



Ahead of the curve

Forward-looking solutions for tomorrow's leading asset management firms

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Introduction

In the midst of an ever-evolving market characterized by shifting buyer behaviors, disruptive technologies, and fiduciary-driven regulations, today's leading asset management firms face an operating environment full of unprecedented challenges and complexities. Tomorrow's leading asset management firms must develop and implement innovative and effective solutions now to stay ahead of the curve.

Asset management executives worldwide have long been the beneficiaries of a lucrative and benign operating environment. The resulting broad growth rewarded many asset managers, even those with functional deficiencies in strategic plans and operating models. Now, the industry faces a reckoning driven by two primary factors:

- **Costs:** Shrinking expectations for capital market returns and slowing organic growth have combined to reveal the industry is not as scalable as previously believed, with expected fixed cost increases now outpacing likely future revenue growth. Asset management executives are reviewing how they allocate costs among current and future business lines.
- **Consumers:** As individuals, rather than institutions, begin to provide the industry's future growth, asset management increasingly looks like other consumer businesses—dramatically changing buying demands, desire for a strong customer experience, and fee sensitivity.¹

As asset managers pursue a variety of solutions, Deloitte Global has observed six solutions that have the potential to provide exceptional value in this shifting landscape:

01. Leveraging M&A to accelerate transformation:

Defining a growth strategy which may involve acquisition or consolidation to better address economic pressures, the need for new capabilities, and/or a shifting value chain.

02. Elements of an agile operating model

Defining a global target state operating model that better aligns the firm's organizational structures, governance, behaviors, processes and technologies with its priorities and enables a firm to better execute its strategy.

06. Technology as a differentiator

Adopting and/or experimenting with disruptive technologies such as Advanced Analytics, Cloud and Blockchain that have the potential to transform the asset management value chain.

03. Digital-enabled distribution

Adopting disruptive technologies to reduce distribution costs and create new product/advice delivery models to support the demand for innovative and personalized investment experiences.

05. Regulatory readiness and productivity

Consolidating or adopting new regulatory solutions, such as regulatory technology (RegTech), to manage risk and compliance efforts to address cross-jurisdictional regulatory agendas.

04. Robotic automation and the cognitive enterprise

Implementing dedicated bots that replicate human actions and judgment with enhanced speed, scale and quality to automate components of middle and back-office functions dealing with reporting, compliance, accounting, and administrative activities.



As competition continues to increase across the industry, the pursuit of innovative, non-conventional, and differentiating solutions has become more important than ever. As tomorrow's leading asset managers work to define their future growth paths they have an opportunity to leverage these six solutions to transform their value propositions, service offerings, and models. It will be bold strategic changes, rather than incremental shifts, that will characterize the firms who thrive vs those who will be forced to consolidate.²



Leverage M&A to accelerate transformation

The asset management industry's traditional operating models are under pressure due to escalating costs and accelerating fee pressures. In this environment, buyer preferences are also evolving, with investors seeking to increase their exposure to passive vehicles as a complement to both traditional active management and alternative strategies. Leading asset managers must meet this demand while maintaining profitable growth.

Asset managers are actively seeking new ways to differentiate themselves in an increasingly crowded marketplace. This competitive environment will put a premium on true differentiation, pushing managers to focus their investments into products and markets likely to yield the greatest return at the lowest possible cost. As a result, mergers and acquisitions are expected to accelerate, increasing the pace of transformation and pushing scale to combat rising costs.

There are four primary value drivers advancing the need for transformative change in the asset management landscape:³

- **Globalization:** Renewing focus on global markets to drive scale and directly address growth market opportunities.
- **Distributor efficiency:** Focusing distribution capital investment, securing strategic partnerships, and embracing next-generation technology solutions to increase scale and efficiency.
- **Enhanced capabilities:** Differentiating product offerings and shifting to more goal-oriented strategies to address the rise of passive investment vehicles and fee pressures.
- **Shifting value chain:** Extending capabilities beyond product into advice, resulting in greater client ownership and economics.

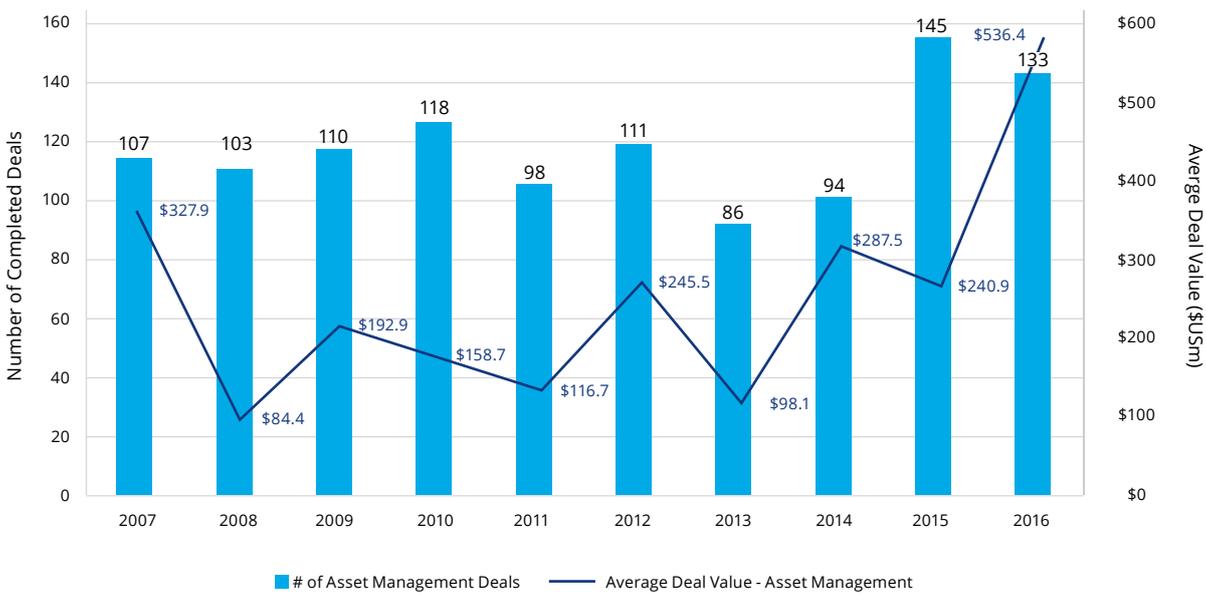
As asset managers are increasingly using inorganic methods to accelerate the pace of change, the past two years have seen a spike in merger activity in the asset management space, with the average deal value reaching US\$536 million in 2016, the highest figure in over a decade and nearly 2.5 times the average transaction value in 2015.⁴

This activity has been particularly notable in the asset servicing space as players rival one another not only for new products and expertise but also for the global footprint necessary to effectively deploy those capabilities.⁵

In this climate, strategic buyers are positioned to lead this next round of M&A activity, bolstered by their own transformational imperatives, strong balance sheets, and a likely continuation of private equity exits from portfolio holdings in the financial services industry. Financial buyers are expected to continue pursuing targeted growth stories, particularly in the fintech space.⁶

As strategic buyers pursue inorganic growth opportunities, industry leaders acknowledge the vital role that execution plays in realizing value. According to a recent Deloitte M&A survey of corporate executives, 88 percent of respondents cited an insufficient due diligence process as the biggest impediment to achieving a successful acquisition, while 78 percent said it was the failure to effectively integrate the newly acquired entity.⁷ While others indicated reasons ranging from improper target identification to the shifting regulatory environment, a unifying theme is a need for a clear plan supported by strong executive leadership.⁸

Asset management deals



Source: SNL Financial and www.pionline.com

Note: Average deal size is based on disclosed deal values for asset and wealth management transactions where 57%, 61%, 66%, 63%, 68%, 70%, 71%, 73%, 79%, and 81% of reported deals did not disclose deal values for 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015 and 2016 respectively.

Getting started:

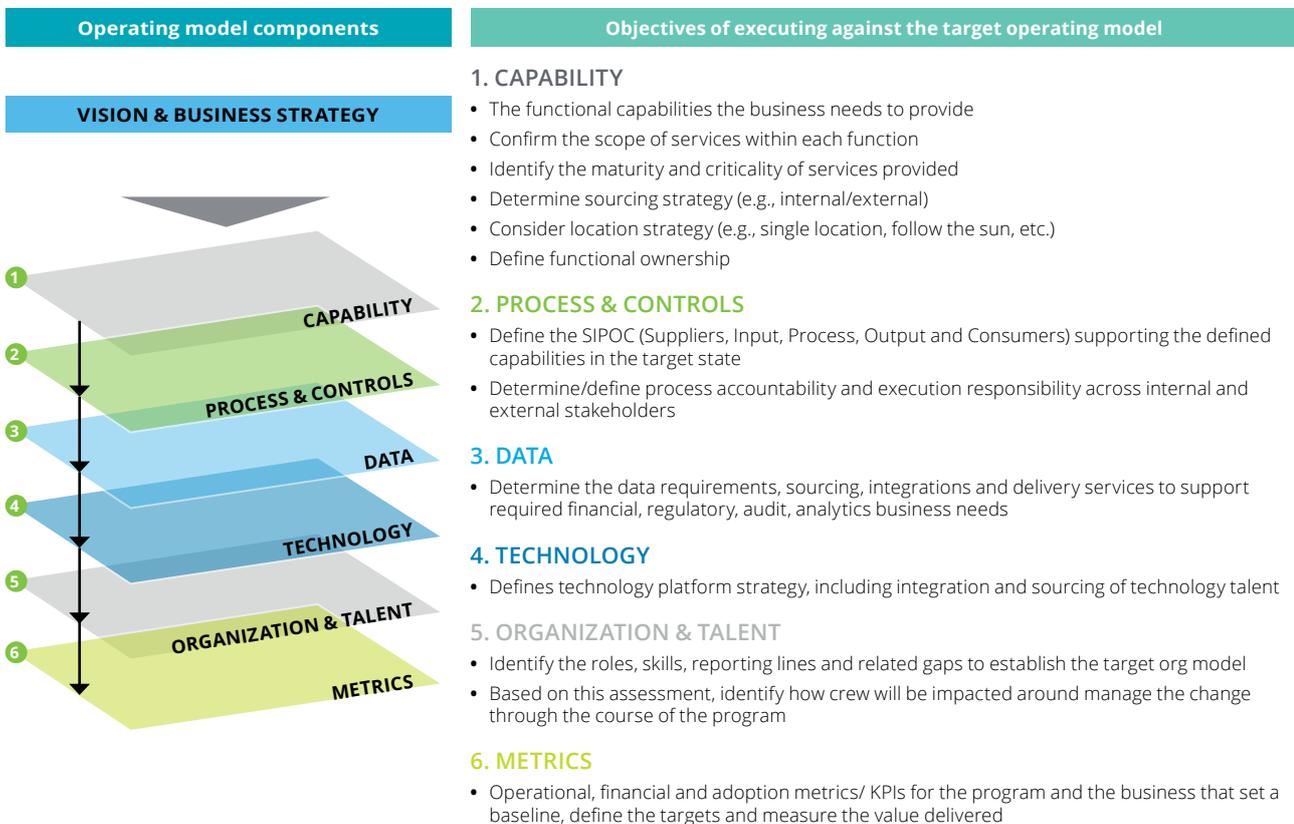
- ▶ Develop a concise and clear vision of your organization’s current and desired position in the marketplace
- ▶ Use the vision to drive decisions addressing organic growth opportunities as well as M&A lifecycle decisions
- ▶ Assess the type of acquisitions both in terms of talent and third parties that your organization is prepared to integrate

Elements of an agile operating model

As compressing economics and secular shifts force asset management firms to find new ways to differentiate themselves from the myriad of mature competitors, many firms are evaluating their operating models to identify opportunities to attain reallocation efficiencies, scale, and risk reduction. A target operating model is a high-level representation of how an organization can be best organized to effectively deliver and execute on its strategy.⁹ It is defined by five distinct elements:

- Capabilities: What are the desired capabilities and functions that should be enabled and supported by the target operating model?
- Process and controls: Which suppliers, inputs, processes, outputs, and consumers are needed to support the defined capabilities in the target state?
- Data: What are the data requirements, sources, integrations and delivery services needed to support financial, regulatory, audit, and analytics business needs?
- Technology: What is the technology platform strategy, including integration and sourcing of technology talent needed to enable the target state operating model?
- Organization & talent: What are the roles, skills and reporting lines needed to establish the target operating model?

Operating model components & objectives



Source: Deloitte

Leading asset managers recognize the interdependencies between these elements and the importance of considering them in aggregate when assessing and redesigning their operating models. Shrinking expectations for capital market returns and slowing organic growth have combined to reveal the industry is not as scalable as many previously believed.¹⁰ With fixed costs now expected to outpace likely future revenue growth in the near term, factors related to cost allocation are increasingly driving decision-making processes. Leading firms are streamlining legacy businesses and harvesting cash flow in order to reinvest in growth product and market segments. When the five elements above are used as the cornerstones of an operating model transformation they enable bold strategic changes that can not only reduce costs, but also enable a broader investment toolkit, develop a stronger brand, create a more agile organization, source better organic data, and deliver an improved customer experience.

While motives for operating model transformation can stem from a variety of desired improvements, many firms are focused on the following:

- **Client service and experience:** Establishing a centralized and scalable global client service organization focused on providing a differentiated and personalized client experience.
- **Cost reduction:** Streamlining, centralizing and standardizing core operations and shared services to reduce cost and increase throughput.

- **Outsourcing:** Enabling middle and back office functions to be outsourced and integrated effectively through alliances to allow the firm to better focus on its core competencies.
- **Global navigation:** Integrating operations globally to expand into different markets and easily shift outputs and capabilities between them.
- **Data as a strategic asset:** Embarking on platform, data, and infrastructure transformation to support the operating model decisions and enable next generation information delivery through advanced analytics.
- **Digital enablement:** Unifying an enterprise-wide digital strategy that embeds analytics and other digitally enabled capabilities into the organization.
- **Top talent:** Building an organization that attracts the best resources and empowers them to collaborate and succeed across regions and countries.

Historically, industry incumbents have warded off challengers by identifying unique competitive advantages and capitalizing on relatively high barriers to enter the industry.¹¹ While this approach was effective during times of predictable and manageable change, the operating environment is evolving at a faster pace, requiring a fresh perspective. To improve their ability to compete in the future, tomorrow's leading asset management firms are proactively pursuing opportunities now to transform their target state operating models to address these shifting dynamics.

Getting started:

- ▶ Confirm guiding principles and strategic imperatives that should be minded while developing the target state operating model for the respective organization
- ▶ Evaluate a set of 2-3 industry best practice operating models focusing on impact to capabilities, processes, controls, data, technology and talent
- ▶ Map a set of core processes across each of the model options to help identify potential challenges and/or efficiencies

Digital-enabled distribution

As the asset management industry shifts from a product-driven to a client-centric view, asset managers can no longer depend exclusively on product portfolios to effectively compete.¹² Changes such as new technology enablement, a fluid regulatory environment, and the empowerment of retail investors have compelled asset managers to re-think their distribution strategies. Industry players are now using disruptive technologies to reduce distribution costs and create new product/advice delivery models to support the demand for innovative and personalized investment experiences.¹³ This evolving industry landscape, along with continued fee pressures, is placing greater value on players with strong distribution platforms.¹⁴ Additionally, firms have relied on continuing to add to distribution headcount to drive growth, without clear differentiation on their engagement strategy or product portfolio. This has led to a hyper-competitive market, which has resulted in falling sales productivity in both retail and institutional channels.

Digital distribution capabilities will allow firms to be more efficient in how they deploy their sales resources, bring a more refined engagement at the point of sale, and stay top of mind in between in-person interactions. Managers who are able to build a unique toolkit and balance the demands of the field and the gatekeeper are in prime position to develop strategic partnership with intermediaries. Being viewed as a strategic partner will position managers to consolidate share as intermediaries move to reduce their product menus.

Leading wholesaling models are also adapting to the changing environment by leveraging enhanced analytics capabilities and digitized services to drive customer insights and deliver better user experiences.

Consumers of financial services products increasingly compare their user experience to non-financial providers they routinely engage with, leading to an increased emphasis on digital solutions that improve the engagement experience. Adoption of these solutions has continued to grow as a survey of 2,700 retail investors substantiated the fact investors are ready for wealth management digital capabilities.¹⁵ Furthermore, a direct distribution model can reduce costs, and firms that control more of the value chain can exert greater control over the client experiences by building and maintaining customized portfolio solutions. Asset servicers should also prioritize the adoption and integration of digital solutions as their clients continue demanding advanced portals to meet their evolving reporting demands.

Advances in technology can empower firms to focus on enhancing the user experience. In a competitive environment where clients expect immediate, personalized, and impactful reactions, human-driven distribution alone will no longer be a sustainable model. To that end, effective asset managers will seek to use new technologies to enable insight-led distribution, digital marketing, field management, and data management to drive efficiencies and increase the probability of acquiring and maintaining business.¹⁶

The next generation investor



Source: Deloitte

Asset managers will continue to develop advice capabilities to be delivered both business-to-business as well as direct-to-consumer as fiduciary standards, regulations, and client demands help drive adoption.¹⁷ Incumbent institutions embracing innovations such as segmentation analysis, predictive analytics, and algorithmic trading can streamline robo-advice into their distribution strategies, allowing them to provide higher value services to a broader customer base without overextending their resources.¹⁸ A key success criteria of robo-advisory solutions is creating a distribution platform that fosters strong relationships with intermediaries and clients while fulfilling real time demands. Asset managers will leverage these tools to

remain competitive amidst increased fee pressures and a shift toward passive investment strategies.

The rise of new client demands, regulatory costs, and increased fee pressures have led to evolving distribution strategies, where industry participants will continue making strategic investments in technology. This approach will also require a commensurate focus on acquiring and training resources with qualified skillsets to drive solutions that enable firms to reach clients throughout the investor life cycle/sales process at high value touch points. Knowing when, how, and what to deliver at these intervals will redefine how asset managers engage with their clients.

Getting started:

- ▶ Define a digital distribution strategy enabling the ability to deliver timely and customized solutions including:
 - Digital advice as a direct-to-consumer platform
 - Digital advice as a driver of advisor sales
 - Digital advice as an advisor-driven tool
- ▶ Identify areas of inconsistent and suboptimal user experiences to improve across the client sales and servicing cycle
- ▶ Determine stages along the sales cycle where implementing innovating digital solutions can increase the probability of driving new business

Robotic automation and the cognitive enterprise

Humans have long sought ways to expand the capabilities of the human brain. By bringing together a variety of artificial intelligence (AI), robotics process automation, and emerging capabilities, cognitive automation enables organizations to emulate and enhance the strength of the human mind. Combined with advances in data and analytics, cognitive automation holds the potential to reshape businesses and even entire industries.¹⁹

The adoption and institutionalization of robotics and cognitive automation (RCA) may be an accelerator for

firms to transform their businesses, allowing them to remain competitive by addressing cost pressures, improving their margins, and exploiting the anticipated exponential growth in the volume of digital data.

RCA will be a key component of the future asset management firm's operating model in the changing industry environment, where a majority of competitors will be leveraging bots to drive efficiency and reduce operational risk. A firm's market position relative to its peers may be dependent on making RCA work in their own, unique operating environments.

RCA asset management use cases



REPORTING

- Client reporting - *Standard client reports/template population (bolt on commentary generation)*
- Regulatory reporting - *Automated data gathering and template population with software logs for reference*



COMPLIANCE

- Rule monitoring - *Automated checks for various internal/external thresholds*
- Compliance reporting - *Rapid data extraction and generation (bolt on generation of narratives)*



ACCOUNTING AND ADMINISTRATION

- Asset and cash reconciliations - *Custodian/counterparties/prime broker vs. asset manager*
- Client onboarding and fund setup - *Automated bots to set up client information in different systems*
- Fund accounting/NAV calculation - *Automating daily NAV checks*



OTHERS

- Securities pricing - *Aggregating securities pricing approvals*
- Vendor Management - *NLP based contract reviews to extract terms of contract and other information to feeds vendor risk analysis, contract remediation*
- Commentary generation through Natural Language Generation software

Source: Deloitte, "Robotic & Cognitive Automation", 2017

The use of robotics to automate standardized, repeatable processes offers a significant opportunity for firms to operate more efficiently while reducing the cost and reputational risk presented by manual, human error. One area ripe for transformation is the asset servicing function, where some firms may have siloed business processes being performed across antiquated technologies as the result of prior acquisitions, custom-built systems, and poor integration. A single, automated bot executing accounting and administration processes costs approximately 11 percent of an onshore-based full-time employee (FTE). Beyond cost savings, deploying

this technology also stimulates a dramatic reduction in error rates.²⁰ Bots can be deployed and programmed to perform asset and cash reconciliation functions, where early estimates suggest that automation could potentially reduce the required headcount by 50 percent, freeing up FTEs to focus their talent on more valuable, business-critical tasks and projects.²¹ Similar opportunities may exist in the client onboarding and regulatory compliance functions, where bots can be leveraged to execute time-consuming data gathering and report template population processes.²²

RCA in asset management

Governance								
Business Management and Governance			Risk Management			Data Management and Business Intelligence		
Policies	Strategy & Planning	General Mgmt.	Market Risk	Credit Risk	Operational Risk	Data Architecture	Data Admin	Database Admin
						Data Delivery	Data Quality	
Front Office			Investment Operations			Accounting and Admin		
Sales & Marketing	Product Mgmt.	Distribution	Trade Support		Market and Reference Data		Accounting	Administration
Marketing	New Product	Channel Selection	Trade processing	Confirmation	Reference Data	Securities Pricing	Postings	Fund Distributions
Sales	Product Pricing	Contracting	Post-Trade Compliance	Cash Forecasting		Corporate Actions	Fund Accounting / NAV Calculation	Proxy Voting
Model Trading	Product Coordination	Network Mgmt.	Front to Back Recon	Clearing/ Settlement			Books and Records	Counterparty Management
Trading			Derivatives / Collateral Management				Pre/ Post-Close Analysis	Bank Relations
Pre-trade Compliance	Order Mgmt.	Trade Allocation	Margin Calculation	Derivative Operations	Collateral Posting		Valuation and Pricing	Custodial Mgmt
Investment Management			Investor and Intermediary Services				Institutional Accounting	Fee Billing
Investment Strategy	Research	Model Development	TA Ops and Admin	Investor Services	SMA and Sponsor Support		Cash & Asset Recon	Intermediary Services
Portfolio Construction	Cash Management	Investment Analytics						
Hedging	Order Creation							

Opportunities for Automation: ■ Low ■ Medium ■ High

Source: Deloitte, "Robotic and Cognitive Automation: Deloitte Perspectives on Financial Services", 2017

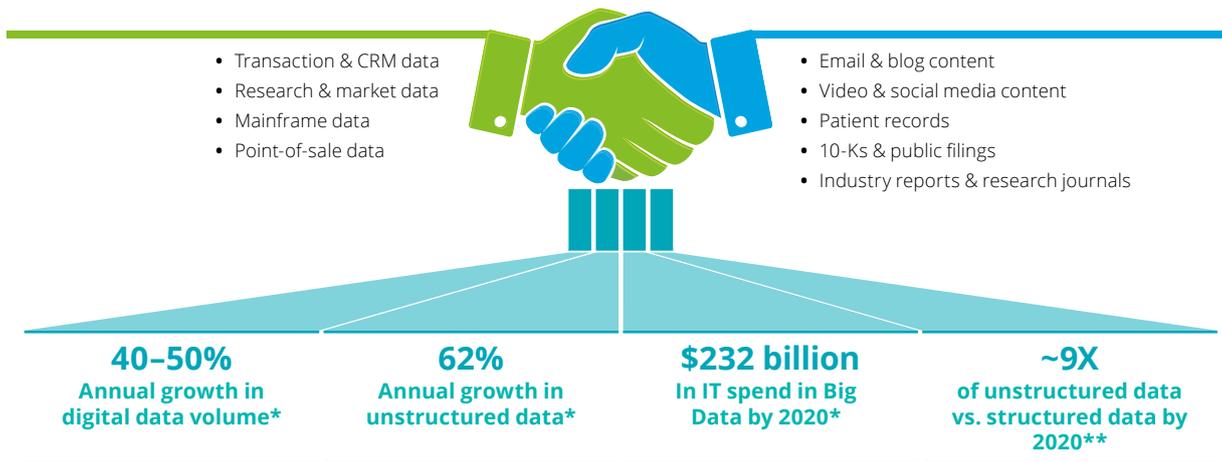
Global digital data volume is growing exponentially. Since 2005, the digital data universe has grown at a rate of 40-50 percent annually and is expected to continue to double in size every two years through 2020, at which point 90 percent will be unstructured.^{23,24} Asset management firms should leverage RCA technologies as differentiators to unlock new insight that was previously challenging to obtain. Firms can accelerate implementations by establishing a center of excellence, where business units procure automation technologies

to gather and pair structured data (e.g., market research, transactions, and CRM data) with unstructured data (e.g., industry reports, analyst reports, public filings, and social media content). Furthermore, firms can leverage cognitive capabilities that augment human intelligence with predictive analytics to identify opportunistic areas for new product development, customer segmentation, and distribution strategies, creating new capabilities that facilitate competitive differentiation.

Data explosion is a key driver for automation



Big Data technologies enable us to extract insights from unstructured data that was previously unused



Source: Deloitte, "Robotic and Cognitive Automation: Deloitte Perspectives on Financial Services", 2017

* HP Autonomy, Transitioning to a new era of human information,

** Steve Hagan, Big data, cloud computing, spatial databases

Asset management firms will need to plan and execute their robotics and cognitive strategy with diligence to mitigate risks inherent to implementing new automation technologies.

Key criteria for addressing challenges when selecting automation business use cases include the following:

- **Achievable and scalable:** Ensure that automating the process is achievable and scalable; firms often target their most complex processes for automation at the outset, a frequent point of contention that can be a prime contributor to underperforming results.
- **Clear scope and plan:** Select a well-defined process with clear scope, execution steps, and existing controls in place to limit the amount of risk in automation.
- **Rules-based process:** Select a process that requires rules-based manual intervention and has high transactions to realize greater value from the automated outcome.
- **Success criteria:** Clearly define measurable tasks and outcomes; success criteria and KPIs are indispensable for a successful automation.²⁵

Over time, automated processes should be reviewed for continuous improvement opportunities, helping eliminate new bottlenecks and realize the full value supporting the business case. Furthermore, standing up a functional center of excellence is critical to ensuring effective prioritization of the highest value-adding automation candidates. Finally, vendor due diligence at the outset of the selection process will ensure the right technology stack is chosen to support the automation strategy, which is especially critical in this highly fragmented and evolving vendor landscape.²⁶

Leading asset management firms should act quickly and strategically to remain competitive and draw increased efficiencies out of key business processes by leveraging the advantages of RCA. Achievable business cases should be identified to target cost reductions, increase operating efficiency, and reduce operational risks to help position firms to build a sustainable competitive advantage. Asset management firms will be enabled to then re-purpose their talent, unlocking the ultimate value proposition of the modern asset manager—its people. This key benefit is frequently overlooked.

Getting started:

- ▶ Identify business use cases as automation candidates across the value chain focusing on processes that are
 - Well defined, documented and have existing controls in place
 - Primarily rules based, driven vs those involving judgement
 - Have high transaction volume and manual intervention for faster automation
- ▶ Assess the technology landscape and select the right vendor
- ▶ Execute the proofs of concept and showcase the value across your business to generate interest

Regulatory readiness and productivity

The wave of regulations that asset managers are subject to is adding a continuous and high level of pressure to the industry's economics, increasing the costs to comply while simultaneously impacting product offerings, asset servicing, and distribution. Global asset management firms are required to navigate cross-jurisdictional regulatory agendas. In Deloitte's recent Global Risk Management Survey of Chief Risk Officers at asset management firms representing more than US\$13.6 trillion in aggregated assets, 81 percent of respondents cited regulatory risk as still the greatest challenge they will face over the next 24 months.²⁷ In order to survive and excel in this fluid regulatory climate, firms will be pushed to consolidate or adopt new solutions, such as Regulatory Technology (RegTech), to manage their risk and compliance efforts.

As major new regulations are enacted in distinct geographies with local RegTech specificities, asset management firms are frequently in the precarious position of needing to prioritize compliance. With major new regulations in the process of being enacted or in the pipeline, including broad measures such as MiFID II and PRIIPS in Europe and the DOL's Fiduciary Rule in the US, the impact to operating margin is estimated to be between 50 and 100 basis points.²⁸ In the case of MiFID II, the cost of compliance in the European market is forecasted to total \$822 million annually for five years before decreasing.²⁹

The growing importance of the retail investor is another catalyst as we observe the emergence of fiduciary regulations such as RDR (UK), Ban on Inducements (the Netherlands), and MiFID II (EU-wide), which seek

to strengthen investor protection and improve the standard of financial advice. Within two years, the implementation of MiFID II and the DOL's Fiduciary Rule will triple the assets in individual portfolios worldwide subject to stricter fiduciary standards, forming part of the overall increase in the cost of compliance for asset management firms.³⁰

With the cost of compliance and increasing fiduciary standards impacting their ability to compete as stand-alone entities, we expect to see a wave intermediary consolidation as distributors seek out larger, broader relationships with fewer investment managers to realize synergies advantages and better manage compliance risks.³¹ We may also see an increase in the outsourcing of more heavily regulated portfolio advice, creating opportunities for larger asset managers and robo-advisors.³² To help meet this new wave of regulations, industry leaders should explore investment in new technology (e.g., RegTech) solutions that are emerging to help balance their need to address emerging regulations while still maintaining an adequate level of investment in innovation. RegTech has the potential to optimize how asset servicers provide post-trade compliance services to asset managers, through improved data management and automation. Asset servicers may choose to offer RegTech solutions on a white labelling mode, outsourcing some solutions to specialized RegTech service providers that have the required scale and expertise. "Smart-sourcing" opportunities to outsource non-core, commoditized processes will offer asset servicers the opportunity to mitigate global compliance risks and reduce costs.

Common applications of RegTech are as follows:

- **Reporting & monitoring:** RegTech can offer new capabilities aimed at monitoring, producing and reporting regulatory data in a more efficient and cost-effective way. Examples of these RegTech solutions include:
 - KYC as a cloud-based managed service covering the entire KYC value chain
 - Transaction reporting tools
 - Regulatory reporting tools
 - Activity monitoring tools (i.e. governance risk and compliance)
 - Reconciliation tools
 - Regulatory watch solutions anticipating regulatory changes important for the financial organizations
- **Compliance & risk automation:** As RegTech matures it is expected to empower compliance functions to make data-driven risk choices and provide well-positioned asset managers and asset servicers with an additional lever to achieve competitive advantage by automating compliance and risk functions.³³

Getting started:

- ▶ Establish a RegTech council to provide vision, governance, capital allocation, research and supervisory involvement to bring the value of RegTech of the firm
- ▶ Develop hypotheses on how one or more emerging technologies can be applied to help address key compliance issues within the firm more effectively
- ▶ Experiment with use cases to apply innovative RegTech solutions to existing platforms for greater process efficiencies, improved data sharing and aggregation and more valuable data driven insights
- ▶ As solutions are deployed, maintain a real time inventory of verified RegTech solutions within the firm to improve the firm's ability to respond to compliance challenges

Technology as a differentiator

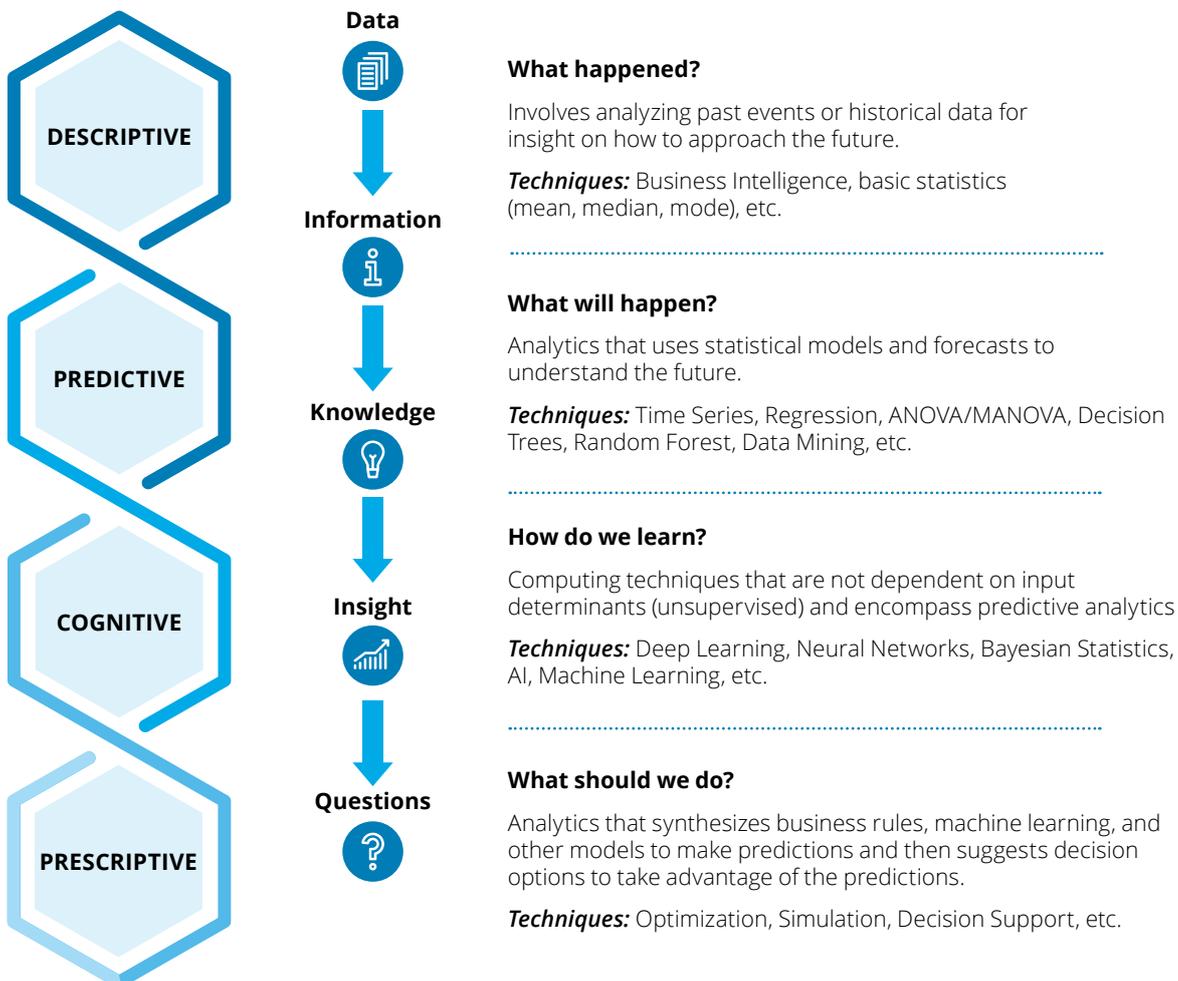
Advanced analytics, cloud, and blockchain have the ability to transform significant components of the asset management value chain and serve as differentiators for the firms that invest in them.

Advanced analytics

Advanced analytics applies machine learning, predictive modelling, statistics, and advanced visualization to (big) data sets with techniques such as predictive modelling, machine learning, and text mining to gain actionable

insights.³⁴ Recent advances have improved the feasibility of advanced analytics, making this a primary focus area for many asset management firms seeking profitable and sustainable growth. Gains in computing power and software have made it easier to manipulate both internal and external data sets while visualization and mobile tools allow firms to present insights more quickly in an accessible format. Ultimately, advanced analytics provides faster access to key insights and information to enable improved decision making and enhance business value.

The analytics spectrum



By leveraging advances in cognitive computing, data mining, machine learning, artificial intelligence, and natural language processing, firms who invest in advanced analytics can establish a competitive advantage by enabling benefits that include the following:

- **Retention and growth of client relationships:** Providing highly personalized offerings, services, and insights based on individual preferences, goals, and history.
- **New market segments:** Generating actionable, highly specific investor insights that may lead to new products and pricing strategies that appeal to nontraditional investors and new markets.
- **Reduced costs:** Identifying patterns and trends that can provide insights into changes in workflows and operations that can decrease costs.
- **Enhanced decision-making:** More easily extract, compile, and view internal and external information to make smarter decisions.
- **Paint a picture:** Desktop and mobile dashboards present data and results visually so they are easier to understand and have more impact.
- **Streamline compliance efforts:** Efficiently and quickly access, compile, and understand information needed to meet regulatory requirements and help mitigate risk.³⁵

Getting started:

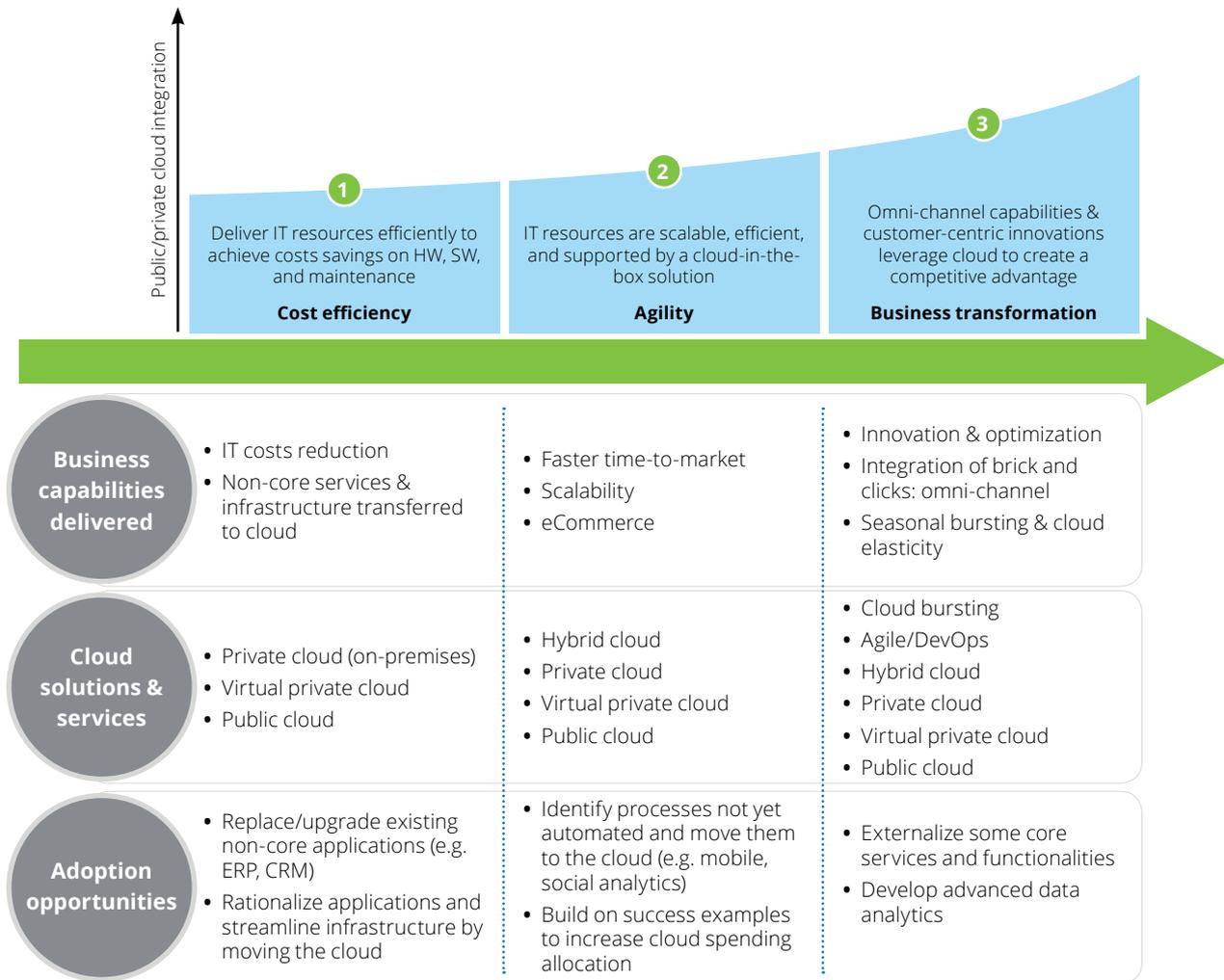
- ▶ Establish a small and scalable analytics center of excellence to foster education, experimentation and adoption of analytics
- ▶ Evaluate analytics tools, technologies and vendors to become educated around the analytics ecosystem
- ▶ Engage the business to define an advanced analytics use case with a clear value proposition
- ▶ Assess and prepare a subset of data needed to execute the use case and generate desired insights
- ▶ Build the relevant models to execute the use case

Cloud

Cloud computing is the adoption of a modernized delivery model, providing applications and services over the internet as opposed to on premise. While the speed of innovation varies across asset managers, many firms have begun embracing cloud computing and the benefits it offers, including increased agility for delivery at pace, elasticity to adapt to changing scale, and a means of balancing costs and value.

Cloud computing can help achieve a high degree of processing reliability, while simultaneously promoting enhanced collaboration and flexibility. With a high level of cloud maturity, Asset Managers have the opportunity to deploy scalable, secure architecture with omni-channel capabilities and accelerate innovation with agile solutions. The adoption of cloud technologies also allows Asset Managers to use their resources more efficiently by facilitating improved budget management and allocation. Properly deployed, cloud computing can help organizations obtain flexibility, optimize costs, and build an enabling IT infrastructure.³⁶

Cloud computing is not a new form of managed service or a different type of technology platform but rather represents a fundamental shift in how companies attain, use, and manage technology capabilities.



Source: Deloitte

Getting started:

- ▶ Identify and communicate business benefits and value
- ▶ Conduct a viability check of legacy applications
- ▶ Identify business operational changes and challenges associated with cloud
- ▶ Evaluate the security impact of cloud adoption

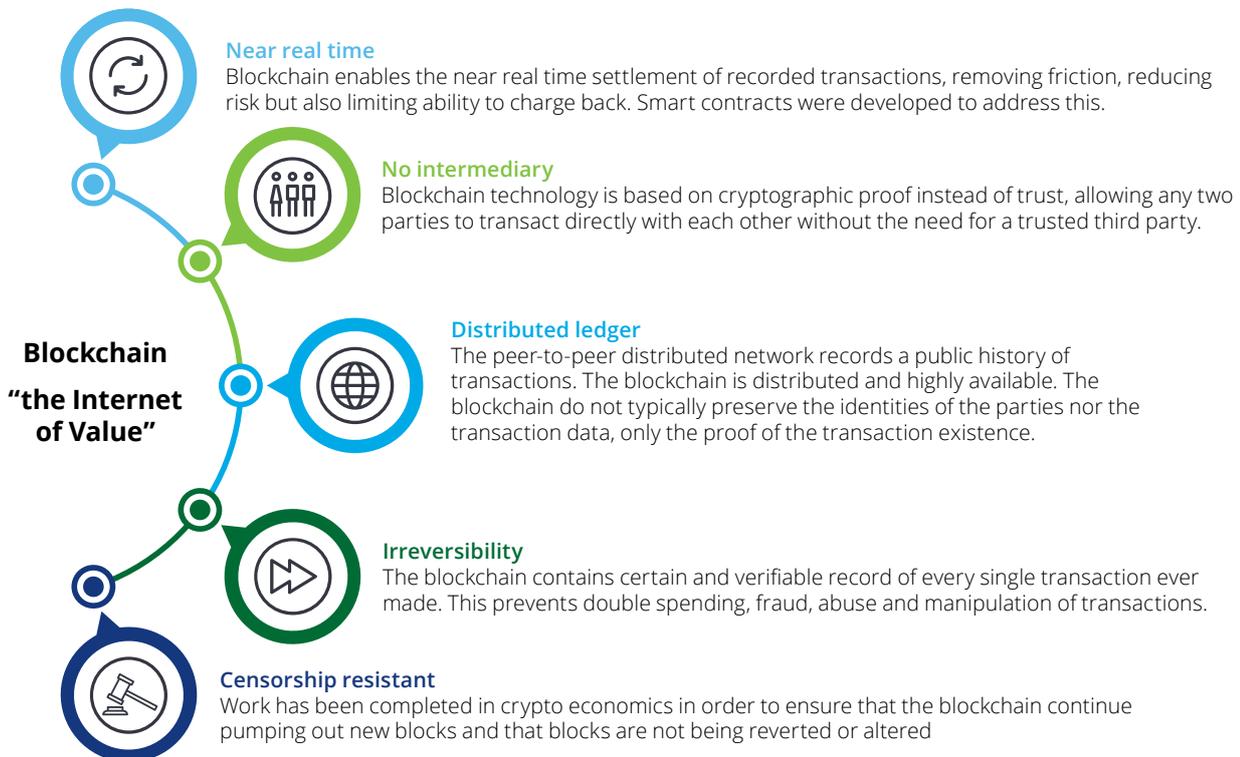
Blockchain

Blockchain, a decentralized, distributed ledger that provides a way for information to be recorded, shared and maintained by a community, is a new technology that demands attention from asset management executives for two primary reasons:

- This technology has the potential to transform and extend the asset management value chain.
- Blockchain is in its early stages of development with many firms actively exploring use-cases, signaling that significant change is on the horizon.

What is blockchain?

Fundamentally, blockchain is a digital ledger system for recording business transactions and events but it is not necessarily designed to store vast amounts of data



Source: Deloitte

When applied to asset management – asset servicing, in particular – blockchain has the potential to redesign the value chain in an industry which has traditionally lagged adopting new technologies. Asset management is ripe for technology disruption and opportunities have emerged for new technologies to replace back and middle office repetitive, manual and cost-inefficient processes, with improved process automation.

In asset servicing, several use cases for blockchain have been identified that aim at streamlining and improving back and middle-office processes. Processes that have multiple parties granting approval, with strong audit, compliance, and regulatory oversight tend to be better suited for blockchain adoption.

Blockchain asset management use cases

Applications across the asset management value chain could fundamentally transform operating models

Trade settlement	Reference data	Client management	Regulatory reporting
Decentralized settlement of trades powered by multi signature escrow entity allowing for T+0 settlement	Industry master data shared across organizations and proprietary data shared across business units	Digitization of client identities linked to client activity on a distributed ledger improving AML, KYC, and KYCC	Self-service reporting for regulators and other external entities by participating as a node on the network
Derivatives	Collateral management	Securities lending	Cross company trading
Smart contracts automate the terms of derivatives contracts Contracts can hold the value and are programmed to automate the lifecycle	Escrow is used to store collateral; the asset is frozen (encumbered) while it is being leveraged as collateral and returned when collateral is released	A lending agreement is shared on the blockchain; then the security, collateral and payments are automated on blockchain and side chains	Cross company trades are facilitated by the blockchain including storage of market price
Corporate actions	Reconciliation in house	Proxy voting	Fund management
Corporate action announcement is broadcast to blockchain; instructions, event related payments, and reconciliations are automated on blockchain	Interoperable side chains for in house systems improve data quality and automate the reconciliation process	Digital identities (public keys) are assigned voting tokens based on positions, private keys enable the voter to cast and verify an anonymous vote digitally	Smart contracts to facilitate fund application and launch, investor contracting, unit registration, unit transfer, divestiture, regulatory reporting, etc

Source: Deloitte

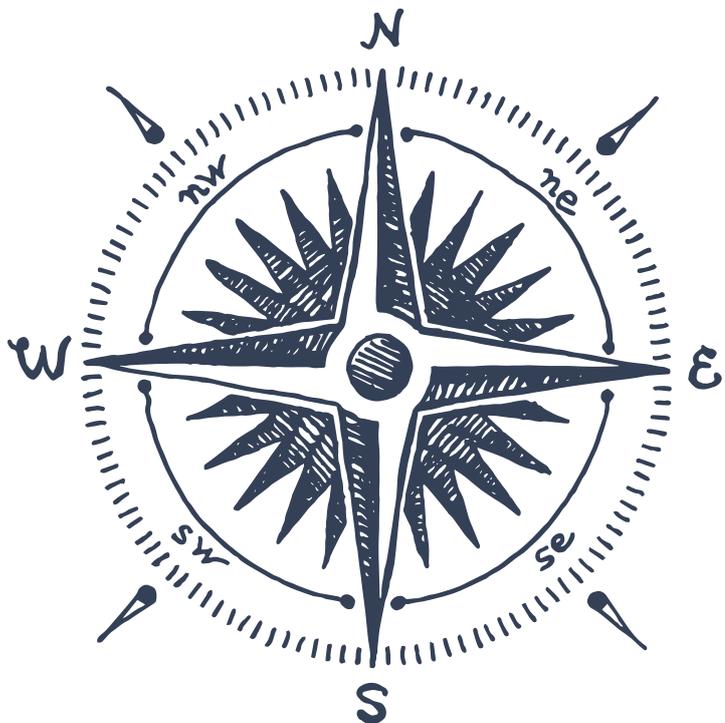
As blockchain matures from novelty to the see increased adoption, several concerns have been raised regarding the ability to scale blockchain along with the anonymity and aggregation of sensitive information stored on the Blockchain. However, if managed appropriately, over the next ten year horizon blockchain has the potential to pave the way for increased efficiency and enhanced capability across the asset management value chain.

Getting started:

- ▶ Conduct research to learn and educate the firm around the benefits and potential use cases related to blockchain
- ▶ Be active in the blockchain ecosystem to get early visibility on potentially disruptive competitors/propositions
- ▶ Establish a scalable working group consisting of both business and technology resources to collaboratively define a set of high value use cases
- ▶ Execute use cases to demonstrate value and possibilities of blockchain at the firm

Conclusion

As the operating environment for asset managers becomes less forgiving, the penalty for poorly planned strategies will become more severe.³⁷ These six solutions have the potential to serve as catalysts for future growth and success and those firms who boldly invest in them stand to achieve an outsized benefit and a differentiated, sustainable competitive advantage.



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