



# Technology for the C-Suite:

## Driving competitive advantage in investment management

**Data and technology are transforming the asset management industry, defining future industry leaders.** Investment management firms spent more than \$50B on data and technology in 2019, a figure expected to balloon to \$84B by 2023. But the scale of investment, use of budget, and return on investment varies greatly. Most firms struggle to get the most out of their technology spend. Many firms struggle to gauge success of their in-flight initiatives or establish a clear pipeline for future investments. Only 15% of CTOs\* report a structured process for measuring value, and just one-third have a defined prioritization process.

**Success relies on optimizing data and technology investments**, allowing firms to shift efforts from fixing outmoded systems to deploying innovative technologies that support differentiated competitive advantage. Evaluating an asset management firm's progress against four criteria (technology leadership, culture, its platform structure, and business practices) reveals three distinct groups of competitors:

- **Late movers (30% of firms)** are characterized by immature systems and weak processes. These firms spend less than peers (9%) and use a majority of spend to maintain outmoded technology.
- **Transforming firms (45%)** are evolving their capabilities and spend the most (12.5%), earmarking more spend to process improvement (35%).
- **Front runners (25%)** have strong technology leadership, clear vision, and a robust execution approach; spend slightly less (12%); and allocate the highest proportion of budgets (17%) to innovation, as defined by budget directly linked to expanding product and service capabilities.

**Leadership benefits of front runners versus late movers are tangible:**

- **5x organic growth**
- **25% longer client retention**
- **Second-quartile** versus third-quartile investment performance
- **Healthier operating margins**

**Creating a data- and technology-driven organization requires an enterprise wide transformation. This dramatic change requires two major initiatives:**

**Empower and adapt leadership to embrace technology**

- Define how data and technology drive **competitive differentiation**
- Rework the composition and **skills of senior leadership**
- Create a consistent and iterative **framework for capital allocation**

**Cultivate a leading technology operating model**

- **Modernize data, applications, and platforms** to reduce drag and optimize agility
- Shift talent mechanisms to favor those who embrace technology
- Accelerate the pace of development by **changing the work model** and establishing a test and learn culture

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## Introduction

Leadership takes foresight to make bold decisions. In the past, investment management CEOs confidently dictated their firm vision, tapping deep experience earned as investment or distribution leaders. The disruptive speed and impact of data and technology, however, challenges today's executives. CEOs are beset with ballooning technology costs, an explosion of new applications and data sets, and a shortage of internal expertise.

Asset management is in its adolescence when faced with how to unlock the transformative potential of data and technology. The industry spends \$51 billion annually on data and technology. But firms are assembling a range of technological capabilities that lack a cohesive recipe.

As technology moves to the core of the business, asset management CEOs must evolve and set a clear vision for how data and technology will drive competitive advantage. Those who have the road map and skills to act will leapfrog the competition.

This paper aims to demystify the essential ingredients to success, working from the top down to link technology capabilities with firm business objectives. Our white paper has four primary conclusions:

- **Data and technology increasingly are central to competitive advantage among asset managers.** Informed by experiences outside of the investment management industry, consumer, regulator, and employee expectations have changed. There is a higher bar for near real-time delivery and personalization, an expanding set of third-party providers and data to inform decisions, and an increasing compliance burden from regulators.
- **Data and technology budgets are growing rapidly, but only a narrow set of industry players are benefiting,** enjoying thicker profits, stronger growth, and better investment performance. Technology front-runners share common characteristics across their culture, processes, operating models, and leadership.
- **Successful data and technology programs begin at the top,** not within a siloed function. In front-runner organizations, data and technology use cases support competitive differentiation; effective change management and technology proficiency characterize current and future leaders; and budgets steer resources toward innovation and away from outmoded systems.
- **Front-runners adapt their operating models to maximize impact from data and technology.** Leading firms invest in their foundation. They make conscious decisions about their shared technology systems, human capital management, analytics, and project execution methods, all of which are designed to amplify technology advantages across the entire enterprise.

*Casey Quirk has an extensive industry-specific information network driven by the Casey Quirk Knowledge Center's ongoing primary research.*

*Data cited in this paper and its exhibits, unless otherwise indicated, come from a number of Casey Quirk's research initiatives, including our annual Chief Technology Officer Study, Chief Strategy Officer Survey, and Performance Intelligence financial benchmarking survey of asset managers, jointly conducted across the United States and Europe with compensation consultants at McLagan, a unit of Aon.*

## Why Now: Factors Driving the Speed of Technology in Investment Management

Informed by daily interactions with other consumer-facing companies, buyers expect a different relationship with their asset managers. Several factors are increasing investment managers' reliance on technology:

- **Just-in-time expectations:** Clients and employees expect instantaneous and accessible information. From market data delivered to investment professionals to interactive client reporting, firms must be able to deliver high-speed, accurate data regardless of internal silos, global operating models, or other internal constraints.
- **Personalization:** Off-the-shelf products and information no longer suffice. Buyers and employees expect customizable, self-service capabilities on demand. Managers must develop the agility to customize products and services without amplifying operational cost and complexity.
- **Expanding ecosystems:** With new challenges come new providers. Fintech firms, outsourcing platforms, consultants, and data providers are joining an ever-increasing ecosystem of service providers supporting the industry.
- **Data proliferation:** Asset managers are expanding their efforts to mine an exploding amount of data, driven by client interactions, new alternative data sets (e.g., from cell phones or internet-enabled appliances) and multiplying levels of market information.
- **Risk and compliance:** Increased customization, from fee schedules to IMAs, and increased regulatory reporting amplify organizational complexity. Technology is becoming essential to manage risk and compliance obligations in efforts to reduce risk and minimize manual intervention.

The COVID-19 pandemic has accelerated the speed of change in the industry and created new pressure points on technology. The shift into a remote working model has emphasized the use of collaboration tools, changed sales and client service processes, and created new demands around employee management and engagement. Data and technology will be critical resources for leadership teams to leverage as they navigate the restrictions of the COVID-19 operating environment and build a plan for a post-COVID-19 world.

## Exhibit 1: Change catalysts for investment management technology

Change Catalysts	
<b>Just-in-time expectations</b> <i>Increased importance of providing instantaneous and accessible data and information</i>	<b>57%</b> <i>of investors note providing 'anytime, anywhere access' as the most important attribute of their financial providers</i>
<b>Personalization</b> <i>Heightened buyer and employee demands for on-demand, self-service capabilities</i>	<b>44%</b> <i>of asset owners citing that they expect service customization</i>
<b>Expanding Ecosystem</b> <i>C-suites must increasingly leverage ecosystem partners to build the business of tomorrow</i>	<b>28%</b> <i>of CTOs expected growth in external vendor spend</i>
<b>Data Proliferation</b> <i>Abundance of traditional and alternative datasets – both structured and unstructured</i>	<b>5.3%</b> <i>annualized increase in total market data and third-party research spend as % of revenue (2014-2018)</i>
<b>Risk &amp; Compliance</b> <i>Importance of mitigating risk in an increasingly litigious environment</i>	<b>1.6x</b> <i>increase in asset manager median legal &amp; compliance costs (2015-2018)</i>

Sources: 2020 Casey Quirk CIO/CTO Survey, 2019 Casey Quirk/McLagan Performance Intelligence Study, Casey Quirk/Top1000funds.com Global Investor Survey, Casey Quirk Financial Advisor Study

## Tech Budgets: Spending a Growing Budget More Wisely

Asset managers historically viewed data and technology solely as enabling functions. Asset managers separated technology from their view of value creation in front-office functions, such as delivering investment performance or sales and distribution. Firms benchmarked their technology budgets to median spend, sought to adopt universal best practices, and largely mirrored competitors. Few technology use cases among investment managers focused on competitive advantages, while essential functions continued to rely on spreadsheets and outmoded technology. As technology shifts to the core of the business, firms are taking increasingly divergent approaches—leading to markedly different results in terms of spend, process, and, ultimately, business impact.

Pressed on issues of technology, executives often assume those that deploy a greater volume of spend win. Median technology spend among asset managers hovers at 10% of operating expenses, representing an estimated \$51 billion in industry spend based on 2019 numbers. Additionally, CTOs expect, on average, to boost technology budgets 20% annually through 2023. Despite this increase in spend, most managers struggle to prioritize, track, and determine the value of projects. More than three-quarters of CTOs say they lack clearly defined business metrics around technology projects. Only 15% have a structured process for measuring the value of technology initiatives, and only one-third indicate they have a process for prioritizing technology investments.

We assessed industry participants based on spend and approach to technology. Front-runners in asset management share two characteristics:

### **Empowered and adept leadership**

- Elevated technology leadership that has the perspective to engage in business strategy
- An enterprise wide culture of innovation that emphasizes new skills and pivots funding to support new development
- A capital allocation process that invests in the foundation, as well as defined business use cases

### **Mature technology operating model**

- Modern and flexible data, systems, and applications, enabling analytics
- A cohesive approach to talent to attract, develop and retain in-demand technology and business leadership
- Leading technology development and implementation processes, such as agile development, capital allocation that is more iterative and considers shared service investments, rigorous impact measurement and rationalization, and mature change management processes

Most asset managers lack these features. An analysis of budgets and capabilities among asset managers indicates that firms fall into one of three categories when it comes to data and technology.

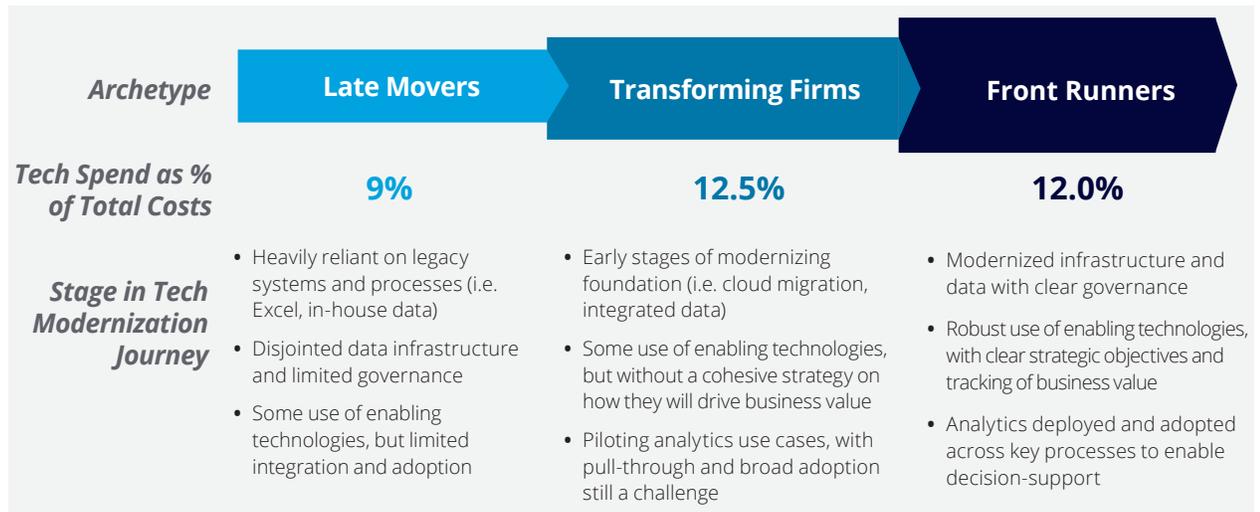
- **Late movers** (30% of asset managers) typically have weak processes and systems, siloed technology leadership, poor monitoring and accountability on technology initiatives, and limited investment in innovation. These players are frequently burdened by the cost of outdated and legacy systems, allocating nearly 70% of their technology budgets on average to maintaining outmoded technology. Late movers currently spend less than peers on a relative basis, but on average plan to boost their data and technology budgets by more than 25% by 2023. Very little of their operating budgets (4%) supports innovation.
- **Transforming firms** (45% of firms) are in the process of addressing their data and technology issues, but have yet to realize impact from these investments because they are clearing a backlog of technical debt and repairing outmoded processes. Transforming firms allocate more of their budget to data and technology than any other group, but spend money mostly to address the existing operating model. They earmark more money for process improvement and efficiency enhancement (35%), but make few material investments (10%) in innovation.
- **Front-runners** (25% of firms) demonstrate key best practices around technology leadership, vision, and execution. These asset managers spend slightly less than transforming firms and foresee slightly smaller increases in spending. Additionally, these firms have shifted the highest proportion of their data and technology budgets (17%) to innovation.

Larger managers, unsurprisingly, invest more heavily in technology than their smaller peers. That said, an asset manager's size provides less insight into how budget is spent across three levels of data and technology

- *Business as usual*, defined as the run-rate costs of maintaining existing technology;
- *Process improvement*, which includes improving or replacing systems to improve efficiency; and
- *Innovation*, data and technology that supports differentiated competitive advantage. Innovative spend is a spectrum, but for asset managers it usually involves technologies directly linked to expanding capabilities. These capabilities may be linked to new product and service capabilities, creating new revenue streams, redefining client experience, or reinventing business lines.

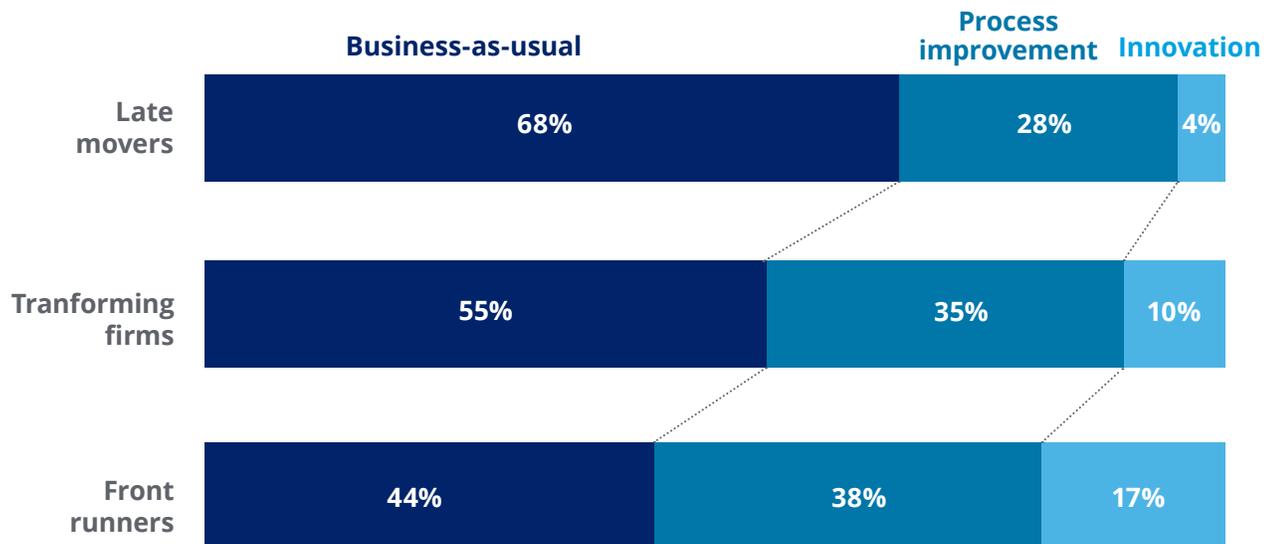
A breakdown of technology spending reveals that, regardless of size, front-runners dedicate a greater share of investment toward value-generating activities like process enhancement or innovation.

## Exhibit 2: Investment manager firm technology models



Source: Casey Quirk

## Exhibit 3: Technology budget spend by type and firm archetype



Sources: 2020 Casey Quirk CIO/CTO Survey; 2019 Casey Quirk/McLagan Performance Intelligence Survey; Casey Quirk analysis

Most importantly, asset managers that are front-runners in data and technology materially outperform peers across all facets of the business.

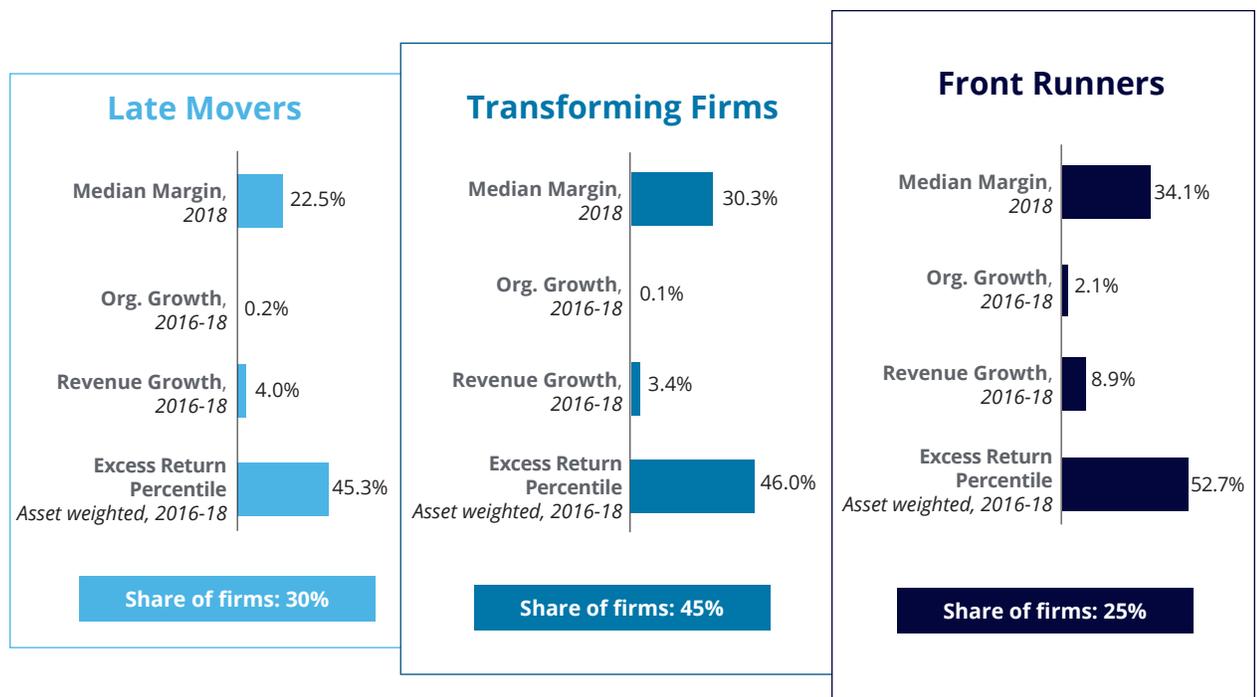
**Distribution:** Data and technology front-runners enjoy 25% higher client tenure, five times the organic growth, and 12% more multiproduct use amongst clients. Productivity gains are a result of how data and technology enable the distribution force. Greater access to custom analysis, risk management metrics, and digital tools enables sales personnel to spend 45% more time on relationship expansion versus peers. Sales professionals spend 28% more time in sales and prospect meetings, reporting significantly lower manual intervention in content generation and sales management. To learn more about how firms are remaking their distribution function, please reference our *Distribution 2.0* white paper.

**Investments:** On average, front-runners are second-quartile performers (second-highest 25%) as measured by excess return net of fees; late movers, by contrast, are typically in the third quartile (second-lowest). As detailed in our recent white paper, *Righting the Ship*, leading asset managers leverage new sources of market and alternative data, utilize research portals to coordinate and share insights, tap natural language processing and machine learning to source and mine for new insights, and realize more seamless order management and execution from rationalized trading platforms.

**Operations and shared services:** Asset managers with leading data and technology drive efficiency gains in several ways. Human capital systems are enabling quicker reporting, greater transparency, and better data governance. Firms are automating regulatory reporting and using workflow tools to better oversee vendors and reduce manual intervention on repeatable processes. Within finance, cloud-based solutions enhance enterprise resource planning (ERP) and self-service dashboards, enabling push-button insight. Better analytics and reporting unlock insights for leadership.

The confluence of these innovations drives financial outcomes. Data and technology front-runners deliver higher revenue growth and margin to shareholders.

#### Exhibit 4: Technology model success metrics



Sources: 2020 Casey Quirk CIO/CTO Survey; 2019 Casey Quirk/McLagan Performance Intelligence Survey; Casey Quirk analysis

While isolated to the investment management industry, front-runners are ahead of peers. The influence of technology will create new disruptive effects, creating competition from fintechs, intermediaries and distributors, and other financial service lines such as banking and insurance. Therefore, front-runner advantages may not be as large as they seem, and leaders may need to benchmark their success against a broader peer group. Across all industries, technology leaders spend even more of their tech budget on capability-expanding innovation (20%), and 57% report an enterprise wide digital strategy. These cross-industry figures are further detailed in Deloitte's *2020 Global Technology Leadership Study*.

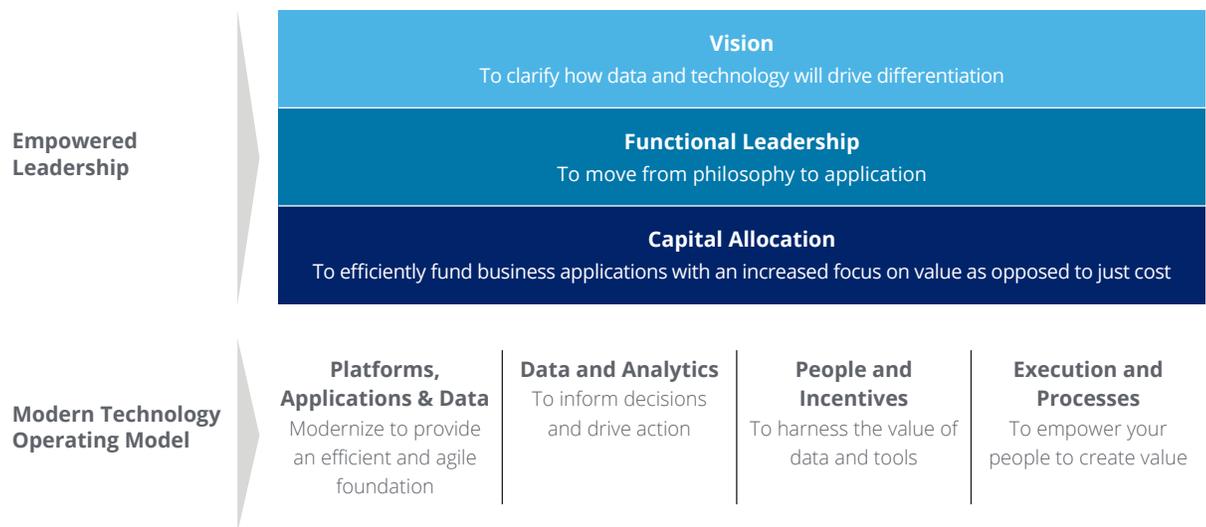
For asset managers, successfully incorporating market-leading data and technology will require significant change across two components of the enterprise:

**Leadership:** Transforming data and technology requires a coordinated effort from the top of the organization: CEOs and their direct reports must articulate a strong vision regarding data and technology, find and empower executive leadership that embraces technology and change management, and adopt a flexible, results-oriented approach to capital allocation.

**Operating model:** Becoming a front-runner will require restructuring four components of the operating model: *technology platforms, analytics, talent model, and culture and metrics* around execution.

The remainder of this paper outlines prescriptions and the best next steps for transforming both aspects.

## Exhibit 5: Key components of a technology-driven organization



Source: Casey Quirk

## Maximizing Return on Technology Investments

### Leadership: owning enterprise technology transformation

If asset managers increasingly compete on the basis of data and technology, then decisions regarding both fall onto the shoulders of CEOs and their executive teams, not simply the chief information officer or chief technology officer. The scope of changes required demands an enterprise wide initiative involving top-down leadership and typically requires three elements to succeed:

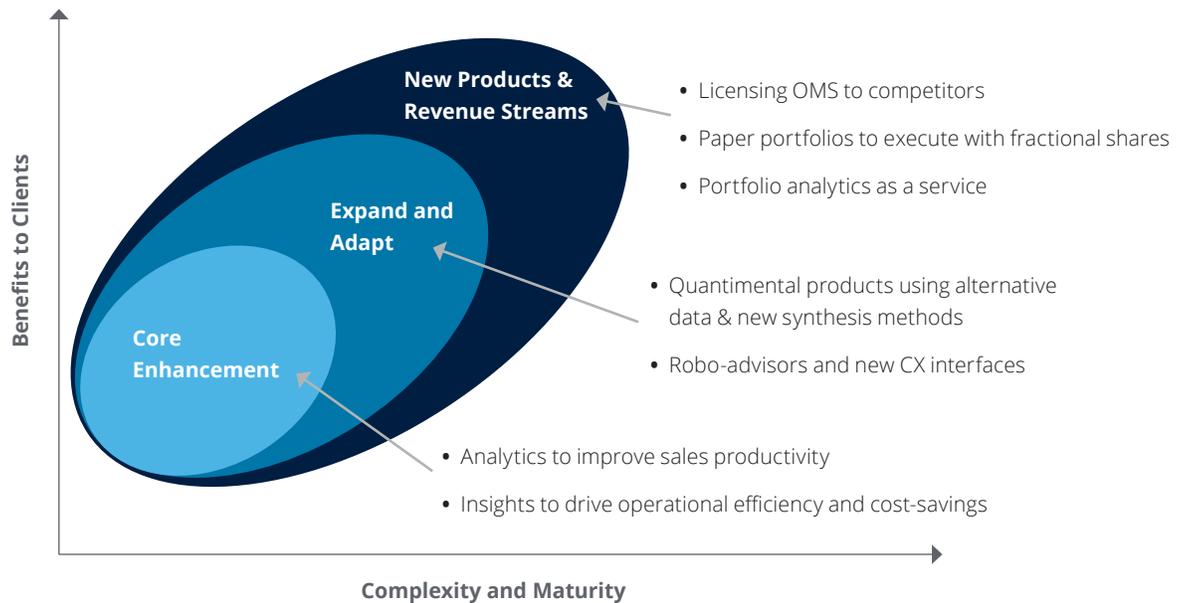
- A compelling vision to inspire change, guide decision-making, and clear objectives around timelines to realization;
- New skills and representation across the leadership team
- A different approach to capital allocation that aggressively redirects funding, emphasizes foundational investments, and monitors capital allocation more frequently

### Vision

Innovation requires integrating new technology and industry perspective. Applying new technologies to existing and emerging business challenges helps firms advance their existing capabilities and discover new growth drivers. There are a range of existing use cases that are driving not only optimization of firms' existing business, but also an expansion of their capabilities. Select firms are monetizing their intellectual property through risk systems, seeking new paths to market with direct-to-consumer and B2B offerings, evolving product with new vehicle structures, delivering customization and harnessing data-driven client feedback. Leaders of tomorrow will define a bold vision for their organization that not only addresses the core operating capabilities, but also extends the purview of their firm's capabilities and revenue opportunities using new technology.

CEOs must represent the fact that in an enterprise, technology isn't somebody's job; it's everybody's job. Leaders must create and support the cultural change required to guide their firm through a technology-driven market. While many asset management CEOs have been quick to recategorize themselves as "tech firms," fewer have been able to provide the necessary clarity of purpose and vision. Asset management CEOs must create an atmosphere that encourages everyone to innovate data and technology—call it the "development environment"—and then prioritize the initiatives ("use cases") that best promote competitive advantage.

## Exhibit 6: Asset management firm technology vision continuum



Source: Casey Quirk

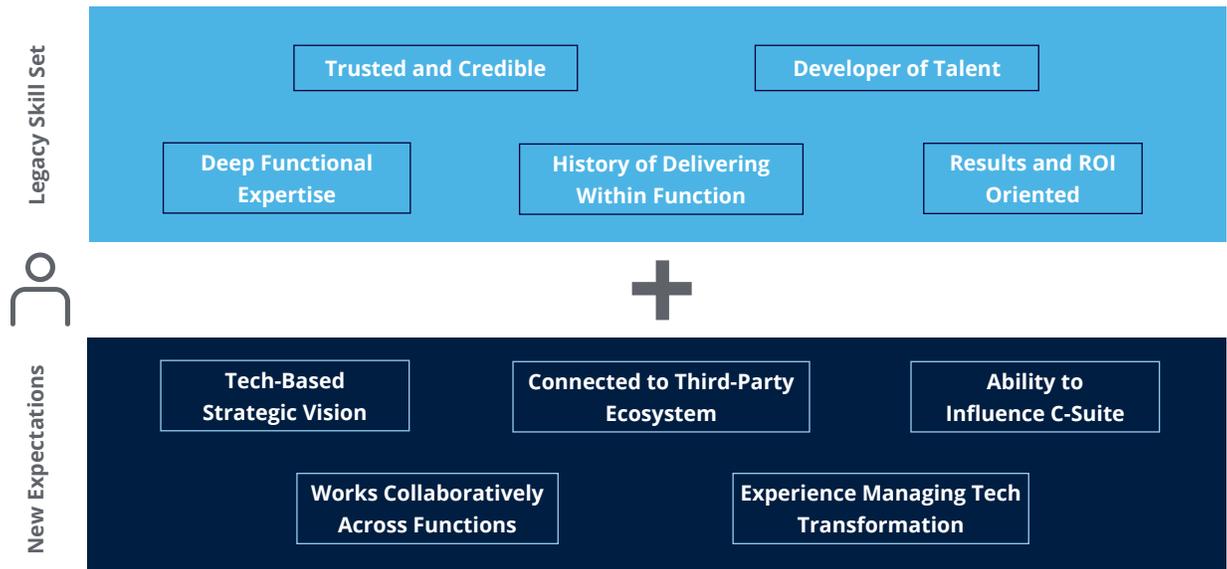
Asset management CEOs can take four steps to define their visions for data and technology:

- First, *define existing competitive advantage*. A corporate strategic refresh can help revalidate existing plans regarding where to play and how to win.
- Next, *clarify how technology can extend existing advantage*. This involves all leaders, not just technology officers, helping define the key use cases that support differentiation.
- Third, *identify how data and technology can shape new offerings*. Examples include new ways to monetize intellectual property, new platforms or partnerships, and new paths to market.
- Fourth, *create clear ownership amongst team leadership*, with specific timelines and incentives to motivate the team to deliver.

### Executive team composition

Fulfilling the transformation road map will require different dynamics, and potentially different skills, across the executive team. One primary change involves the chief technology officer, who will need a seat at the corporate leadership table if he or she already does not have one. Currently, only 48% of CTOs report to the CEO and just 55% have direct involvement in strategic planning with the leadership team. It is clear that front-runners among asset management data and technology share a common characteristic: Their CTOs are highly involved in strategic decisions for the enterprise. Consequently, CTOs must evolve from pure operators to catalysts for change: leaders who can blend technical aptitude with strategic perspective.

## Exhibit 7: C-suite executive expectations



Source: Casey Quirk

Additionally, the skills that previously comprised an asset manager's executive committee may prove necessary but insufficient. Asset management CEOs increasingly will measure executives by their ability to catalyze and lead technology transformation. Leaders have a few options to upskill or reinvigorate their executive teams:

- **Additional team members:** Talent and data officers become more important factors in creating competitive advantage and should join leadership workgroups.
- **Hires from outside the industry:** Recruiting new officers from industries with more mature data and technology approaches (particularly adjacent financial services such as consumer banking or securities) injects needed transformational skills.
- **Secondments:** Shifting CTOs into business-line positions, and vice versa, to structure more well-rounded executive teams.
- **Incentives:** Aligning business case expectations and metrics on technology investments into executive compensation creates more accountability.
- **Corporate development:** M&A exercises (including prospecting, diligence, and integration) in financial technology provides a crash course for leadership.

## Capital allocation

Increased technology spend presents asset managers with new challenges to their traditional capital allocation and budgeting processes. A new approach to capital allocation can optimize technology spend and accelerate transformation. Five key decisions can help:

- First, *determine the amount of capital* required and sequencing of spend to meet the needs of the strategic vision. Using business cases and timelines, identify the absolute cost of the required projects that are necessary to unlock firm objectives.
- Then, *decide how you will fund transformation*. CFOs have a range of options to fund transformation, from compressing margin, funding new projects via cost-cutting, or issuing equity or debt. Consciously choosing a funding mechanism to improve data and technology and effectively communicating such choices to stakeholders helps frame intent and protect transformation initiatives.
- Third, *expand the criteria used to measure investments*. Managers systemically underinvest in data and shared systems due to their incompatibility with traditional ROI measurements. Adjust capital allocation to factor sequencing of cornerstone projects that create leverage for downstream efforts, ensuring they add value.
- Next, *adapt the balance sheet* to shift data and technology investments from capital expenditures to operating expenses. Doing so not only better reflects the “software-as-a-service” format of cloud technologies and outsourcing arrangements, but also allows CFOs to calculate the P&L impact of technology investments more quickly. Those impacts may outweigh the depreciation and tax benefits of booking technology as capital outlays.
- Finally, *define your sell discipline*. Good portfolio managers cut losing positions; the same rationale applies to technology projects. Asset managers with leading data and technology capabilities set clear parameters on existing projects, consistently track progress, and quickly shut down underperforming initiatives.

Chief financial officers can help create the right environment for this more flexible approach to data and technology spend. Considering the budgeting function as “always on,” rather than solely annual, permits leadership to continuously and transparently monitor and adjust investments. Linking prioritization metrics to firm objectives ensures that decisions favor enterprise value.

## Maximizing Return on Technology Investments

### Operating model: turning transformation plans into reality

Front-runners among asset managers in data and technology not only create strong transformation plans, but also consciously change their operating models to support a new culture and work environment. These changes fall into four big categories: *modern platforms, analytics, workforce, and execution*.

#### Modern platforms, applications, and data

A majority of managers struggle with their data and technology platforms, applications, and data: 56% of CTOs noted that legacy, outmoded infrastructure was the greatest challenge to transformation, more than any other potential roadblock to change. Platforms consist of a range of capabilities, including the financial systems, workflow tools, data storage servers or cloud, trading systems, client-facing websites, and client and market data. Overhauling the range of platforms in use can appear a gargantuan task at the outset, but yields a range of organizational benefits:

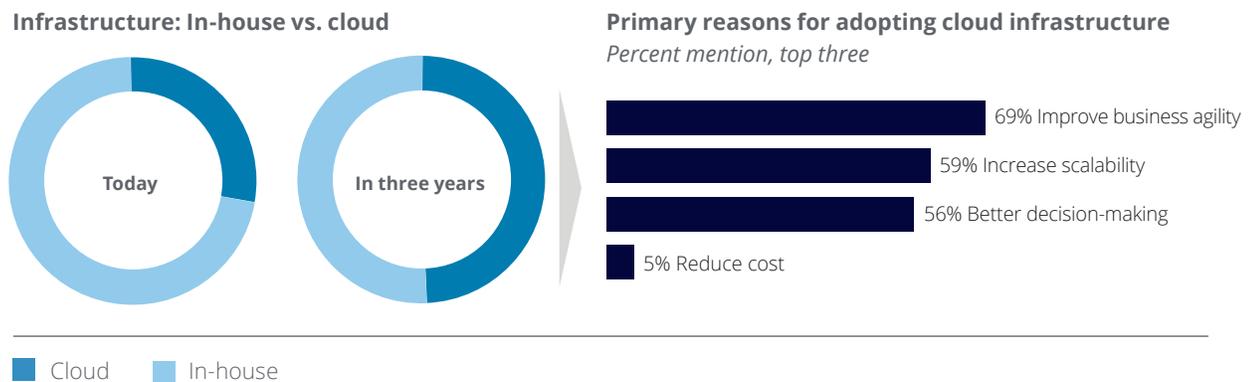
- **Faster deployment:** Front-runners manage more programs and deliver faster than peers. Modernizing legacy platforms relieves firms of “technical debt” that impedes organizational agility. Late movers face more dependencies in each technology program, requiring more integration points and updates of old systems that add cost and time to new development. The advantage of speed and productivity enables front-runners to extend their lead over competitors.
- **Streamlined costs:** Historically high margins have allowed asset managers to keep using outdated and fragmented systems that cost more to run than updated, better-engineered replacements. Rising cost pressures will reveal these weaknesses in many firms. Despite spending 33% more than lagging firms on technology overall, front-runners spend 14% less than laggards on business-as-usual costs because they have proactively addressed outdated systems.
- **Increased resiliency and risk reduction,** particularly as asset managers require follow-the-sun operations and always-on businesses that cannot afford downtime due to maintenance, updating, or systemic issues. Firms also reduce their risk profile by connecting siloed systems and automating manual processes. Additionally, cybersecurity programs are becoming increasingly important to meet regulatory responsibilities and safeguard client information and intellectual property.
- **Improved innovation:** In particular, shifting from on-premises servers to cloud computing allows developers to access new applications and coding tools within the native cloud environment rather than retrofitting new tools into a proprietary server system. This accelerates innovation and attracts and retains developer talent.
- **Enhanced client experience:** Better-organized data, more responsive systems, and integrated applications improve both client and work experience by supporting digital conduits such as automated reporting, websites, and distribution touchpoints.

Five best practices can help asset managers modernize their platforms:

- *Assess existing systems, data, and applications* to determine if they align with the firm's stated vision and are either a dependency or inhibitor to achieving the vision
- *Set business metrics for new system adoption* and checkpoints to avoid project delays or overruns
- Decommission systems as part of *new build projects*
- *Aggressively integrate systems* post-acquisition or merger
- *Invest in training and change management* to avoid a lagging dependency on outmoded systems

Moving data and applications from on-premises hardware to a cloud-based system makes new application development quicker and easier and provide access to a modern development environment. While not likely to reduce cost in isolation versus on premises servers, agility and development capabilities increase speed and reduce cost across numerous downstream initiatives.

## Exhibit 8: Adoption of cloud infrastructure



Sources: 2020 Casey Quirk CIO/CTO Survey; Casey Quirk analysis

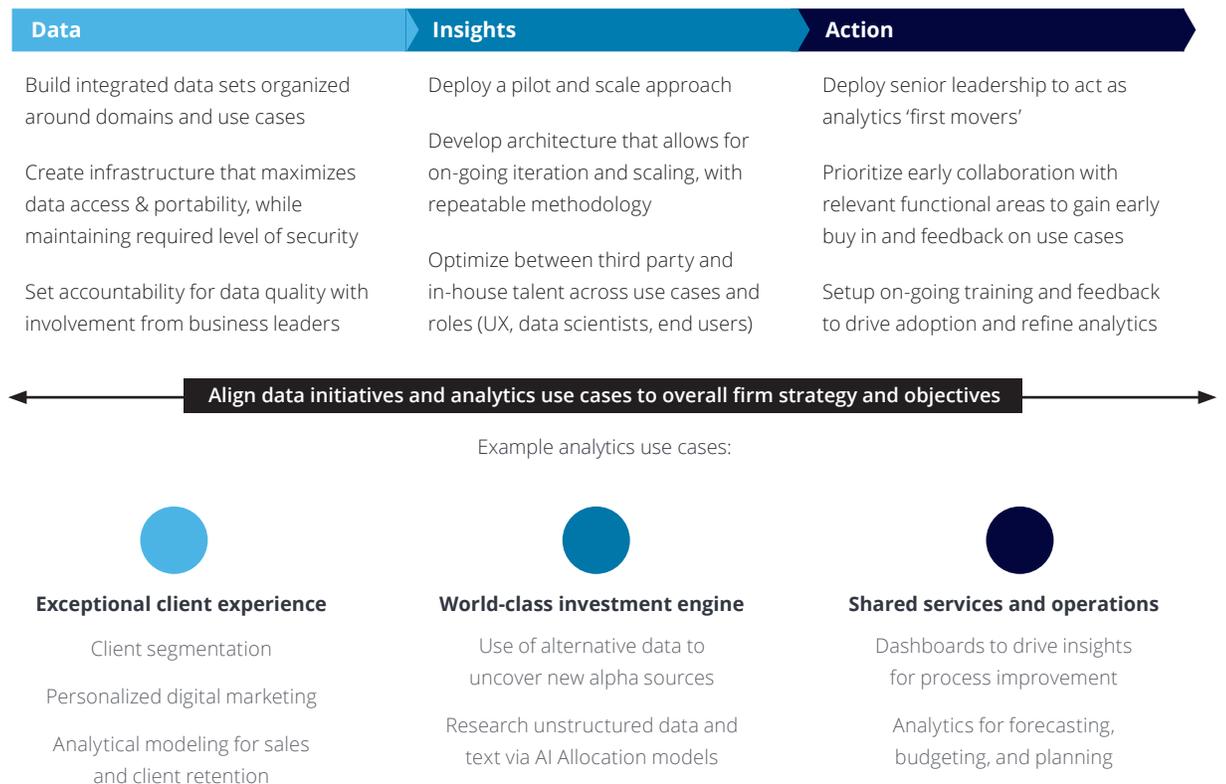
## Analytics

Data-driven insights will enable better decision-making and outcomes—particularly if those insights align with initiatives that the corporate strategy prioritizes. Front-runners prioritize setting up analytical systems to help inform those decisions. Strong analytics for asset managers has three ingredients:

- *Clean data*, which is the fuel for decision-making. Most asset managers suffer from unstructured, disorganized, and fragmented data. This creates costs in the form of manual intervention and reduces the impact of downstream applications. Leaders in asset management technology build a “single source of truth” by creating integrated data repositories, imposing data governance, and clarifying data ownership. They build an architecture that maximizes data access across the organization while creating the necessary layer of security to avoid costly model mistakes or revealing personal information.

- *Valuable insights:* Asset managers with mature technology organizations provide their leaders with tools and functional skills to not only access and manipulate data, but also search for actionable insights. Building such analytics should be a deliberate exercise. Architecture should start small, but scale, allowing for ongoing testing and monitoring. Outputs can range from simple statistical analysis to outputs guided by machine-learning algorithms. However, the search for insights should begin with a clear use case and be refined to improve quality over time.
- *Action:* Insights are worthless if they fail to support actionable business decisions. Asset management firms can take two steps to improve analytics adoption. Prioritize collaboration between data scientists and functional areas, potentially through reorganization. The goal from this collaboration is to identify use cases, develop proofs of concept, and build buy-in for further development. Secondly, managers should embed analytics education and usage in training, feedback, and incentive structures to accelerate adoption throughout the organization.

## Exhibit 9: Data and analytics success factors



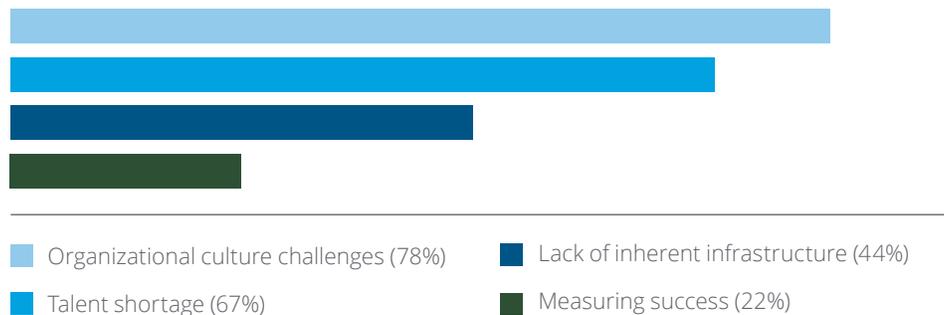
Source: Casey Quirk

## Workforce

Human capital maximizes the value of technology; consequently, the people needed to drive technology cannot reside in a silo. The current COVID-19 environment accelerates the need to adapt the existing talent framework. The shift to work from home has created new demands for flexibility, greater leverage of collaboration tools, and a heightened need for new management oversight tools. Managers that use this moment to act have a unique opportunity to redefine their workforce of the future.

### Exhibit 10: Key challenges during a digital transformation

Percent mentioned, CTOs



Source: 2020 Casey Quirk CIO/CTO Survey

Several challenges face workforce transformation. New applications, coupled with the ever-doubling volume of data, have created more diverse talent requirements. Individuals can specialize along a continuum that extends across front-to-back-end systems, databases, application programming, or middleware. Leaders can take the following steps to drive evolution:

- **Rethink professional development and rewards:** Traditional human capital programs can help accelerate transformation. Training (not just on existing applications, but also both technology fundamentals and the process of change management) supports a culture of innovation. Qualitative scorecards tied to incentives, driven by measurable project KPI's, can reward adoption and development of technology initiatives.
- **Tap into external talent:** Most asset managers suffer from internal data and technology talent shortages. Increasingly, leaders will tap into a broader ecosystem of advisers for skills supporting just-in-time fulfillment of nonessential tasks. A growing network of outsourcers, consultants, and contractors will complement the internal workforce and accelerate completion of deliverables. Oversight, workflow management, and risk controls will maximize the potential of third parties.
- **Adapt promotion criteria:** Success will require cultivating a future generation of leaders. Current HR systems favor success in role, but underweight the importance of new skills and change management. Asset managers must build talent programs that balance technology centers of excellence and reward functional collaboration in order to cultivate leaders that can deliver change within the organization.

## Execution

Lagging firms approach technology development in a waterfall approach, building end-to-end from the ground up. Front-runners increasingly view development in a modular, agile approach. Each new capability is an extension of the existing platform. This enables firms to start further downfield toward their objective, enhancing speed of delivery. Asset managers characterized as “front-runners” support nearly twice as many high-priority technology initiatives compared with late movers. These firms have created a culture that prioritizes speed and flexibility when executing change. Process and execution advantages will drive separation between front-runners and the rest of the industry, which will compound over time.

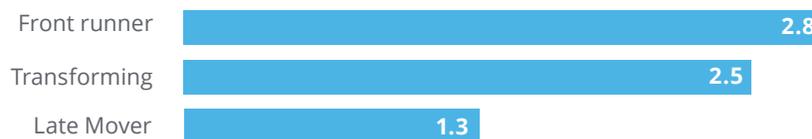
A shift to agile development is a core tenet of new working models within asset management firms. Agile processes emphasize:

- Iterative development centered on minimum viable products
- Cross-functional working teams, with representation from business and technology
- Distributed accountability and ownership of the working team, reducing bureaucratic barriers
- User feedback and transparency to stakeholders
- Performance monitoring and incentives that track and reward team members

Done right, the adoption of agile will improve productivity, support a culture of rapid delivery, and establish clear accountability.

### Exhibit 11: Average number of high-priority technology initiatives

*By tech leader status*



Sources: 2020 Casey Quirk CIO/CTO Survey; Casey Quirk analysis

## Where to Start

The time to invest in data and technology is now. We're facing a shifting environment that has put data and technology at the center of business and is being accelerated by the COVID-19 crisis. Leaders will be challenged to not just fix their technology to compete today, but also use new capabilities to move beyond optimization. Existing businesses need to embrace technology to drive quality, create seamless business practices, renew culture, and improve client experience.

The rise in data and technology is going to create significantly new opportunities for disruption. Leaders will explore new revenue streams, seek new ways to monetize their capabilities, and expand the value chain. Examples such as risk management systems, unbundled product offerings, and client-facing applications show the promise of technology as a tool to think beyond the traditional product-and-revenue construct.

As asset management executives begin to grasp the magnitude of data and technology's impact on their future organization, many struggle to find a place to start. A clear-eyed assessment of the organization's current leadership and operating model against the best practices outlined can identify both the short-term and long-term changes necessary. Additionally, leadership can gain a sense of their current state versus peers in key dimensions **such as empowered technology leadership, culture of innovation, technology operating model, and leading development processes that distinguish front-runners** from the rest of the industry.

As the applications of technology expand and the consequences of its use ripple throughout the industry, leaders face a new competitive equilibrium. CEOs must balance the trade-offs that will define their current and future business. They must create a clear vision for the organization and be the catalyst for transformation. Success in the next generation will come to those who harness the power of data and technology to deliver the best tools that drive efficiency and competitive advantage to their asset management organizations. This transformation will empower the CEO to strengthen talent and business practices, deliver greater efficiency in existing spend and ROI, and create a road map for how technology will help support—and, more importantly, promote and accelerate—strategic goals.

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