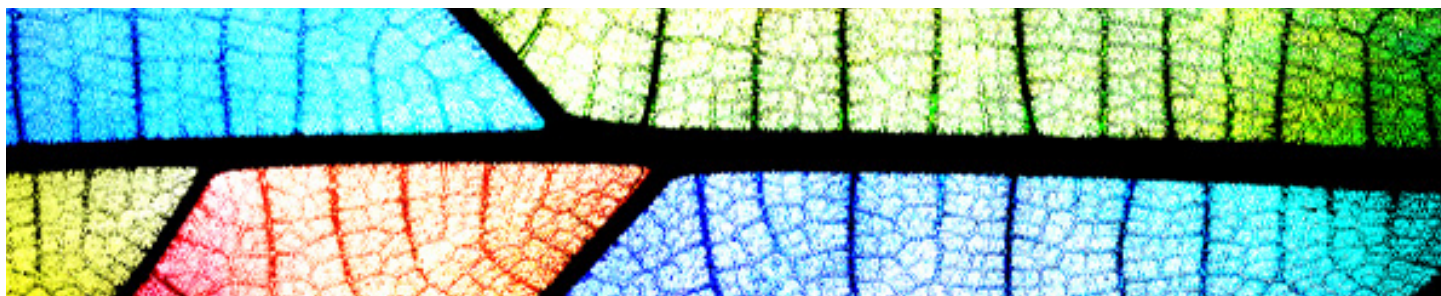


Tech Trends 2025

A Perspective for the Investment Management Sector

Generative Artificial Intelligence (AI) remains a focal point of discussion across the Investment Management industry. Still, as highlighted in our Tech Trends 2025 report, we predict that AI is set to become an integral, unseen part of how the industry does business. We see this AI-infused future across most of this year's six macro forces of information technology (IT). In this report, we will share our observations, experiences, and predictions from the Investment Management industry for each trend.



Interaction

Spatial Computing

Spatial computing is an emerging technology within the Investment Management industry. Some asset managers are bullish on this technology and are actively exploring it by building their applications and experiences in-house. For example, Fidelity Investments released their first immersive metaverse experience, offering a new way to learn investing basics called “The Fidelity Stack”¹. “The Fidelity Stack, built in Decentraland, features a multilevel design complete with a lobby, dance floor, and rooftop sky garden for users to explore on foot—or even through teleport. In the Invest Quest at The Fidelity Stack, users are challenged to traverse the building learning the basics of exchange-traded fund investing while gathering “orbs” along the way.”¹

Spatial computing has multiple applications within learning/knowledge management, client interactions, and wealth planning, to name a few. With the advent of GenAI, providing hyper-personalized client experiences is within reach and spatial computing can take it to the next level. Imagine you are engaging with your financial advisor in a personalized space created by augmented reality /virtual reality (VR) (aka—put on your VR headset without leaving your home). You are working through various wealth planning scenarios, and as you interact with different levers, your surroundings adjust to help you imagine the future. These are powered by GenAI agents generating images/voice/text and working seamlessly to create a tailored client user experience.

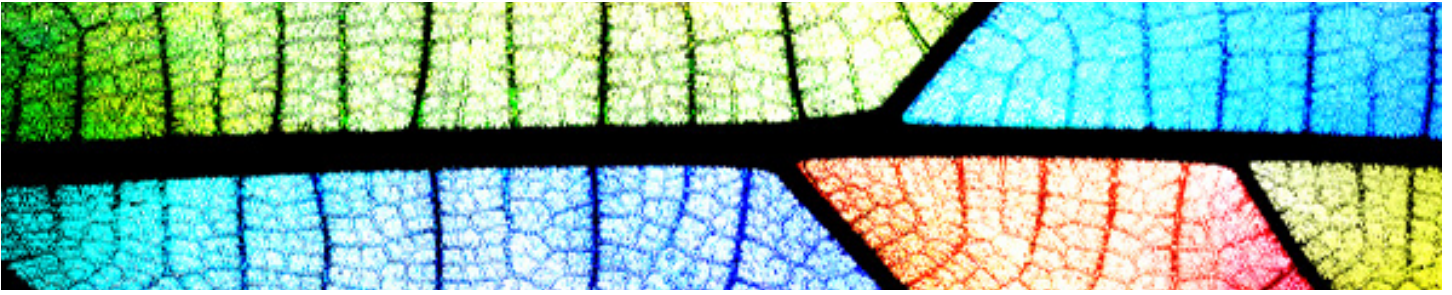
Despite the potential, things to watch out for include—solving for technical challenges (i.e., better processing and battery life for current devices), data retention and data privacy concerns, ergonomic form factor, limited user access issues, and securing skilled engineering talent to build these niche capabilities.

Information

Small Language Models (SLMs)

While large language models (LLMs) have excelled in creating quick insights on a wide range of topics, use cases requiring specialized knowledge or unique terminology remain challenging to solve efficiently and cost effectively. SLMs have advantages over LLMs by being efficient (e.g., lower resource needs, faster processing, lower latency) and having a more compact focus, which helps them stand out in key metrics of performance and cost. “One such SLM, developed by Kohei Watanabe, a member of the Lazard Quantitative Equity team, is latent semantic scaling (LSS). LSS is a semisupervised document scaling technique that locates documents in any language on user-defined dimensions. It estimates the semantic proximity between words in the data, while the seed words define the dimensions of interest. In addition to being transparent—we can completely unpack and fully understand LSS outputs—this level of precision comes at a fraction of the cost if we were to attempt the same exercise using an LLM.”² The team leveraged LSS to gain insights from annual reports written in Mandarin to navigate the challenging Chinese equity markets. The model identified companies least impacted by the volatile Chinese housing market without being fluent in Mandarin or having to use a translation, which loses nuance or contextual references.





These are additional opportunities within Investment Management where SLMs can be incredibly powerful—a research team could engage with a chatbot to review proprietary analysis and specific financial documents for investment ideation, as noted above. A compliance team can leverage an SLM trained on specific compliance rules to efficiently set up compliance rules. An investment adviser can leverage an SLM (trained to understand financial data and concepts, much like a Chartered Financial Analyst) to support their day-to-day tasks. As the era of Agentic AI approaches, SLMs will be instrumental in this sector, acting as highly effective Copilots that transform how work is done.

The adoption of SLMs is not without challenges. As the technology matures, companies must be prepared to orchestrate a multiagent architecture (solutions offered by startups and existing product vendors) where specialized SLMs perform specific functions, like a microservices architecture in software development. Ensuring the accuracy and reliability of these models through robust monitoring systems and data privacy guardrails will be crucial for their successful implementation.

Computation Hardware for AI

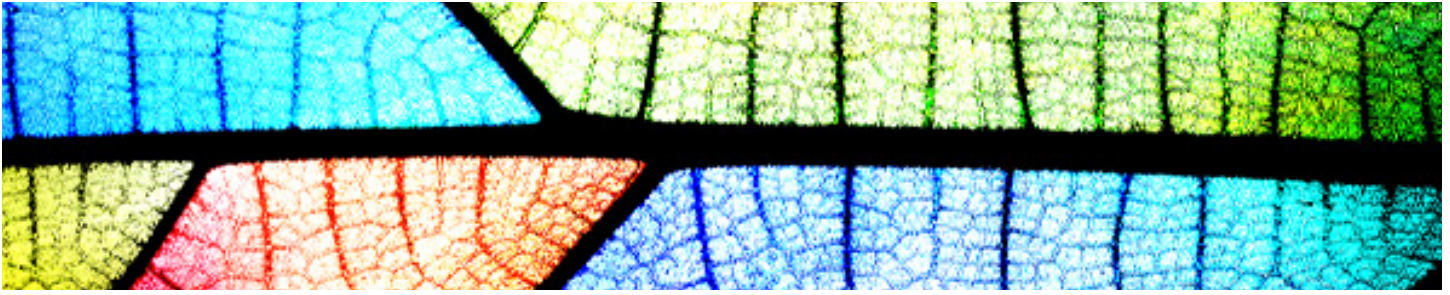
In the last five to seven years, migrating from mainframe to cloud has been a greater focus for Investment Management firms. As more AI use cases emerge, investment managers are revisiting their data center strategy to support scaling AI infrastructure and energy needs. AI workloads demand low-latency, high-data-rate transfers in addition to increased computational demands, which require a shift away from traditional setups to high-power, AI-ready infrastructure. Investment Management firms are directly investing in their core infrastructure and establishing partnerships with the leading providers to incorporate this prevalent technology trend into their investment theses. BlackRock, Microsoft, Global Infrastructure Partners and Metagenomi Inc. announced the new Global AI Infrastructure Investment Partnership in September 2024 “with a goal of building the backbone of future AI infrastructure... [to] build data centers and ... the supporting grid energy infrastructure to power them.”³ In the same month, “Blackstone along with the Canada Pension Plan Investment Board (CPP Investments) agreed to buy AirTrunk ... the fastest-growing data center platform in the Asian-Pacific region.”³

Other aspects of hardware advancements include laptops and desktops with AI chips and Copilots built into the machine. Potentially, even futuristic screens that allow for simulations, what if scenarios analysis, and research at the fingertips of financial analysts.

As firms prepare and adapt to these changes, robust hosting strategies become critical. Balancing on-premises solutions, hyperscalers, and emerging providers will be key to navigating regulatory, operational, and cost constraints.

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Business of Tech Operating Model

At many AI pioneering investment managers, the AI agenda is driven by IT and Data, Analytics, and AI teams with business sponsorship. Early successes have elevated the role these teams play in major transformation initiatives to partners instead of just service providers.

Currently, investment managers are increasingly adopting modular and vendor-driven solutions that streamline operations and provide flexibility. Solutions from vendors like Aladdin and Charles River are potential options, offering scalable platforms that consolidate data from both public and private markets. This is freeing up their internal business and technology/data teams to focus on noncommoditized aspects of their business and genuinely becoming data-driven for agility in responses to market demands, expectations for greater personalization, and operational efficiency. “As Vanguard CEO Tim Buckley and CIO Greg Davis explain, AI condenses earnings and research reports, enables faster and more accurate decisions, and simplifies advice. And that is only the beginning.”⁴ To fuel these ambitious prospects and capabilities, specialized tech talent is a must.

As AI initiatives scale, IT teams within investment managers will relook at their operating model from the lens of five pillars: Infrastructure, Engineering, FinOps, Talent, and Innovation. There will likely be a shift from human-in-charge to human-in-the-loop, which will transform IT delivery. New roles like prompt engineers will emerge, reshaping the talent mix. AI-driven automation will reduce business teams’ reliance on IT. However, areas, such as model risk management and monitoring and LLM ops, will become more prevalent, especially as AI regulations become clearer.

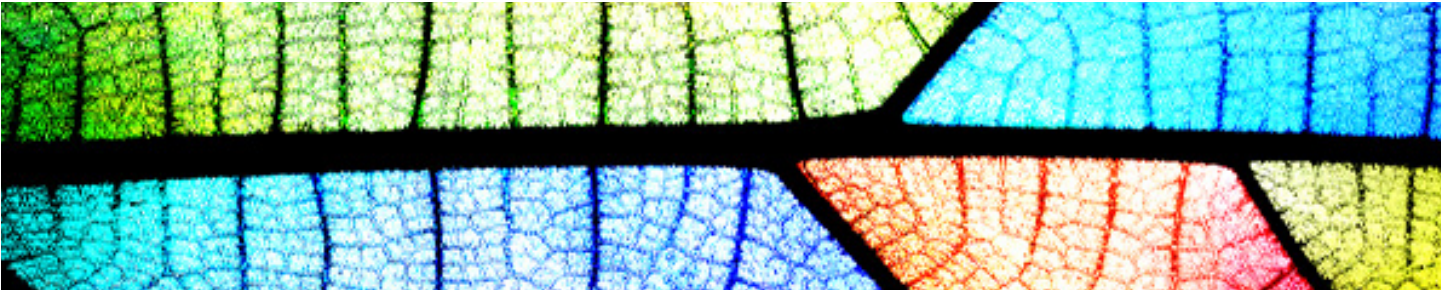
These shifts are essential for firms aiming to stay competitive and responsive in a dynamic financial landscape as well as emerging technology trends and positioning them to meet the evolving needs of clients and stakeholders effectively.

Cyber and Trust Cybersecurity

As Investment Management firms embrace innovations and gear up for the future, they may be overlooking newer types of cybersecurity risks. While the advancement of quantum computers is still in its initial stages, there are several strong use cases for this technology within the sector, such as advanced securities trading, optimized fund asset management, and stochastic modeling for predictive analytics. Although quantum computing is anticipated to bring significant improvements to the sector, concerns around data privacy and security are coming into question.

Investment Management firms store massive amounts of sensitive personally identifiable information data, such as addresses, phone numbers, social security numbers, and transaction histories. Traditional encryption techniques are generally used to secure this data, and considering the systemic risks associated with cyber attacks, it is vital for asset managers to maintain an infrastructure that can withstand such attempts.

The AI landscape is rapidly evolving...timely adoption, building the foundational capabilities, and training execution muscles will be key.



Conclusion

While building quantum-secure protocols is not currently top of mind, we see asset managers heavily prioritizing the maturity of their cyber programs. JP Morgan's Global Head of Cybersecurity Awareness Program emphasizes how "Building a united and secure oversight framework—across cybersecurity, risk management and business resiliency—is a top priority for our firm."⁵ A well defined road map to reach a post-quantum world is critical in helping ensure Investment Management technologies can continue to operate within the constraints of privacy and security.

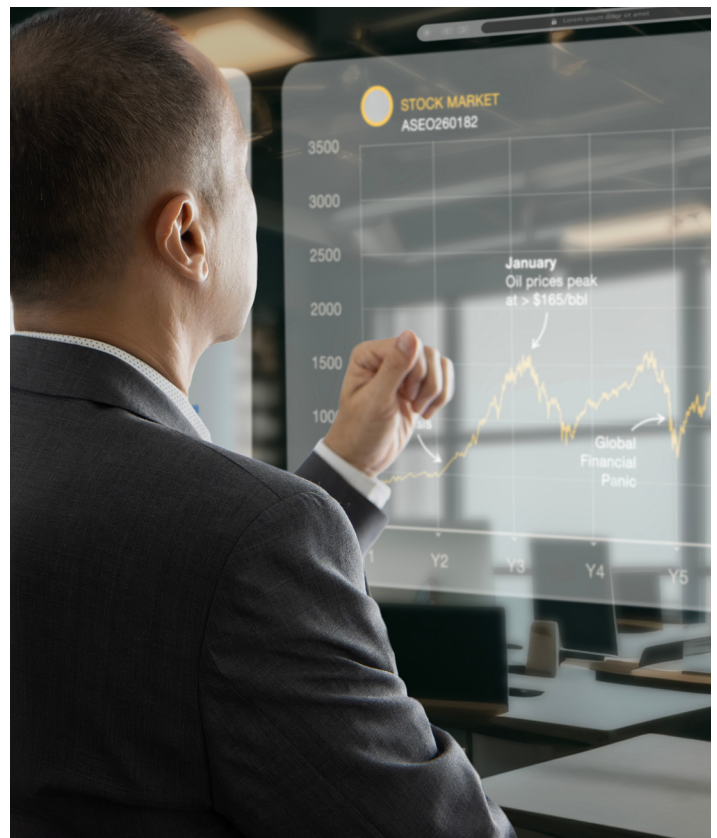
Core Modernization Core Systems

2025 will see the rise of new GenAI features within core systems, such as Trading, Customer Relationship Management (CRM), Human Resources (HR), and Finance, to name a few. Within the front office, Aladdin Copilot and Bloomberg GPT have started to emerge in discussions. Asset servicers like State Street offer front-to-end solutions with AI embedded throughout the platform, offering AI-fueled "Front to back and AI in between"⁶ solutions. There is also a lot of excitement around leveraging AI features from their CRM and Finance/HR systems to transform how work gets done today. We will see investment managers create smart workflows around these systems to garner the full power that GenAI has to offer.

Another lens is to use GenAI to develop and/or migrate in-house systems/tools better and faster. Many legacy systems lack documentation and experienced engineers (in old technologies). But with AI-assisted solutions, these challenges can now be overcome at scale.

Asset managers are integrating GenAI into their core systems, either by transforming existing systems or building new ones. They must address the complexity of rolling out these features and ensure proper education on the technology and its limitations. Furthermore, implementing controls, such as human-in-the-loop processes, ongoing monitoring, and prompt maintenance, are essential to safeguard GenAI deployments.

The AI landscape is rapidly evolving. For investment managers to take maximum advantage of the new technology, timely adoption, building the foundational capabilities, and training execution muscles will be key. As Investment Management firms further adopt AI, it will be increasingly important to balance the risks of the technology with the productivity and customer experience benefits it provides. The spectrum of AI use cases will widen as the technology becomes more sophisticated. This evolution will further unlock AI solutions that are tailored to address the unique challenges and needs of the Investment Management industry.



Contacts



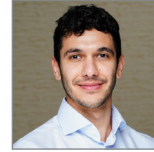
Snehal Waghulde
Managing Director
Deloitte Consulting LLP
swaghulde@deloitte.com



Tim Potter
Principal
Deloitte Consulting LLP
tipotter@deloitte.com



Jana Borer
Senior Manager
Deloitte Consulting LLP
jborer@deloitte.com



Jad El Rez
Consultant
Deloitte Consulting LLP
jelrez@deloitte.com

Contributors

Najeh Adib
Tiffany Kleemann
Jeff Levi
Manish Motiani
Nicholas Merizzi
Kaitlyn Kuczer

Ruchika Bengani
Rachel Ji
Mervin Chen
Ryan Foster
Prathima Sadashiva

Endnotes

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