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Data-driven strategies:

Data management and AI architecture for alternatives and private equity firms

Alternative investment firms are discovering that their competitive advantage increasingly depends not just on deal sourcing and operational expertise, but on their ability to integrate, govern, and analyze vast amounts of disparate structured and unstructured data. Yet many firms remain trapped in legacy systems and siloed data architectures that limit their ability to generate actionable insights and drive superior returns.[1] Further, organizations typically have underinvested in data capabilities like business metadata glossaries, data quality tooling, and data aggregation and insights platforms.

The stakes have never been higher. Firms with robust AI and data management and architecture capabilities are outperforming their peers by 15% to 20% in portfolio company value creation. Meanwhile, regulatory pressures, investor requirements for transparency, and the explosion of third-party and alternative structured and unstructured data sources are creating an imperative for transformation that can no longer be ignored.

What's driving the data complexity?

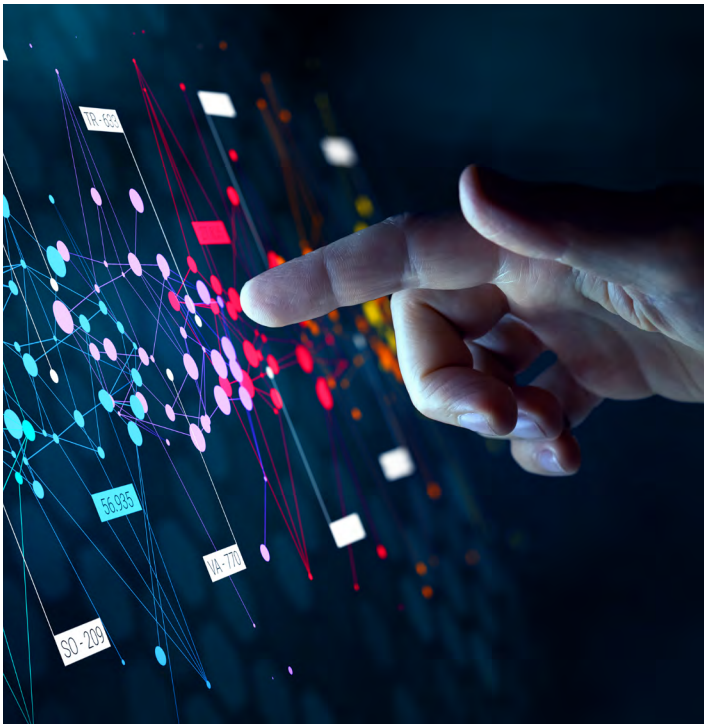
There are three leading trends driving AI and data, technology, and architecture complexity:

1. **Private credit asset class:** Private credit as an asset class has been a strong growth area for nonbank lenders, private equity, and alternatives firms. Based on Preqin research, private credit assets under management are set to exceed $2.5 trillion by 2030.

2. **Artificial intelligence (AI) and Generative AI (GenAI) is increasingly used** to drive productivity and operations across front-, middle-, and back-office functions.

3. **Wealth and high-net-worth/retail segment:** Historically, the retail segment has been underserved by alternatives firms. Private equity firms are advisory and wealth offerings in their growth plans and are expanding products and technology solutions to cater to this segment.

These trends and business drivers require investment and maturation of data and architecture capabilities that are AI-ready and can handle structured and unstructured data.



The data dilemma: Why underinvestment in data architecture and data capabilities falls short

In today's AI-first data and investment landscape, private equity and asset management firms face mounting challenges as their portfolios grow in both size and complexity. Orchestrating seamless data management across dozens or even hundreds of diverse portfolio companies, operating in multiple industries and geographies is now a fundamental requirement for competitive success. As the pace of dealmaking accelerates and regulatory expectations intensify, the ability to efficiently bring together, analyze, and report on operational, financial, and market data is critical. Organizations that underinvest in robust data infrastructure risk not only falling behind their peers in agility and insight, but also encounter regulatory pitfalls, operational blind spots, and significant inefficiencies that can erode value and slow growth.

Portfolio complexity at scale:

- Managing data for 10 to 100+ portfolio companies with diverse systems and reporting standards
- Integrating operational, financial, and market data across industries and regions, and across data of varying modalities
- Reconciling different accounting standards, currencies, and reporting periods

Speed is agility:

- Due diligence time frame compressed from months to weeks, requiring rapid data integration, high-quality data, and analyses that should be produced rapidly
- Real-time portfolio monitoring demands that can't wait for quarterly reports
- Investment committee/operational teams requiring comprehensive data insights assembled on demand

Regulatory and investor needs:

- Regulator reporting requirements, limited partner (LP) transparency expectations extending into granular data needs, and a need to maintain fine-grain data lineage traceability and custom reporting data classifications (hierarchy, ontology)
- Local laws, rules, and regulations requiring compliance across reporting frameworks and multiple jurisdictions, with varying data and aggregation requirements

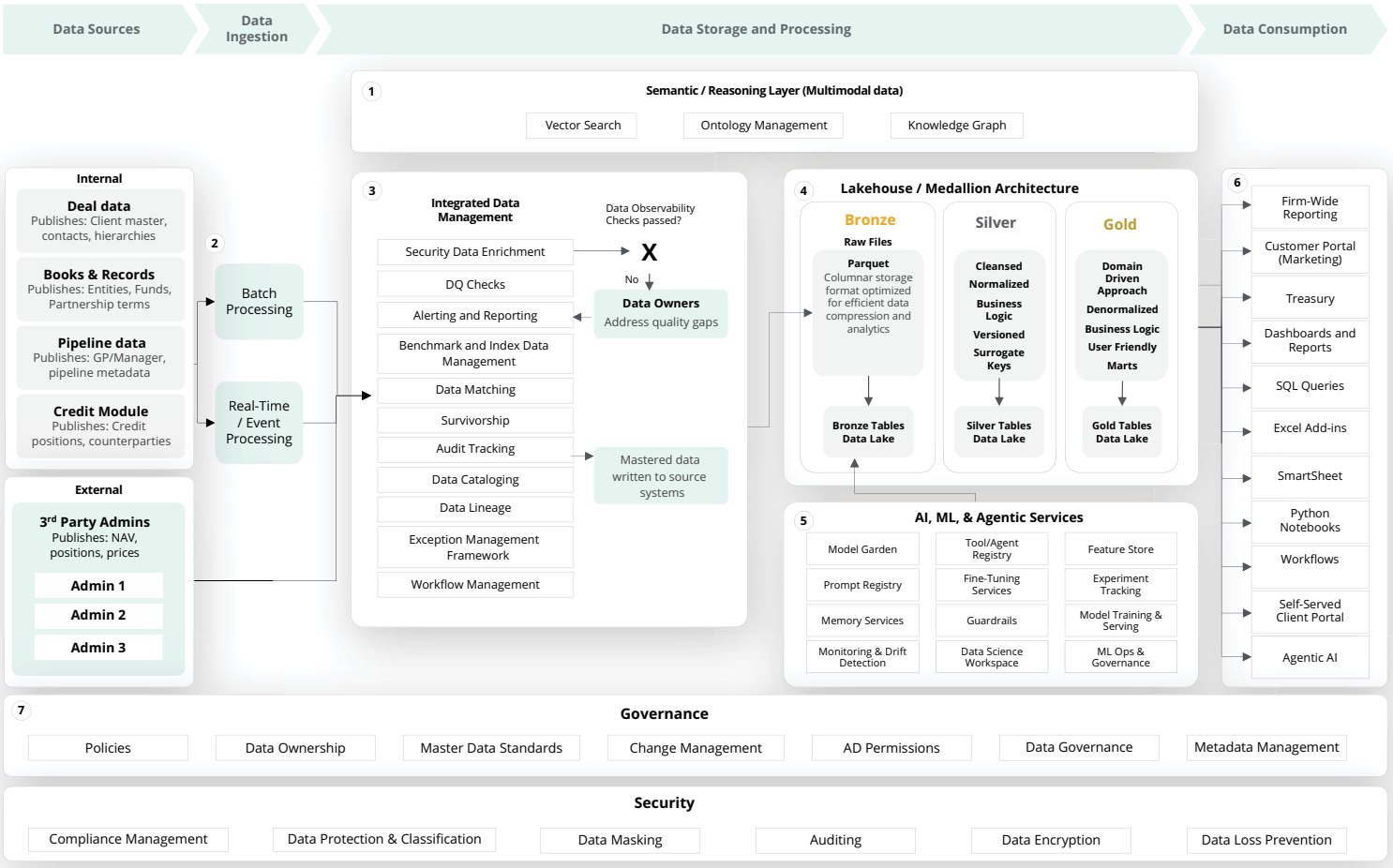
Cost of underinvestment:

- Due diligence delays: Manual data collection and analysis can increase deal timelines by 30%
- Value creation blind spots: Limited ability to identify operational improvement opportunities across portfolio companies
- Reporting inefficiencies: Finance teams spend 50% of their time on data gathering rather than focused analysis
- Competitive disadvantage: Slower decision-making processes and diminished capacity to demonstrate value to LPs and investment sponsors

A modern data and AI architecture has the following capabilities:

1. A Reasoning layer that provides company-specific understanding of datasets and processes to achieve semantic understanding, based on defined business terms and taxonomy/ontology mapping of relationships and entities. A semantic model can then vectorize an organization's data (structured and unstructured) and combine it with a defined ontology and knowledge graph to enable human-like understanding.
2. Data ingestion via batch and events/real-time processing, with the ability for third-party fund administrators to share data directly into a cloud layer without physical data movement (e.g., zero copy clone).
3. An integrated, customizable solution for data mastering, data quality, data lineage, and data catalog, which offers flexibility to set specific rules by domain.
4. Domain-driven principles to model the bronze, silver, and gold architecture layers in a Medallion architecture that serves data science, agentic workflows, dashboards, and downstream applications.
5. AI and agentic services layer to manage data, tooling, governance for prompts, and capabilities to manage AI use cases (vector database, feature store, data science workspaces, and guardrails).
6. Consumption patterns are enabled ranging from traditional BI for reporting, business-specific workflows (e.g., Treasury, Marketing), traditional ML, agentic processes, data sharing, and natural data understanding via "talk-to-my-data" interfaces.
7. Data and AI governance to manage the process and technology/infrastructure capabilities.

The data architecture advantage: Building blocks for data and AI excellence



Quantifying the value

Our experience has shown that investing in solid data architecture, data management, and aggregation capabilities will result in:

Operational efficiency gains

- Reduction in time spent on data collection and reporting
- Faster due diligence processes through use of deal data rooms and certified data in gold layer, along with semantic understanding of disparate data
- Improvement in portfolio monitoring frequency and accuracy

Value creation enhancement

- Increase in portfolio company earnings before interest, taxes, depreciation, and amortization (EBITDA) through data-driven operational improvements and faster identification of value creation opportunities
- Improvement in exit preparation timelines and valuations

Risk mitigation

- Reduction in regulatory reporting errors
- Enhanced compliance reducing regulatory and reputational risk
- Improved LP satisfaction through transparent, real-time reporting

The path forward: Building tomorrow's competitive advantage

The transformation from data- challenged to data- and AI-driven isn't just about technology—it's about reimagining how private equity and alternatives firms create value in an increasingly complex and competitive landscape.

Firms that invest in robust data management and architecture today are positioning themselves not just for operational efficiency, but for sustainable competitive advantage. Leading firms are already leveraging advanced data architectures to identify opportunities faster, manage portfolios more effectively, and deliver high-quality returns to their investors.

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Endnotes

1. Aditya Ganti et al., "Data-driven strategies: The winning edge in private equity," Deloitte, June 2024.

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