems and operations when the new data platform was launched on Day 1.
- Beyond technology and implementation excellence, our recognition in this instance
 pertains as much to the company's organizational mindset, which focuses on
 continuous micro-innovations and improvements, and this winning case study
 demonstrates these broader elements.

DETAILED DESCRIPTION

QSuper, one of the largest superannuation funds in Australia, with an excess of AU\$100 billion of funds under management and over half a million members, has embarked on a journey to achieve significant initiative around enterprise data management to ensure sustainable growth, stronger provisioning of data, and future-proofing of technology investments.

Opportunity

As the QSuper fund grew in assets under management (AUM) and complexity, operational demands on investment data management and performance reporting continued to escalate. In response, QSuper's Investment Operations and Performance group commenced development of their investment data strategy.

Purpose / Audience
Communication in conceptual View

Assign Responsibility

Control

Transparency

Track & Improve

Assign Responsibility

Control

Transparency

Track & Improve

Communication

The audience includes all date
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Figure 1: Investment Data Strategy and Target State

Source: QSuper

The outputs from this exercise served to envision a future data environment—including data management protocols, quality assurance processes, and data governance practices—with end-goals toward achieving an integrated service delivery model, as well addressing pertinent elements in terms of organizational culture and the way that people perceived data.

In charting QSuper's investment data strategy, this subsequently led to the conclusion that although the existing solutions provided pockets of excellence, the current investment data capability was immature, and changes were necessary to achieve

- stronger data governance
- improved regulatory compliance
- enhanced exposure management capabilities
- more agility and scalability in the face of change

Figure 2: Opportunities to Realize Strategic and Operational Ambitions

QSuper sought to leverage modern, flexible technology solutions to underpin a long-term data strategy project and maximize member outcomes

Strategic and Operational Ambitions

Trusted and accurate investment data, member information and performance/risk insights

Integrated service model and technology future proofing for combined Sunsuper and QSuper entity

Personalized retirement outcomes for superannuation (pension) scheme members

Opportunity to embrace enhanced capabilities



Agility and scalability in supporting merger and ambitious growth plans



Enhanced exposure management – consolidated views and full data 'look-throughs' to better manage exposure and performance in member portfolios



Stronger operational oversight and data governance, and improved regulatory compliance

Source: QSuper

Beyond that, QSuper is undergoing a significant merger with Sunsuper, and with the coming together of two of Australia's largest funds, this Enterprise Data Management platform initiative would serve to underpin a more sustainable, longer term data strategy and to better position QSuper to handle the combined growth of assets.

Sitting on significant pools of data, QSuper has started with delivering more robust data to its investment service stakeholders to help them manage the portfolio more effectively, with a longer term opportunity to harness these data sets as an asset for the organization and for their members. With stronger data foundations, this would place QSuper in a unique position to provide personalized retirement outcomes for its constituents.

¹ QSuper and Sunsuper will merge to become Australia's largest superannuation fund, called Australian Retirement Trust (ART), with the intent of creating a AU\$200 billion+ AUM superannuation fund with two million members, open to all Australians.

Solution

QSuper recognized the need to work with best of breed technology partners who could support its ambitious growth plans and equip its teams with an enhanced data management platform.

The team conducted an RFP to acquire a technology solution to deliver the technology infrastructure foundations required to improve the company's investment data management operations. The goal was to build a modern, mature investment data management capability to maximize member outcomes through strong investment performance.

The outcome from the solution evaluation was that QSuper selected Matrix IDM.

Figure 3: Key Functional and Technology Capabilities



Asset allocation and book-level views



'Deep Dive' views



Unified data model supports that all existing data consumers



Integrated cloud operational data store, data warehouse, and BI



Agile tech development and data operations

Source: QSuper

The foundations for implementing the Matrix IDM data platform are based on the following strategic and operational elements:

- Full fund "look-through" across QSuper's complex fund structures (Figure 4 and Figure 5)
 - Standard views of exposure, transactions, holdings—all seamlessly flowing from the front end
 - Full look-through functionality with the ability to traverse up and down in a pricing structure with ease
- A custodian and data vendor-agnostic data model—normalized to future-proof and more quickly react to changes
- Modern cloud-native technology stack—leverages the latest cloud advancements to
 enable collaborative, operational, and development benefits across teams, e.g.,
 customers being always on the most recent version of the software, with minimal
 business interruption and cost; on-demand spin-ups of data and processing
 environments; and tools to support modern rapid development methods (DevOps-CI/CD)

- Fully integrated operational data store and data warehouse that can work seamlessly to combine "live" transactional, historical, and reporting data to straddle the information needs of different functional/user groups—e.g., real time/operational views, on-demand versus periodic BAU reporting—a unified approach that enables improved agility and stronger quality controls and builds further confidence in the platform as the trusted source of truth
- Power BI integration that enables day-to-day business users, investment experts, and IT users to handle, analyze, and derive data/insights in a self-service, visually impactful manner
- A more robust data quality framework capable of governing all data sets, including the
 addition of a "circuit breaker" functionality to ensure that Ops teams can immediately
 suppress data feeds when issues are detected

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Figure 4: Solution UI/UX—Hierarchy View

Source: QSuper

Reports

| Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Comment Reports | Part | Com

Figure 5: Solution UI/UX—Asset Allocation and Exposure Analysis

Source: QSuper

Implementation Approach

In embarking on a journey to modernize QSuper's enterprise data management infrastructure, this initiative delivered the first realized benefits in an accelerated manner—from the start of implementation to its first "benefit drop" in seven months. However, the complexities of this undertaking were significant.

The complexity of the solution centered around the need to ingest multiple different data sets from different vendors into a unified data model that could support all existing consumers of the data. As with many endeavors of this magnitude, **securing buy-in and meaningful engagement** from the relevant stakeholders was the first organizational hurdle to overcome: to ensure that the various groups understood the imperative for change, saw its potential benefits, and were willing to commit to it purposefully. Mobilization of the team meant getting the right data owners, data custodians, and data stewards assigned in a relatively short timeframe, as well as collaborating effectively with resources from vendor and consultant partners.

Moreover, of paramount importance was that **no existing business processes should be disrupted or impacted**. In the case of QSuper, one of the primary project imperatives was to ensure that that core investment lifecycle activities, such as trading, would not be disrupted because of the cutover to the new Matrix data platform.

Figure 6: Delivery Approaches and Challenges to Overcome

IMPLEMENTATION APPROACH

- Strategic aims to deliver rich coverage of the data model to support ALL existing data consumers
- Leverage unified data model, which supports the complexities of ingesting multiple different data sets from different vendors
- Multi-functional/multi-discipline core project team of business analysts, developers & business SMEs
- Latest Agile methodologies to deliver continuous change over two-week sprints
- Virtual delivery and collaboration implementation was executed remotely with team based across three different geographic locations

CHALLENGES

Large number of data consumers and stakeholders



Coordinating successful implementation



Complex and diverse fund structures and data sets



Quick time to market, with minimal disruption



Source: QSuper

To ensure the firm delivered these objectives, the QSuper team assembled a core (critically important) project team of business analysts, developers, and business subject matter experts (SMEs). The project employed the **latest agile methodologies to deliver continuous change over two-week sprints**, providing the opportunity for frequent feedback from the business, and the freedom for project and technical teams to quickly change course where required. This served to ensure strong alignment with critical business requirements and reduce unintended nonconformities.

In addition, the entire project was delivered during the height of the COVID-19 pandemic, and the entire implementation was executed remotely, with multiple teams based across three geographic locations.

Outcomes

Within only a short span of seven months, the build out and delivery of QSuper's enterprise data platform has aided the company in many ways, with a key milestone yielding results that are highly significant. Table 1 provides various qualitative and quantitative benefits attained as a result of this initiative, and through the new platform.

Table 1: Outcomes

Results

Benefits

Stronger data quality, confidence, and trust in the information production processes

- Improved security mastering embracing several different market data sources to enrich the record
- Greatly improved data quality, in large part due to the gating the company introduced that stops poor quality data from making its way into the Matrix ODS and Data Mart
- Ability to consolidate multiple static data sets (for all portfolios) are in one location, improving data consistency and reporting views
- Data quality process extended to govern market data sets

Improved efficiency and responsiveness in core data operations

- Improved data operations platform reduces EOD data processing time by 50%
- Addition of new data to reports possible to accomplish within a two-day business turnaround due to the richness of the core Matrix data model
- Circuit breaker functionality enables the Ops team to dynamically suppress feeds when there is an issue with the data
- Enhanced user experience enables the data operations user to easily navigate the various data sets rather than needing to query the database
- QSuper able to be highly flexible and responsive should there be future requirements to transition and adapt supplier arrangements, thanks to market data vendor and custodial agnostic data models

Enhanced visualization to facilitate informationrich analysis, investment decisioning, and performance monitoring

- Ability to centrally create and adapt the rules for custom hierarchies/views based on user preferences—this rules-based parameterization has removed the need for hardcoding and is facilitating a focus on the underlying investment data sets
- Platform enables the delivery of full look-through reports in the Power BI service within four weeks
- Accurate and granular information provision for portfolio management, performance, and risk teams
- Visual representation of the fund structure, which is typically complex and diverse in nature

Source: QSuper

Future Plans

In line with Celent's recognition, QSuper sees this primary milestone and the efforts achieved so far as an ongoing evolution, not merely a one-and-done project. For the immediate future, with established precedents around its new cloud data platform capabilities (a unified data model, trusted data sets, and more robust data operations in place), QSuper can now look to similarly scale and replicate these capabilities swiftly into other important enterprise functions, such as for its performance analytics, as well as its valuation processes going forward.

In the coming year specifically, new changes include several plans on the roadmap that are being mobilized for action: QSuper is implementing its new performance analysis system (based on Ortec's PEARL) and new unit pricing system (pControl), using a configuration in which the new data platform will be undergirding and feeding information into these activities and system domains. QSuper is also looking to migrate all current investment functions running out of its existing Investment Data Warehouse into the new Matrix data platform. Alternatives, private markets, and unlisted data will be onboarded, and the company has the potential to expand the new solution into other areas of the business, including Treasury and Strategy.

LEVERAGING CELENT'S EXPERTISE

If you found this report valuable, you might consider engaging with Celent for custom analysis and research. Our collective experience and the knowledge we gained while working on this report can help you streamline the creation, refinement, or execution of your strategies.

Support for Financial Institutions

Typical projects we support include:

Vendor short listing and selection. We perform discovery specific to you and your business to better understand your unique needs. We then create and administer a custom RFI to selected vendors to assist you in making rapid and accurate vendor choices.

Business practice evaluations. We spend time evaluating your business processes and requirements. Based on our knowledge of the market, we identify potential process or technology constraints and provide clear insights that will help you implement industry best practices.

IT and business strategy creation. We collect perspectives from your executive team, your frontline business and IT staff, and your customers. We then analyze your current position, institutional capabilities, and technology against your goals. If necessary, we help you reformulate your technology and business plans to address short- and long-term needs.

Support for Vendors

We provide services that help you refine your product and service offerings. Examples include:

Product and service strategy evaluation. We help you assess your market position in terms of functionality, technology, and services. Our strategy workshops will help you target the right customers and map your offerings to their needs.

Market messaging and collateral review. Based on our extensive experience with your potential clients, we assess your marketing and sales materials, including your website and any collateral.

RELATED CELENT RESEARCH

Enterprise Data Management Visions and Trajectories 2025 (Part 2): Interview Market Color and Insights from Investment Firms March 2022

Enterprise Data Management Visions and Trajectories 2025 (Part 1): Capital Markets & Investments Edition

January 2022

Operational Alpha on the Buyside: Strategic Levers to Exploit "Ecosystem in a Box" Paradigms

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Operational Alpha on the Buyside: Crystal Balling Future Hybrid Provider Propositions and Ecosystem Innovations

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Celent Model Award Case Study: TCS ESG Integration Solution March 2021

Celent Model Award Case Study: Morgan Stanley: Portfolio Risk Platform March 2021

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