

The Business Case for Modern Data Architecture: Unlocking AI-Driven Insights

95% of financial services organizations struggle with unstructured data, while firms embracing modern architectures report 25-30% faster AI-driven insights delivery. Discover how modern data architecture can revolutionize the financial services industry.



Why Modern Data Architecture is a Strategic Imperative

In today's rapidly evolving financial landscape, firms are facing unprecedented challenges as the volume, velocity, and variety of data grow exponentially. To remain competitive, asset managers and financial services firms must adopt modern data architectures capable of supporting advanced analytics, automation, and targeted insights. Yet, many organizations still rely on outdated systems and fragmented processes that hinder innovation and decision-making.

Modern data architecture is not simply a technological upgrade; it is a strategic imperative. By unifying data ecosystems, enabling scalability, and accelerating time to insight, organizations can unlock new opportunities for efficiency, agility, and growth.

In this whitepaper, we outline the business case for modern data architecture and its role in driving AI-enabled insights. Drawing on industry trends, relevant statistics, and Continuus' deep expertise, we demonstrate why now is the time to modernize.

"Modern data architecture is the foundation that enables firms to transform their data into a strategic asset. Without it, you're simply managing data, not leveraging it."

– *Matt Moeser, Continuus Founder and CEO*

The Growing Data Challenge

Financial services firms today face a data arms race. Market disruptions, complex asset classes, and increased investor demands require fast, reliable insights. Yet, the majority of firms are unprepared for this shift:

- **95%** of financial services leaders say their organizations are struggling to manage unstructured data (Deloitte).
- **60%** of firms admit they still rely heavily on Excel for critical business processes, despite its limitations (Gartner).
- Legacy systems often result in **70-80%** of time spent on data preparation rather than analysis (Forrester).

"Data without structure or governance creates chaos, not clarity," notes Natalie Sendele, Co-Chief Data Officer at Continuus. "Modern architecture lays the groundwork to clean, integrate, and govern your data at scale, enabling trust and accuracy in every insight."

The cost of inaction is high. Firms that fail to modernize risk falling behind competitors that are harnessing AI, automation, and analytics to inform faster decisions and better serve target clients with insights they need. —>

The ROI of Modern Data Architecture

Cost Savings Through Efficiency

Modern data platforms like Snowflake reduce the costs associated with maintaining outdated infrastructure. A Forrester Total Economic Impact study found that organizations leveraging Snowflake experienced a **604% ROI** over three years, primarily driven by cost savings on infrastructure and improved efficiency in data management. They also eliminate error-prone batch processing by enabling seamless data sharing and integration.

Accelerated Time-to-Insight

By breaking down data silos and streamlining data flows, a modern architecture reduces the time it takes to extract actionable insights, empowering teams to make informed decisions faster.

Scalability for Future Growth

A cloud-based architecture ensures that your data platform scales with your business needs, accommodating increasing volumes of data without compromising performance.

The Business Case for Modern Data Architecture

A modern data architecture is designed to handle the demands of today's financial landscape, delivering real business value through:

Faster Time to Insights

By unifying data sources into scalable cloud platforms, firms can significantly reduce time spent wrangling and reconciling data:

- Firms that have adopted modern architectures report a **25-30% faster** delivery of AI-enabled insights (McKinsey).
- Advanced solutions like Snowflake's cloud platform enable near real-time access to critical business data.

"Speed matters. A modern architecture ensures our clients are able to analyze data in hours, not weeks, so they can react efficiently to market shifts," says Andy Leichtle, Chief Operations Officer at Continuus.

Operational Efficiency

Modern architectures reduce the reliance on manual processes, resulting in improved operational efficiency:

- Firms report a **30% reduction** in operational costs after implementing cloud-based solutions (Accenture).
- AI-powered automation can reduce repetitive tasks and free up resources for high-value analysis.

Enabling AI and Advanced Analytics

AI adoption in financial services is no longer a luxury; it's a necessity. However, AI relies on high-quality, governed data:

- According to PwC, firms that leverage AI see a **10-15% improvement** in portfolio performance.
- AI-driven decision-making has been linked to a **3x increase** in alpha-generating opportunities for asset managers (BCG).

"Without modern architecture, firms simply can't take advantage of AI. AI requires clean, connected, and scalable enterprise data models," states Kellyn Cochell, Chief Revenue Officer at Continuus. →

Key Components of a Modern Data Architecture

A modern data architecture aligns people, processes, and technology to enable flexibility and scalability. Its core components include:

Cloud Native Data Platforms

Platforms like Snowflake unify data sources, offer elastic scalability, and reduce costs with pay-as-you-grow models. Asset managers using Snowflake report **40-60% lower** infrastructure costs and faster data access (Snowflake). These platforms also enhance collaboration with secure, real-time data sharing across teams and partners.

Data Governance and Quality

Strong governance ensures consistent, reliable, and high-quality data for AI and analytics. Defining ownership roles, maintaining data integrity, and monitoring quality metrics **reduce errors by up to 25%** (Harvard Business Review). This improves operational efficiency and builds confidence in data-driven decisions. See *"Best Practices for Governance and Security"* section for more.

AI-Driven Automation and Analytics

AI tools automate tasks, uncover insights quickly, and identify market opportunities. Predictive analytics and process automation, such as anomaly detection and compliance reporting, enhance decision-making and free up resources for strategic initiatives.

Scalable, Flexible Data Architecture

Scalable architectures grow with business needs, enabling quick adaptation without costly overhauls. Modular, cloud-based designs support innovation and keep firms agile in the face of changing market demands and regulatory requirements.

"A scalable architecture isn't just about meeting today's needs or solving today's challenges. It's about positioning for tomorrow's opportunities," says Asha Macwana, Co-Chief Data Officer at Continuus. "Many data and analytics leaders operate as though data governance is a necessary task or chore in the same realm as data hygiene, but they should see it as a key business capability that directly impacts the organization's success. It's not just a box to check. But it is not about unlocking the full potential of the business."

Best Practices for Governance and Security

Data Ownership Frameworks

Clearly define ownership roles and responsibilities across the organization to maintain accountability and streamline decision-making. Assign specific data stewards or custodians for key datasets, ensuring consistency, quality, and alignment with organizational goals. This approach not only reduces errors but also empowers teams to take proactive measures in addressing data-related issues.

Access Controls

Implement granular access controls to secure sensitive data and minimize risks of unauthorized access or breaches. Leverage role-based access control (RBAC) or attribute-based access control (ABAC) frameworks to ensure that employees, contractors, and external partners access only the data necessary for their specific roles. Regular audits and monitoring can further enhance security and compliance.

Regulatory Compliance

Adherence to industry standards like GDPR, CCPA, and HIPAA is non-negotiable in today's regulatory landscape. Establish processes for data classification, consent management, and breach reporting to ensure compliance. Regularly review and update policies in response to evolving regulations to mitigate risks and maintain client trust. —>

"Snowflake breaks down silos by providing centralized access and eliminates cumbersome file management associated with batch processes. This centralization is critical for driving AI and advanced analytics initiatives that require firm-wide collaboration and trust in the data."
– Kellyn Cochell, Continuus Chief Revenue Officer

Immediate Wins with Snowflake

For firms looking to modernize their data architecture quickly and effectively, Snowflake provides immediate, measurable benefits. As a cloud-native data platform, Snowflake eliminates traditional bottlenecks, accelerates decision-making, and enhances collaboration across teams. Key wins include:

Seamless Data Sharing

Legacy systems often rely on cumbersome batch processes that delay critical insights. Snowflake's unique architecture enables seamless, secure data sharing across internal teams, partners, and third parties in real time. The result: Firms experience improved operational workflows and reduced latency in decision-making.

"The ability to securely share data across teams and external stakeholders in real time is transformative for financial firms," says Rachael DiMeo, VP of Partners and Alliances at Continuus. "Snowflake ensures that everyone has access to the right data at the right time without compromising security or governance."

Real-Time Analytics

Traditional on-prem systems often require time-consuming data preparation and reconciliation, delaying insights. Snowflake allows firms to analyze data instantly, with minimal setup or performance trade-offs. This enables real-time insights empower firms to react quickly to market changes, giving them a competitive edge. A McKinsey report highlights that firms implementing modern platforms see **25-30% faster delivery** of AI-driven insights.

Enhanced Collaboration

Financial services firms are increasingly adopting cross-functional, data-driven strategies that require robust collaboration. Snowflake supports this by providing a single source of truth, accessible securely by stakeholders across the organization. As a result, teams can collaborate on unified data sets, improving accuracy and alignment while reducing duplication of effort.

Cost and Scalability Advantages

Snowflake's elastic cloud architecture allows firms to scale their data systems up or down based on usage, providing a cost-efficient alternative to traditional infrastructure. For example, financial services firms migrating to Snowflake have reported up to a **40-60% reduction** in infrastructure costs, while accelerating access to high-value data.

With Snowflake, financial organizations gain the foundation needed to modernize, scale, and unlock the full potential of their data. →

Real-World Impact: Delivering Results

Case Study 1: Continuous Helps Financial Services Firm Modernize Security Master Infrastructure and Streamline Data Management

- **Challenge:** Fragmented security reference data management led to errors, delays, and increased costs due to duplicative efforts and a lack of trust in the data.
- **Solution:** Continuous centralized security reference data into a single Markit EDM Warehouse, implemented mastering rules and validations, and established a scalable data architecture and governance framework.
- **Outcome:** Achieved \$300,000+ in cost savings, improved attribution precision by 1 basis point in a flagship portfolio, and created a consistent, high-quality gold copy of enterprise data.

Case Study 2: Enabling Flexible Data Strategy Trough Comprehensive MDM Evaluation and Market Analysis

- **Challenge:** Rigid, outdated data strategy and governance framework, coupled with complex architecture and limited expertise, stalled decision-making and project progress.
- **Solution:** Continuous conducted a comprehensive analysis of tool usage, gathered requirements, showcased industry-specific demos, and provided tailored recommendations for tool selection and implementation.
- **Outcome:** Enabled key data strategy decisions and advanced the firm's data strategy and governance transformation.

Case Study 3: Continuous Transforms Credit Union Data Infrastructure for Enhanced Efficiency and Insight

- **Challenge:** Sought to modernize its data infrastructure to support a data-driven strategy but was hindered by an on-premise Oracle database limited to two years of data and requiring frequent purges.
- **Solution:** Continuous designed and implemented a scalable data architecture using Snowflake, enabling centralized data access, efficient reporting, and executive dashboards for real-time performance tracking.
- **Outcome:** Achieved query performance up to 7,000 times faster and reduced time to insight by saving an average of 25 minutes per dashboard.

Case Study 4: Streamlining Source Migration to Aladdin for Greater Consistency and Efficiency

- **Challenge:** Faced the complex task of transitioning from Bloomberg OMS to Aladdin, ensuring seamless integration of security master and transactional data with their accounting platform, Invest One.
- **Solution:** Continuous implemented a multi-layered API-drive architecture that extracted, transformed, and loaded data from Aladdin to InvestOne.
- **Outcome:** Delivered a seamless data transition with minimal operational disruption, enhanced data accuracy and consistency, and established a modern, integrated data environment to support the client's investment management and accounting functions.

Steps to Modernize: Partnering for Success

1. **Assess Current State:** Identify gaps, pain points, and opportunities within existing data systems.
2. **Design the Solution:** Build a roadmap tailored to business goals, leveraging scalable cloud platforms and AI capabilities.
3. **Implement and Integrate:** Ensure seamless integration with existing systems and processes.
4. **Drive Adoption:** Facilitate training and change management to empower teams.
5. **Measure and Optimize:** Continuously monitor success metrics and refine the architecture.

Transitioning to a modern data architecture may seem daunting, but a phased, intentional approach ensures success.

Continuous specializes in partnering with financial firms to modernize their data ecosystems, delivering custom solutions that align technology with business outcomes. Rachael DiMeo, VP of Partners and Alliances, underscores the importance of partnership: "Our clients trust us to navigate the complexities of modernizing their data systems. The key to success is aligning technology with business strategy." →

Take the Next Step Today

Modern data architecture is no longer optional for firms seeking to thrive in an AI-driven, data-intensive world. Financial services firms that invest in scalable, governed, and flexible data solutions will unlock insights faster, improve operational efficiency, and remain competitive in the face of industry disruption.

"The future of financial services belongs to firms that can harness their data effectively. With modern architecture, firms are not just keeping pace, they're leading the way," concludes Matt Moeser, CEO of Continuus. We empower firms to move beyond the chaos of legacy data systems, unlocking the full potential of their data with modern, tailored solutions. Continuus can help you get started on your data modernization journey today. [Contact us](#) to get started.

Related Resources



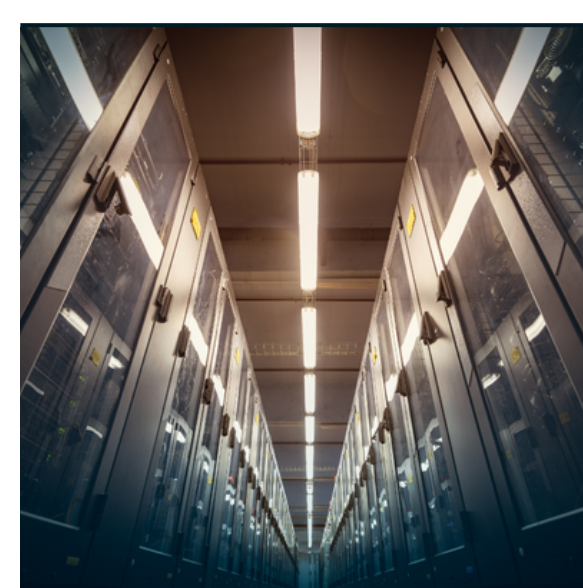
Unlock GenAI Potential with Snowflake and a Modern Data Architecture →



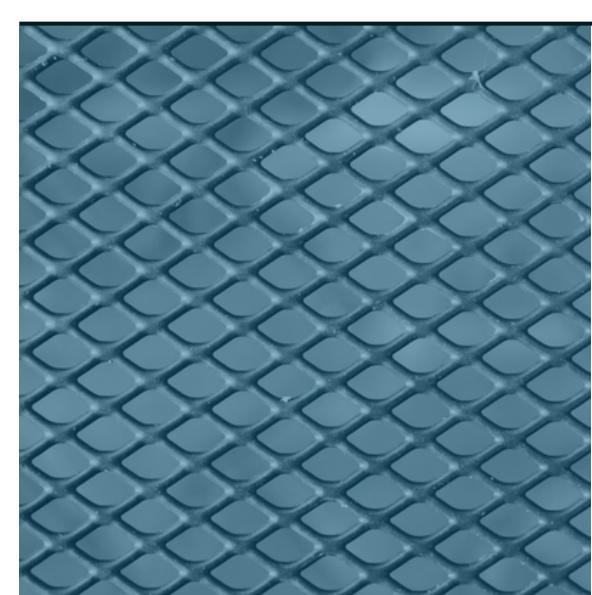
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Modern Data Architecture: Data Mesh vs. Data Fabric – Part I →



Modern Data Architecture: Data Mesh vs. Data Fabric – Part II →

Sources

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- [Accenture Cloud Modernization Case Study](#)
- [McKinsey Report on Data Architecture and Insights Delivery](#)
- [BCG Financial AI Analysis Report](#)
- [Snowflake Case Study on Financial Services Firms](#)
- [HBR Study on Data Governance in Financial Services](#)
- [Accenture Cloud Adoption and ROI Study](#)
- [Forrester TEI Study on Snowflake](#)

About Continuus

Continuus is a data analytics and cloud consulting firm that employs an elite, focused group of industry experts who design innovative, custom solutions that enable the financial industry to achieve operational alpha. We help our clients surface insights faster, increase operational efficiency, and harness the exponentially growing world of data. From strategy and governance to implementation and support, we unite complex data ecosystems, drive adoption of cutting-edge technology, and build custom, scalable, and sustainable solutions. Our core practice areas start with Data Strategy & Governance to align your data processes, break down silos, and implement governance for responsible, self-service data use. Our Data Delivery & Transformation services ensure seamless migration to modern cloud platforms, optimizing data ecosystems for long-term success. Lastly, our AI & Analytics offerings leverage cutting-edge AI technologies to unlock insights, automate interactions, and drive smarter decision-making through advanced analytics and dashboards.