



A State Street Company

# Transformation at the Speed of Business

Powered by Charles River IMS + Microsoft® Azure

Investment managers face a shifting landscape of investor product preferences, increasing regulatory mandates, and brisk industry consolidation. These factors present managers with both risks and growth opportunities. In addition, security breaches at large enterprises drive demand for cybersecurity solutions as firms seek to minimize financial loss and business disruption. Charles River has collaborated with Microsoft to provide the foundation for a scalable, secure, and highly performant cloud-based investment management platform.

The Charles River Investment Management Solution (Charles River IMS) on Microsoft Azure provides a platform that enables timelier investment decisions, helps firms adhere to regulatory requirements, and scales seamlessly to support organic and acquisition-based business growth. A secure cloud environment that offers proactive threat monitoring and simplified disaster recovery allows managers to focus on delivering investment products to their clients.



### Performance

- On-demand provisioning increases agility to preview and test new capabilities without impacting day-to-day functions
- Predictive and prescriptive analytics help ensure high availability and resilience across all functions regardless of market conditions
- Scalable platform can support growth across new geographies, asset classes, and business acquisitions



### Security

- Embedded security monitoring can detect, analyze, and resolve security threats
- End-to-end encryption helps meet the highest security standards
- Complete auditability supports data protection and compliance monitoring
- Point-and-click disaster recovery helps ensure business continuity



### Innovation

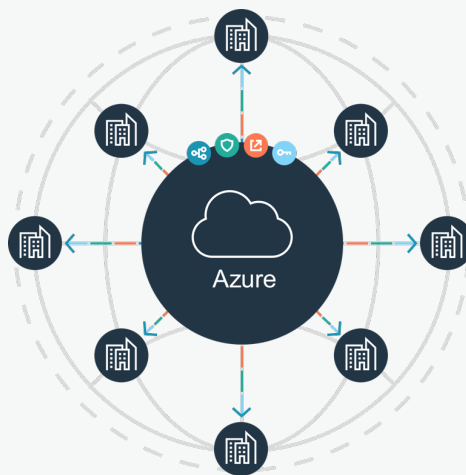
- Extensible platform allows integration with internal and external applications, data, and analytics
- Deep data history enables asset managers to construct and validate new investment products
- Version-independent micro-services will bring new capabilities online without upgrading

## Hub and Spoke Design

### The Charles River Hub

Charles River IMS is centrally managed in regional Hubs, which are provisioned in Azure and contain all core cloud services.

Management in regional hubs enables rapid deployment of new services and upgrades, promoting continuous innovation.



### The Customer Spoke

Each client firm operates in a separate “spoke” containing their specific data and applications.

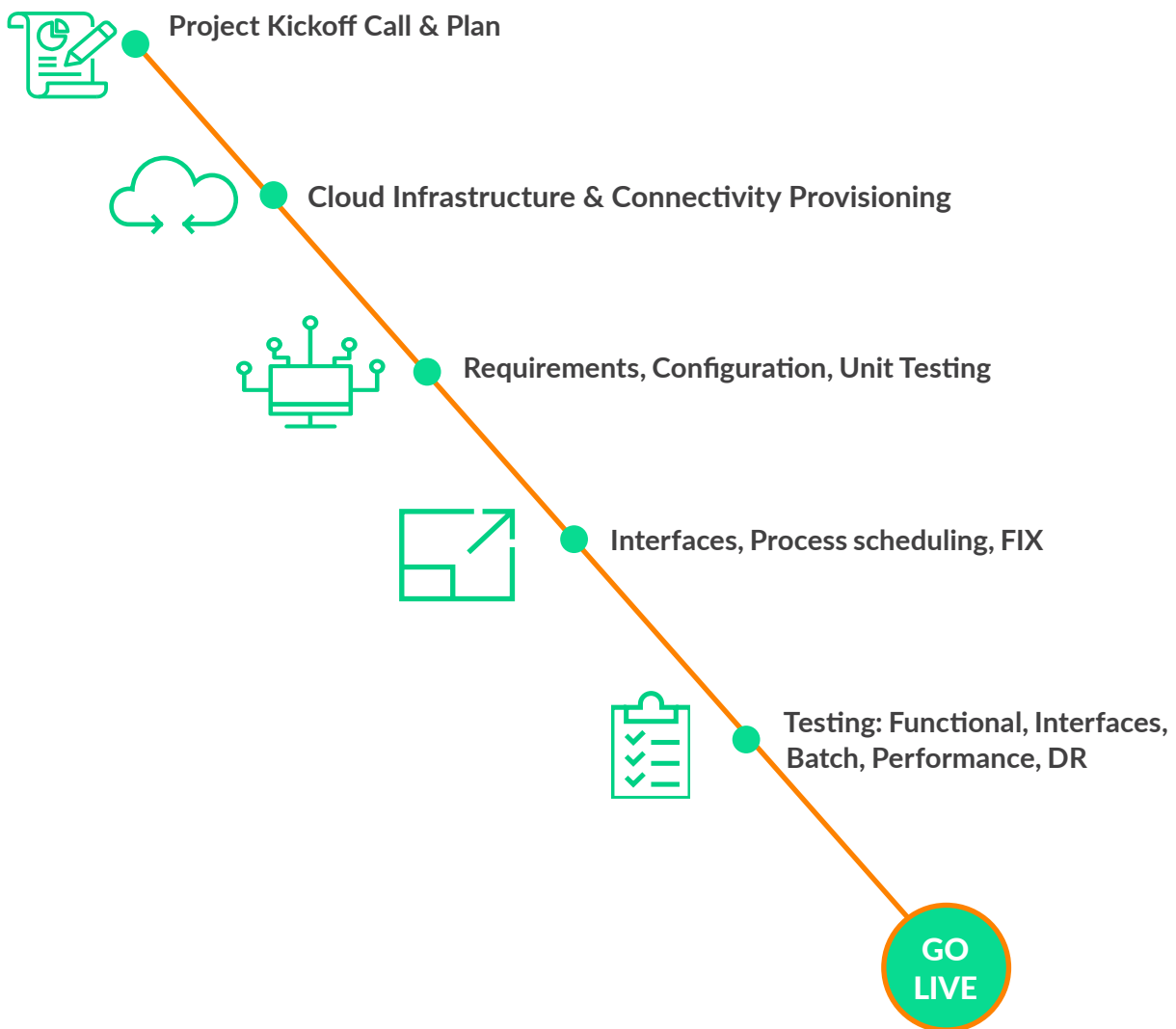
Separate spokes provide system and network isolation and geographic proximity, enhancing security, performance and support for data residency requirements.

### The Benefit

The Hub and Spoke design provides an extensible platform that allows Charles River to offer new services efficiently and quickly while helping improve the client experience.

# Implementing Charles River IMS on Azure

Charles River's established migration methodology and global support team help enable an efficient and smooth migration to the Azure cloud. Our approach is predicated upon strong cooperation, coordination, and communication between the client and Charles River. The implementation team encompasses operations, data, software, and other specialists for optional services. During the process, the Client Relationship Manager works closely with the client and oversees the implementation process to help provide a smooth transition to Charles River IMS on Azure.



# Charles River Development, A State Street Company

Investment firms, asset owners, wealth managers, hedge funds and insurers in more than 30 countries rely on Charles River's front and middle office investment management platform to manage more than US\$30 Trillion in assets. Together with State Street's middle and back office capabilities, Charles River's cloud-deployed software technology forms the foundation of State Street Alpha<sup>SM</sup>. The Charles River Investment Management Solution (Charles River IMS) is designed to automate and simplify the institutional investment process across asset classes, from portfolio management and risk analytics through trading and post-trade settlement, with integrated compliance and managed data throughout. Charles River's growing partner ecosystem enables clients to seamlessly access external data and analytics, applications and liquidity venues that support the demands of their product and asset class mix. Headquartered in Burlington, Massachusetts, we serve clients globally with more than 1,000 employees in 11 regional offices.

(Statistics as of Q1 2021)

Learn more at [crd.com/azure](https://crd.com/azure)

Charles River Development - A State Street Company is a wholly owned business of State Street Corporation (incorporated in Massachusetts).

This document and information herein (together, the "Content") is subject to change without notice based on market and other conditions and may not reflect the views of State Street Corporation and its subsidiaries and affiliates ("State Street"). The Content is provided only for general informational, illustrative, and/or marketing purposes, or in connection with exploratory conversations; it does not take into account any client or prospects particular investment or other financial objectives or strategies, nor any client's legal, regulatory, tax or accounting status, nor does it purport to be comprehensive or intended to replace the exercise of a client or prospects own careful independent review regarding any corresponding investment or other financial decision. The Content does not constitute investment research or legal, regulatory, investment, tax or accounting advice and is not an offer or solicitation to buy or sell securities or any other product, nor is it intended to constitute any binding contractual arrangement or commitment by State Street of any kind. The Content provided was prepared and obtained from sources believed to be reliable at the time of preparation, however it is provided "as-is" and State Street makes no guarantee, representation, or warranty of any kind including, without limitation, as to its accuracy, suitability, timeliness, merchantability, fitness for a particular purpose, non-infringement of third-party rights, or otherwise. State Street disclaims all liability, whether arising in contract, tort or otherwise, for any claims, losses, liabilities, damages (including direct, indirect, special or consequential), expenses or costs arising from or connected with the Content. The Content is not intended for retail clients or for distribution to, and may not be relied upon by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to applicable law or regulation. The Content provided may contain certain statements that could be deemed forward-looking statements; any such statements or forecasted information are not guarantees or reliable indicators for future performance and actual results or developments may differ materially from those depicted or projected. Past performance is no guarantee of future results. No permission is granted to reprint, sell, copy, distribute, or modify the Content in any form or by any means without the prior written consent of State Street.

The offer or sale of any of these products and services in your jurisdiction is subject to the receipt by State Street of such internal and external approvals as it deems necessary in its sole discretion. Please contact your sales representative for further information. State Street may from time to time, as principal or agent, for its own account or for those of its clients, have positions in and/or actively trade in financial instruments or other products identical to or economically related to those discussed in this communication. State Street may have a commercial relationship with issuers of financial instruments or other products discussed in this communication.

©2021 STATE STREET CORPORATION