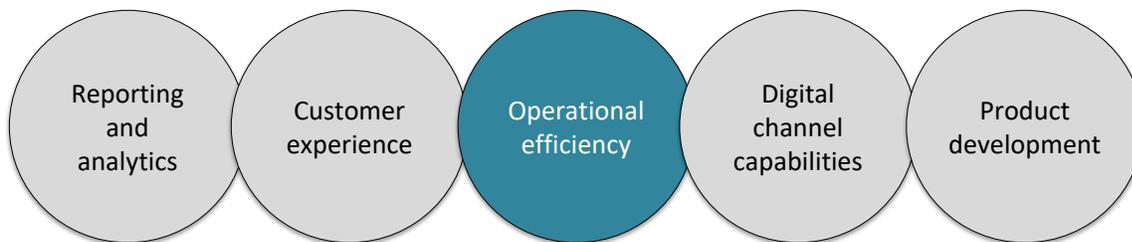


IMPACT INNOVATION AWARD

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2020 Impact Innovation Award in Capital Markets: State Street Alpha



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STATE STREET

State Street is one of the world's leading providers of financial services to institutional investors. With US\$38.8 trillion in assets under both custody and administration, and over US\$3.5 trillion in assets under management (AUM), the company serves clients across the globe in over 100 different markets. In October 2018, State Street decided to expand its technology business by completing its US\$2.6 billion acquisition of Charles River Development, a provider of the front-office trading, portfolio management, and compliance system, Charles River Investment Management Solution. This move meant that State Street is the only global custodian to own a buy-side front-office trading and portfolio analytics solution.

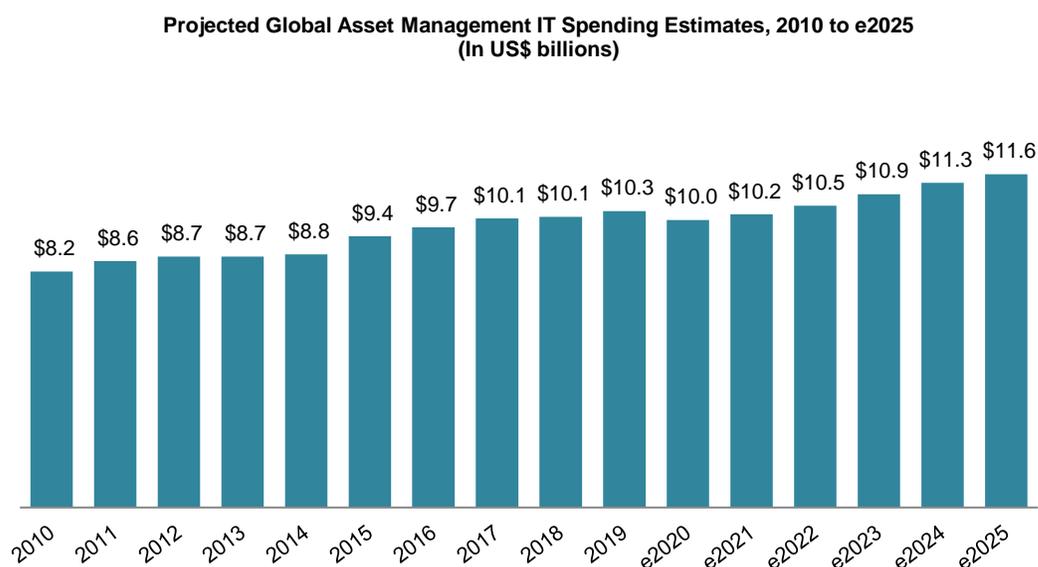
MARKET CHALLENGES AND NEEDS

With the COVID-19 pandemic bringing fundamental economic shifts in global markets, the need for financial institutions to manage market volatility has never been greater. Increasingly, clients have struggled with volatile markets, product rationalization, and changing investor preferences. In addition, complex financial regulations, shrinking margins, and the rapid pace of technological transformation have presented hurdles that require innovative solutions for investment management firms operating in the current environment. Consequently, the value of continuous coverage and operational resiliency for buy-side clients is rising.

Even before the pandemic, institutional and wealth managers were adjusting to the new realities of the investment landscape: rock bottom interest rates, the rise of passive investing, technological resiliency, and changing client expectations. The market stress and volatility of the past year have been a timely reminder of the importance of the core activities of asset managers that drive competitive differentiate and investment excellence. One way in which firms are responding to the new operating landscape has been to outsource technology and operations to a strategic partner with the depth of expertise and global scale to support their business across the investment life cycle.

Many institutional investment managers currently use multiple front-, middle-, and back-office systems that do not integrate well with one another or require numerous reconciliations that lead to inefficiencies in the investment management operations. Simultaneously, they are dealing with growing pressure to handle, analyze, and store considerable amounts of data, and gain near-real-time views of positions and cash balances. Without seamless connections between IT systems as well as with asset servicers, the extent of operational efficiency and automation that can be achieved is limited.

With the operating model in mind, the need to simplify tech stacks and processes, and achieve high rates of straight-through processing across all asset classes, is more evident for the asset management industry. Aite Group's estimates show that asset managers are expected to spend an increasing amount annually on IT over the next few years (Figure 1).

Figure 1: Key Pain Points

Source: Aite Group

INNOVATION: STATE STREET ALPHA

State Street Alpha is a relatively new division of the company that has been established to bring together transaction processing, workflow, real-time data, and intelligence across the investment life cycle, with the goal of improving decision-making, and to support growth for institutional and wealth management clients globally. The best way to think of the Alpha platform is as the culmination of State Street’s multidecade expansion and investment through either acquisition or internal development to meet the needs of the buy-side with software and services. Alpha can help clients manage a wide range of different market assets by enabling them to streamline their day-to-day processes.

State Street Alpha is an interoperable open architecture client-servicing platform that integrates front-, middle-, and back-office processes, and synchronizes the data that fuels them. Higher-quality data provides an enterprisewide “single source of truth.” This, in turn, promotes greater efficiency, advanced analytical insights, and improved decision-making, allowing investment and wealth managers to put more focus on their core activities of raising assets and enhancing returns. State Street Alpha went live in October 2018 with the acquisition of Charles River Development (Table A).

Table A: Initiative at a Glance

Category	Details
Financial institution	State Street
Key vendor partner	N/A
Innovation	State Street Alpha

Category	Details
Implementation time	On day one of the acquisition of Charles River Development, there were 12 clients using Charles River Development in their front office, having already chosen State Street as their middle- and back-office provider. Individual client implementations from scratch can take as little as three months for managers of smaller firms, while the implementation process can take two to three years for very large clients that have a multitude of internal operating models that require reengineering to leverage the benefits provided by the Alpha platform.
Official launch date	October 2018
How it works	State Street Alpha is an interoperable open architecture client servicing platform that connects front-, middle-, and back-office data movement, enabling an enterprisewide “single source of truth” across the investment life cycle, which promotes greater efficiency and improves decision-making.
Key benefits	<ul style="list-style-type: none"> • Charles River Development front-office solutions, deployed on Microsoft Azure cloud infrastructure • Cloud-ready data warehouse powered by Snowflake, with comprehensive data management services and integrations with leading reference data, analytics, and index providers • End-to-end analytics delivered via proprietary offerings, and partnerships, including MSCI (Morgan Stanley Capital International), Qontigo, and Northfield, as well as State Street’s own truView platform • Straight-through processing for all asset classes across the front, middle, and back office, minimizing reconciliations and reducing the risks associated with manual processing • Enhanced access to global liquidity venues, securities financing, and collateral management through integration with leading providers (e.g., MarketAxess, Tradeweb, Cassini Systems) and State Street Global Markets’ foreign exchange, cash, trade cost analysis (TCA), and financing solutions • Reduced costs by leveraging State Street’s scale advantage, along with reduced capital expenditures on infrastructure, enabling firms to focus investments on capabilities that are more strategic to their growth plans

Category	Details
Future roadmap	<ul style="list-style-type: none"> • Expand Alpha strategic partnerships with leading Software and Services providers • Deepen investment book of record capabilities. Broaden asset class coverage and improve servicing efficiency across the platform (e.g., for over-the-counter derivatives) • Deliver new business services on cloud-native architecture • Deeper integration of Charles River Investment Management Solution with State Street Global Market capabilities for multi-asset class trade execution platform and centralized collateral management • Transform clients' digital experiences, customized for each persona, including extensions into the client's front office, improving how they interact with their own clients • Scale up data services and integrate additional data partners (e.g., for environmental, social, and governance data) • Broaden platform capabilities to address the needs of other client segments, including insurers, asset owners, and wealth managers who are looking to migrate from on-premises data centers to State Street's cloud capabilities • Support private assets, infrastructure, and crypto-assets on State Street Alpha

Source: State Street, Aite Group

TARGET MARKET

Large global asset managers with upward of US\$500 billion in AUM, who want to solve operational and technical complexities emerging from their various acquisitions, represent the most sizeable segment of State Street Alpha's target market. Often these firms are looking to focus their activities on growing their business, consolidating acquisitions, and generating alpha for clients rather than grappling with technical complexities. State Street's Alpha platform offers these firms the opportunity to outsource their operations and leverage the deep expertise and scale of State Street.

For midsize managers with less than US\$500 billion in AUM, State Street offers scale advantages. To build capabilities into their platforms, these managers have to evaluate the required capital expenditures for each capability in turn. By contrast, State Street's Alpha offers these managers the opportunity to harness capabilities on demand and to focus on differentiating themselves in the market. While the platform was initially built for larger and complex clients, product teams

at State Street are turning their attention to how they can create a standardized and simpler structure that managers of smaller firms at either the global or regional level can easily plug-in.

Retail Separately Managed Accounts (Retail SMA) servicing is a third segment State Street is targeting. Large institutional asset managers are looking for ways to distribute their capabilities into the Retail SMA market. As this market grows and costs decline, the retail SMA market represents a potentially efficient way for State Street Alpha to deliver strategies and provide end clients the tax advantages that come with separate account capabilities.

HOW IT WORKS

Value is delivered to clients using State Street Alpha through a combination of modern technology, streamlined operations, and a growing partner ecosystem. The implementations are better described as transformations, as they involve fundamental changes to clients' investment operations.

The end-to-end platform is integrated to maximize automated trade life cycle processing for trades originating in Charles River or other trading platforms.

Trade data validation rules are built into the Charles River Order Management System to mitigate trade processing issues before they occur. Harmonized reference data from front and middle office through settlement is designed to reduce manual and time-consuming operations.

State Street's services offered on the Alpha platform cover all major markets and asset classes, providing a strong operational foundation for expansion into new strategies, geographies, and markets. Standard integration and strategic partnerships with leading industry partners in analytics, liquidity, data, technology, and trading enhance the platform's value by providing clients with a broad choice of capabilities aligned with their investment process. Deployment options are configured to support clients' cloud strategy, with options for data delivery directly via Alpha's cloud (a partnership with Microsoft Azure), client private cloud, or a hybrid environment.

After a client chooses to adopt the platform's software and services, the timing of the subsequent implementation depends on the specific needs of the client. For example, a small sovereign wealth manager in Asia looking to build its asset management capabilities from scratch in a certain asset class recently went live on the Alpha platform within four months. The relatively narrow requirements and smaller scale of the client led to a quick implementation process, despite the entire process occurring during the remote working environment of the past year. On the other end of the spectrum, larger managers with, in some cases, up to 15 different operating models as a result of acquisitions and rapid organic growth, will adopt State Street Alpha to consolidate their operations, significantly reduce their technology footprint, and derive benefits from higher-quality data. In this instance, whereby the client's requirements are broader, the implementation process may take two to three years.

SOLUTION DEVELOPMENT

As a long-term provider with decades of experience servicing both asset managers and asset owners, State Street has had a front-row seat to many challenges and trends in the industry. Drawing upon its experience and in collaboration with clients, State Street created its own

platform to extend beyond traditional back- and middle-office solutions. Having acquired Charles River Development and Charles River Investment Management Solution (IMS) in 2018 as a core part of its platform strategy, State Street is poised to offer the world's first fully open and integrated front-to-back investment servicing platform from a single provider.

Though the name "Alpha" was coined in 2018; significant parts of the Alpha platform were in place prior to the acquisition of Charles River Development, owing to State Street having been an important third-party asset management platform for a few decades. The firm's longstanding middle- and back-office and data capabilities were neatly complemented by the addition of a front office, portfolio analytics, trading, and compliance platform. On the day of the acquisition, State Street had 12 middle- and back-office servicing clients that were using IMS for its front office. So, the "front-to-back" solution was already operational, but the strategy was to make it work significantly better through further investments in integration and advanced data management technology. Those efforts have been delivering a steady stream of benefits in the several years since the Charles River acquisition was completed.

Prior to the acquisition, a significant amount of work went into mapping out client demand for the outsourcing of software and services. It was clear from conversations with clients that State Street integration with other front-office platforms was causing significant costs and friction. The increasing value of having access to, and oversight of, the full breadth of data from front-to-back led to the realization that State Street would be best served by owning the whole value chain, leading to the firm becoming the first fully open and integrated front-to-back investment servicing platform.

The platform leverages an open architecture to enable interoperability with other third-party provider solutions and software. This approach allows clients to use the platform in a way that works best for them. Rather than hindering client innovation and flexibility, the goal is that State Street Alpha will encourage clients to act more creatively to get ahead of competitors and offer improved products and services.

KEY QUANTITATIVE AND QUALITATIVE RESULTS

- With State Street having been a service provider to many of its larger clients before the acquisition of Charles River Development, these clients have experienced a relatively seamless transition on to State Street Alpha for its front-office capabilities.
- Clients report that they value the services-on-demand model offered by State Street Alpha, as this frees them up and allows them to invest in sales tools, grow their business, and compete more effectively. State Street estimates that clients who adopt the Alpha platform could see transaction cost reductions of 10% to 15%.
- At the end of 2020, active discussions were being held with over 100 new and existing clients to explore Alpha-related opportunities.
- There is a robust Alpha pipeline, with active discussions and continued strong interest from clients, which is manifested in quarterly results and contract signing announcements.

- Clients have found significant value in the partnership opportunities with software and data firms that come with the State Street Alpha platform, for example:
 - **Analytics:** MSCI, Qontigo, Northfield
 - **Liquidity venues:** MarketAxess, Tradeweb, Liquidnet, LTX
 - **Data sources:** Refinitiv, ICE, BondCliQ
- Renewed focus on data management through a public partnership with Snowflake and Microsoft Azure to launch the State Street Alpha Data Platform, an end-to-end data management and warehouse solution for clients. The Alpha Data Platform also underlies a complementary Alpha Data Services “outsourced data management” offering.
- State Street Alpha is achieving global reach in markets outside the U.S. For example, the European manager Vontobel Asset Management has recently entered into a multiyear service agreement with State Street for front-office technology, investment operation services, data services, and liquidity risk solutions.
- Clients value the role that State Street’s professional services teams play in guiding them through the transformation—often a new and often complicated process—by leveraging their experience and tried and tested methods.
- State Street has doubled the research and development budget of Charles River Development, which has accelerated rollout of new capabilities, and the introduction of the CRD Client Advisory board has had a positive impact on client engagement relative to preacquisition perceptions.

FUTURE ROADMAP

State Street is committed to growing the Alpha platform through the development of proprietary capabilities along with integration with a greater range of third-party analytics, software, and data providers. State Street is aiming to fully integrate its middle- and back-office services and data (e.g., position, trade status, corporate actions, cash forecast, collateral, etc.) directly into front-office workflows. Looking specifically at the platform’s front-office offering, the plan for the next 12 to 24 months is to develop a cloud-native position-keeping service, transaction processing for complex entity structures, and position and cash segregation.

For front-office integration with global market trading and liquidity solutions, State Street Alpha is aiming to develop an end-to-end cash management solution and collateral and margin calculation analytics, to integrate the *FX Connect* web application and introduce BestX TCA capabilities for foreign exchange, fixed income, and equities.

For performance and risk, State Street aims to upgrade enterprise performance measurement and risk reporting functionality. State Street is also planning to roll out self-service reporting and a variety of oversight dashboard capabilities. Additionally, there are plans to develop a turnkey, end-to-end exchange traded fund (ETF) solution by integrating Charles River IMS to State Street’s existing ETF servicing capabilities.

AITE GROUP'S TAKE

The State Street Alpha platform represents an important development for the investment management technology landscape. The initiative to offer a front-to-custody platform at the point of its Charles River Development acquisition was never going to be a painless task; however, since October 2018, the platform has kept to its promise of efficiency and openness to clients. As a single provider, State Street offers the possibility of outsourcing technology in front office and outsourcing full business processing in the middle and back office, as well as custody services. Considering the volatility and increasing demands of clients as a result of the changing landscape of financial markets, State Street's acquisition now seems particularly prescient.

State Street Alpha is receiving this award for the extent of its operational efficiency and its manifest commitment to providing clients with an opportunity to streamline and consolidate its processes. As with any undertaking of this magnitude, challenges remain, particularly around the provision of services to stand-alone clients, but the Alpha platform has received a very strong reception and continues to show great promise:

- **First mover advantage:** In acquiring Charles River Development, State Street took a calculated risk that seems to have paid off for the firm. By offering capabilities across the front-to-back investment life cycle, the firm has first mover advantage and can become the “go-to” provider for buy-side firms that desire the full-service model. A number of front-to-back partnerships have launched since the acquisition, mostly with BlackRock Aladdin or Simcorp Dimension as the front-office provider. By owning Charles River outright, State Street controls the front-to-back Alpha roadmap and the integration of the overall client experience.
- **Open architecture and partnerships:** The open platform approach that allows for third-party fintech firms to connect to the Alpha ecosystem will provide clients with greater opportunities to access interoperable applications or enhanced capabilities that are not available through Alpha's core solution set. By leveraging its industry scale, State Street is in a position to offer clients partnerships with major data and software providers as a key piece of the Alpha value proposition.
- **Varying service levels:** While the State Street Alpha platform is mostly associated with large and complex institutional managers, the firm's product teams are directing their focus more toward how they can simplify the Alpha platform to allow access for managers of smaller firms with one-off and less comprehensive requirements. While there is still much work to be done for this client segment, it represents an important shift in the platform's target market and could increase its potential market share in the future.

AITE GROUP IMPACT INNOVATION AWARDS

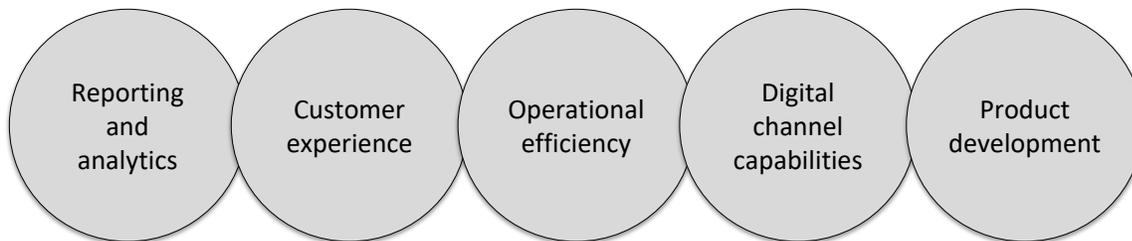
Customer needs and expectations continue to evolve, and financial institutions must strive to stay one step ahead. Their capabilities and the breadth of their product portfolios must go beyond what has traditionally been offered to address new market challenges and capture new opportunities. Aite Group’s Impact Innovation Awards are designed to recognize and celebrate innovation achieved by financial institutions leveraging technology to surpass the status quo. Award recipients are leading the industry by identifying and implementing new products, capabilities, and/or levels of automation and effectiveness that are bringing our industry one step closer to next-generation banking. They are the financial institutions, regardless of size, that others will follow.

QUALIFICATION AND EVALUATION METHODOLOGY

Aite Group solicited nominations for its 2020 Impact Innovation Awards in Cash Management and Payments from August to October 2020. All nominated initiatives were required to be in production within financial institutions.

Aite Group analysts reviewed all nominations and narrowed the field to the top three to four submissions in each of the following five categories (Figure 2).

Figure 2: Impact Innovation Award Categories



Source: Aite Group

A panel of external judges representing leading financial institutions, industry thought leaders, and consultants or implementers, along with Aite Group analysts determined the winners. Each nomination was evaluated based on eight attributes (Figure 3).

Figure 3: Impact Innovation Award Evaluation Criteria

Level of innovation and competitive advantage	Ability to meet market needs	Impact on customer experience	Impact on customer operational efficiency
Level of new revenue opportunity	Impact on customer retention/new customer attraction	Level of scalability across customer base	Future roadmap

Source: Aite Group

ABOUT AITE GROUP

Aite Group is a global research and advisory firm delivering comprehensive, actionable advice on business, technology and regulatory issues, and their impact on the financial services industry. With expertise in banking, payments, insurance, wealth management and the capital markets, we guide financial institutions, technology providers, and consulting firms worldwide. We partner with our clients, revealing their blind spots and delivering insights to make their businesses smarter and stronger. Visit us on the web and connect with us on Twitter and LinkedIn.

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