



The power of data-driven asset management

Propelled by the power of data to accelerate transformation with AI, analytics and cloud

THE STAKES ARE HIGH IN GETTING DATA RIGHT

Many asset management firms need a “data reinvention”—developing the ability to analyze vast amounts of data, sometimes in real time, to fuel growth and product innovation and deliver world-class customer service. The stakes are high in getting data right.

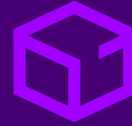
Yet, if you asked asset managers if their firm is truly data-driven—if they can turn their data into an asset to achieve a competitive edge—only a few would say yes. In fact, according to Accenture research, 66 percent of asset managers say that data management at their company needs to be completely disrupted.¹

Where are firms struggling regarding data?

In our work with asset management clients, we see some or all of the following:

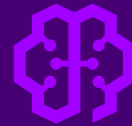
- **Data fragmentation and disparate versions of “the truth”**
- **Proliferation of data sources**
- **Rising costs of data management**
- **Lack of an enterprise data strategy**

Transforming data into a differentiated asset for the long term requires a focus on three interrelated actions across business, technology and people:



Build a strong data foundation

Create an effective data management program, which includes data governance, data quality and master data management; technology platforms and data architectures; and data supply chain management.



Harness advanced technologies

Use artificial intelligence (AI), machine learning and analytics to glean critical insights from data.



Create a data-driven culture

Manage the people and cultural dimensions of advanced data management.



Building a strong data foundation

A strong data management program is key to transforming data into an asset and successfully delivering on a firm's goals and complex projects.

Whether asset managers are transitioning their entire operating model for investment accounting or keeping pace with changes in the industry, they may find themselves struggling to deliver projects on time with the expected business value because they lack a comprehensive data management program.

A firm's data foundation is critical to facilitating data-powered business use cases and realizing tangible business value.

- 01** [Data governance](#) →
- 02** [Master data management](#) →
- 03** [Data quality and veracity](#) →
- 04** [Technology platforms](#) →
- 05** [Data architecture](#) →
- 06** [Data supply chain management](#) →

Data governance

Asset managers often struggle to take a firmwide view of data, so their data management approach supports only specific, non-integrated requirements. That approach creates a siloed understanding of data which then causes a fracturing of the data structure and differing points of view on reporting requirements across functional domains.

An effective data governance program establishes trusted, certified data for business users. It creates standards for business data transparency, data protection and audit integrity. Asset managers realize the importance of good governance: more than half (55 percent) of the asset managers that Accenture surveyed recently said they have a data management initiative underway that aims to enhance governance and data quality.²

Data governance requires coordination across organization, process and technology:

ORGANIZATION:

It starts at the C-level, but structurally it is important to create a data council—a formal governing body maintaining a cross-domain perspective that guides the firm’s data strategy. Particular roles are also important, including data stewards and business data owners who shepherd high-quality data assets and promote data literacy throughout the firm.

PROCESS:

Data governance policies and procedures help establish a management framework, but the process delivers the goods. Process is organized into operating models which support business and data transformation. For example, operating models which support the complete,

end-to-end data lifecycle from initial data capture to the delivery of analytical views where data has been normalized to support an enterprise view of the asset.

TECHNOLOGY:

Technologies and platforms enable the governance process. Metadata management and data cataloging detect and isolate redundant data and identify data flow breakage and data loss. Enterprise data governance platforms provide capabilities including policy management tools, data glossaries, data lineage capabilities and dashboards/reporting which provide vertical and horizontal views of data.

BUSINESS CASE

A DATA GOVERNANCE AUTOMATION SOLUTION

One global asset manager wanted to organize for growth by enhancing its reporting capabilities. Effective data governance was emphasized to ensure that data being reported was accurate and did not introduce reputational risks or the chance of incurring regulatory fines.

Working with Accenture, the company established an enterprise-wide data governance and data quality capability using an automated solution. The firm improved business decision-making because it now had high-quality data and standard taxonomies.

It achieved a reduction of operational costs and risks by establishing common artifacts that were shared across the organization. By automating key manual data integrations, the asset manager was able to enhance efficiency and decrease risk.

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02

Master data management

Master data management (MDM) is a centralized and controlled data aggregation capability that incorporates end-user requirements and performs validations to verify that the data is trustworthy and fit for purpose.

Accenture cross-industry research found that 83 percent of companies don't have enterprise-wide, multi-domain MDM, while half of respondents don't regularly reassess and update their data governance process definitions.³

For the asset management industry, having an MDM strategy and the ability to change master data centrally can allow firms to adapt with minimal impact during project implementations.

Transforming data into an asset should be focused on having authoritative sources for key data domains in asset management, namely: account/product, security, price and index/benchmark. Security reference data or "security master" defines the investments themselves and facilitates the communication of discrete assets internally as well as with the market and third parties.

Leading practices suggest that asset managers should ingest any shared data centrally for all data consumers and organize it by domain to create a final and complete master record. This allows for multiple efficiencies in data acquisition, validation and enrichment. Ultimately, all sources are normalized and consolidated into a single, standard model that meets all data consumers' requirements.

83%

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03

Data quality and veracity

The ability to measure the quality of data across the enterprise can be a challenge for asset managers. Across industries, data scientists spend over 80 percent of their time preparing and scrubbing data to make it fit for use for analytical purposes.⁴

Establishing master data management goes a long way, but implementing a data quality validation approach enabled by technology and business processes is needed across the data ecosystem. A comprehensive set of data validations, applied at integration points and within repositories, can provide end-to-end assurances. The remediation of data quality issues and communications based on service-level agreements is critical.

Data quality is intertwined with data governance. The data governance program supports the enterprise in making a firmwide commitment to set up and maintain a data quality framework. Establishing this capability creates trust among users that the data they need has been validated and is fit for their business purposes.

It allows data consumers to focus on their core competencies and not feel the need to create shadow data management teams to support their business requirements.

+80%

Across industries, data scientists spend over 80 percent of their time preparing and scrubbing data to make it fit for use for analytical purposes.⁴

03

Data quality and veracity

When it comes to data quality, the goal is data veracity.

“Veracity” refers to the state of data quality in terms of what is fit for purpose and ready for the data consumer. With veracity, you pull together all aspects of data quality to decide whether the data can be released or not.

Because different data consumers require distinct levels of data quality, a veracity framework needs to support a multi-level certification process. These certifications should be communicated to data consumers via metadata or data consumption services. Transparency is required to achieve trust. Without transparency, data consumers would devote unnecessary time to individually acquiring and revalidating data.

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04

Technology platforms

Many asset managers' system infrastructures have aged to the point where they cannot easily support new business goals.

Across the asset management industry legacy, inflexible technology stacks (on-premises databases and software installs, for example) are common. Legacy systems and data issues can hinder asset managers' time to market, operational readiness with new products and their capabilities to integrate new third-party data sources. To remain competitive and reduce costs, firms should establish a modern technology platform.

One lever for potential cost savings and capability enhancements is outsourcing or buying a service from a third party. The work taken on by a managed services provider is typically lower-value commodity work, which means that the firm can maintain core competencies in-house.

This shift towards "as a service" offerings demands more efficient and scalable data integration technologies, including the use of cloud.

One lever for potential cost savings and capability enhancements is outsourcing or buying a service from a third party.

The cloud is increasingly the choice for a technology platform.

Data on the cloud is driving business and technology transformation for asset managers in several ways:



Modernizing the enterprise data warehouse

“Modernization” in this case means accelerating the ability to capture, curate and publish data for operational and analytical reporting purposes. It also means quickly scaling up and governing exploratory data science environments against high volumes of structured and unstructured data—something that can be laborious and inefficient in traditional data warehouse environments.



More demanding customers

Cloud-based customer relationship management solutions can boost efficiency and effectiveness, assist institutions in managing client relationships more effectively, and create one central repository of client relationships and contacts.



A more dynamic operational environment

Enterprise-strength offerings (trading, middle and back office) are now available via SaaS, paving the way to future rationalization at a lower cost.



Sustainable cost reduction

Cloud-based shared services accessed on a pay-per-use basis can help reduce costs by breaking down existing vertical silos and facilitating more effective enterprise data transformation.



Smarter and more sophisticated risk management

Cloud-based risk management engines are available on a pay-per-use basis. The scalability of on-demand, cloud-based offerings makes them well-suited for large, complex and resource-intensive risk calculations.

BUSINESS CASE

EXECUTING A SUCCESSFUL OUTSOURCING PROGRAM WITHOUT DISRUPTING THE BUSINESS

One asset manager initiated a transformation program to outsource its accounting services for its institutional and mutual funds to multiple service providers. The firm's accounting system was used as a quasi-data-warehouse with no governance over data consumers' access.

A cloud-based data hub was selected to insulate consumers from the conversion effort and aggregate both legacy and service provider data domains for downstream consumers. In parallel, a global data management operating model was deployed to achieve standardization and meet the demands of data consumers.

Working with Accenture, the company documented requirements and

guided the ingestion of data from the product master, security master and multiple accounting sources. It assessed and rationalized consumer needs to develop business and technical requirements for outsourcing partners across all data sets. The firm also identified risks and proposed solutions for the normalization of data across different fund structures and accounting sources.

A cloud-based data hub was selected to insulate consumers from the conversion effort and aggregate both legacy and service provider data domains for downstream consumers.

05

Data architecture

Beyond platforms, data architecture is a fundamental component of the overall data strategy.

According to Accenture cross-industry research, 71 percent of data management high performers focus on data architecture to handle large data volumes while still adhering to industry standards. Just 50 percent of data management lower performers can say the same.⁵

At many companies, as data grew in complexity and scope, different functional groups would just build something they needed in the short term without thinking about long-term integration. In such an environment, bringing the architecture up to date requires significant work.

The data architecture is a critical part of the overall data foundation. Changing it on the fly, while continuing to run the business, is challenging. The data architecture should be flexible and extensible.

71%

of data management high performers build data architectures that can handle large data volumes while still adhering to industry standards.

50%

Just 50 percent of data management lower performers can say the same.⁵

BUSINESS CASE

SPEEDING TIME TO VALUE FOR MERGERS AND ACQUISITIONS

One firm sought to create a plug-and-play acquisition capability to align data and investment lifecycles with technology and operating models. Its immediate challenge was that different business domains within the company, each with competing data priorities, had created their own data solutions.

Rapid business growth—including ongoing M&A activity—had led to redundant systems, fragmented data, suboptimal operating models and a poor user experience. The company found itself in this position despite concerted—and sometimes expensive—programs to address its data challenge: an enterprise data lake, modern governance tools and efforts to harness technologies like AI and analytics.

Working with Accenture, the company created an enterprise-wide data program by standardizing and governing its data and developing an enterprise data architecture. It defined and executed on business-driven initiatives to help executive leadership advocate for the strategy, and better facilitate acceptance of the change by the business and technology teams.

One firm's immediate challenge was that different business domains within the company, each with competing data priorities, had created their own data solutions.

Data supply chain management

Advanced asset management firms are increasingly executing their data strategy through managed data supply chains to handle front-to-middle and middle-to-back data flow.

Data supply chain management brings together data governance, master data management, data quality and veracity, platforms and architectures through a data delivery operating model that plans and governs sourcing and consumption strategies.

The data supply chain subscribes to the principle that analytics can be delivered faster and solidifies the foundational data ecosystem to

support future use cases like flow insight, money in motion and cross-sell. Integration of new data into the data ecosystem and the ongoing maintenance of integrated data flowing through the supply chain is then handled as business-as-usual execution.

In asset management, we know that a supply chain requires a coordinated effort to source and run data through the firm's key systems.

Today, the speed, agility and scale provided by the new on-premises and cloud vendors are helping to support simplification of data flows and planned data flow architecture.

Establishing a supply-chain-driven data foundation helps firms move forward confidently with disruptive capabilities and quickly ingest external data sources to proactively put forward new use cases.

The key is to advance the foundational framework by just the right measure. Then you can iterate to increase the maturity of advanced capabilities such as embedding analytics into real-time decision-making processes across the front, middle and back office.



Harness advanced technologies

**Make data work for your business
by bringing together AI, analytics
and machine learning to drive
transformation.**

The connection between data, AI and transformation needs to be clear because, when it comes to innovation, it's not enough to have the right tools and technologies.

Firms should be able to connect the dots between insights and technologies, have a broad vision on how to apply them and ensure end-to-end integration.

Asset management firms' ability to use emerging technologies like AI and machine learning at scale, and to leverage new sources of data, are key to increasing efficiency and driving innovation and growth.

Firms have begun to apply advanced technologies in their businesses, but many asset managers have not yet realized the full potential of those technologies. Despite investing in data, they might not see a sufficient ROI when it comes to using that data to serve up the right product at the right time to the right customer.

Achieving that kind of intelligent product delivery would require a more significant investment and strategic scaling to bring the full power of new data and AI to your organization.

This would require a platform with a flexible architecture supported by a marketplace of capabilities that can help firms scale as well as pivot quickly in response to a rapidly changing world and evolving demands.

We will look at three advanced technologies:

01 [Analytics](#) →

02 [Machine learning](#) →

03 [Artificial intelligence](#) →

01

Analytics

Analytics is an “in” topic these days in asset management, but few firms are really leveraging its full value. In fact, according to cross-industry Forrester research, between 60 and 73 percent of all data within an enterprise goes unused for analytics.⁶

At their best, however, analytics technologies and capabilities are revolutionizing how asset managers conduct research and assess alpha-generation opportunities.

These advanced technologies are allowing managers to access previously unattainable or

unreadable data sets, helping them to feed their analytics and research platform to experiment and validate investment ideas. Use-case-focused analytics applications and implementations can help firms make investment recommendations and decisions.

60% -73%

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Consider the use of analytics in the following asset management contexts:

Customers' needs can be inferred by analyzing their offline and digital footprint captured across a variety of sources.

For any company or customer, investment managers can create an "analytics record" made up of:

- **External data:** fund flows, fund performance data, survey data, interactions data via social media
- **Internal data:** assets and transactions, portfolio composition, performance and volatility
- **Proprietary data:** capabilities of iSentium and Ravenpack, for example

Key signals can be extracted via online news from multiple sources. These signals can include business risk, credit ratings, debt transactions, executive changes, financial filings, legal issues and more.

Companies can assess brand value by mining consumer data related to affinities and brand usage to help understand and measure brand sentiments.

Analytics can help probe trends of key financial ratios such as profitability, liquidity and market, and can also analyze changes in a prospect's composite risk score.

Finally, in the investments area, analytics can aid alpha generation and research.

Analytics improves sales and distribution capabilities.

Asset managers can develop deep insights around investment patterns and pricing analytics based on customer behavior, transactions and redemption analyses.

Obtaining richer client insights and having the ability to predict potential asset shifts allow for more targeted delivery of products to address a client's needs. A deep understanding of the sales workforce can also be developed to promote high performers and preempt attrition.

Monitoring for compliance and risk can also be transformed by analytics.

Multiple data sources can be leveraged to drive trade surveillance through identification of new trade patterns, sales practices and trigger/alert rationalizations.

Fund surveillance benefits from analytics by facilitating the ability to perform liquidity checks under regulatory guidelines, supported by trend analysis through modern reporting practices.

Employee activities can also be monitored to highlight anomalies across personal investments, gifts and entertainment and compliance reviews.

Machine learning

Although we often think of machine learning in the context of performing modeling and predictive analytics, in fact it is being increasingly used in the data management space to help clean up data by conforming and normalizing it.

Rather than doing such clean-up manually, machine learning helps accelerate the process. Suppose you find a business rule against a security master ID or a date and apply that to one field. In the manual world, you would have to look at every field and define the rule that's appropriate. Machine learning helps you look at how you're applying a rule to a certain kind of data, then goes out and

highlights what it thinks are other security IDs or date fields and asks, "Would you like to apply these rules to these 150 different elements that we found across the warehouse?" That can accelerate the process of disseminating and applying data quality rules against a larger breadth and volume of data.

Consider also the process of data conformity. To get data right to support analytics, you should define it. But different lines of businesses can use different names for the same thing. Machine learning can help you align and conform data to an enterprise view.

If you define security ID one way in one field, it can identify other fields that appear to be a security ID and ask, "Should we apply the business metadata to these fields and link it to the model?" That's where firms can start getting acceleration and scale.

You can use just a few people for activities that might have required a couple dozen people just a few years ago. Others can be freed to perform higher-value work.

Machine learning

Machine learning presents a tremendous opportunity to discover “hidden signals” generated by customers in their digital interactions.

The key to unlocking value from broader data sources is creating a 360-degree view of customers, combining first-party data with external third-party data. This third-party data is constantly evolving and expanding its reach across the end-customers’ digital interactions to include sources like social media and geospatial data.

Machine learning can help drive predictive marketing and create highly contextualized client experiences. Machine learning combined with new customer analytical records can result in predictive models for precision targeting, including not only acquisition, but also cross-sell, retention and risk-of-redemption.

Think of customers and their basic marketing demographic information—age, marital status, income and occupation. Now add data that provides insights into the customers’ life stage and their digital behavior to round out their “external data”-based profile. This may tell you that the individual makes a comfortable income and is a digital superuser.

That’s helpful, but the ability to deliver the “right message placed at the right time through the right channel” comes from contextually engaging the customer based on their geo-location, online browsing and app installations. Once engaged, now the zero moment of truth can be created through a display ad, followed up with a call to action for the customer to open an account or create a systematic investment plan (SIP) on an existing fund.

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03

Artificial intelligence

AI can enhance the investment decision process by acting within parameters designed to identify buy/sell opportunities and populate trade orders within order management systems based on criteria that align with the investment strategy of the portfolio.

AI is revolutionizing how asset managers conduct research by providing a platform by which to experiment and validate investment ideas. Firmographics and recent investments in new technology (e.g., blockchain) or growth trends can be integrated into an insight platform. Multiple unstructured sources of external data can be combined to enable portfolio discovery and alpha generation. Corporate signals based on news feeds, or consumer data related to affinities and brand usage (e.g., surge in complaints on social media about a product) can be curated and, with the application of natural language processing, more effectively measure and understand brand sentiment.

These AI capabilities can reduce costs as well.

70%

Accenture research found that 70 percent of operations leaders expect AI to deliver the next wave of cost reductions to the asset management industry.⁷

Even though AI streamlines and expedites the identification of investment opportunities, portfolio managers' primary responsibilities should continue to focus on portfolio analysis. The introduction of AI and intelligent analytics helps portfolio managers to access more accurate data faster to execute investment decisions. The combination of human and machine decision-making about investments could reduce timeframes from hours to minutes.

Managing a data-driven workforce and culture

New mindsets and ways of working are prerequisites to success and should not be thought of only late in the transformational process.



Becoming truly data-driven requires asset managers to successfully manage workforce and culture change

Failure to anticipate the effects of change might delay the business case and the data program itself.

As we look toward the future, successful firms will likely be those that are agile and can quickly adapt to technology innovations and market infrastructure developments.

This speed of innovation makes having a strong change management program more important than ever.

Managing evolving skillsets is another imperative.

One Accenture survey in the asset management industry found that:

75% of respondents identify investment operations domain knowledge and problem-solving skills as the qualifications most in demand at their firms today.

65%

Five years from now, however, 65 percent of respondents believe that data science and technology development capabilities will be most in demand.⁸

What's next?

Planning and managing your data-driven journey

The basic coordinates of the journey to becoming data-driven may be similar for every firm, but different asset managers begin from distinct positions. We speak about the next steps for an asset manager in terms of three stages of a journey, with the goal of leapfrogging to stage three and becoming a data-driven firm.



The steps to transformation

↳ Proof of Concept Factory

Firms at this stage are focused on creating compelling proofs of concept for data-related initiatives. However, some may get stuck with isolated initiatives that do not gain support or are never scaled. Because of these deficits, firms typically execute small, bottom-up initiatives that fail to deliver on a broader strategy.

For these companies, some of the most immediate to-dos include:

- Align executive sponsors with the goals and potential benefits of the data strategy.
 - Formally agree on a strategy that incrementally leads to reinvention of the data organization.
 - Ensure that key principles—including agility, scalability and continuous delivery—and consolidated business requirements are formalized.
-

↳ Data as Capital

Companies that have moved beyond the proof-of-concept stage have probably started implementing initiatives like centralization of architected data and analytics platforms, or evolution of enterprise data management and governance capabilities. C-level (CEO, CIO) sponsors are ready for the next stage which is exploitation of data as capital.

These firms are ready to take advantage of a new data organization from the top-down so they can:

- Use analytics to solve larger problems with 3X to 5X ROI.
 - Establish a data supply chain for continuous delivery of business data requirements.
 - Ensure that governance and data quality are linked to key data assets that make up the data capital of the firm.
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↳ Data-Driven Reinvention

The firms most advanced with their data strategy enjoy several advantages including the ability to fuel innovation and business models in a post-digital world, infuse data and AI into business processes and reinvent the data culture of the enterprise.

As they refine their data strategies and ability to harness emerging technologies, these firms should focus on:

- Plotting a value-creation-driven approach to data capital.
 - Supporting the living process such as constantly sensing events in the market and using them in a predictive manner.
 - Fostering data experimentation to drive new products and profitability models.
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