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Optimizing Efficiency via Data and Technology Rationalization

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Optimizing operations in financial services: Rationalizing data and technology infrastructure for superior efficiency

Modern financial institutions demand extensive data utilization and artificial intelligence (AI)-driven insights for a competitive edge and profitability. As business leaders seek new advantages, technology heads are forced to grapple with increased complexities and costs to meet these demands.

Thus, rationalizing data and technology infrastructure is key for modern financial institutions, leading to increased efficiency, lower costs and a stronger competitive edge. Rationalization efforts show a comprehensive landscape of their system and data architecture, identifying redundancies and inefficiencies while creating the blueprint for cost and process optimization.

This white paper navigates the landscape of data and technology rationalization, offering strategic insights to reduce costs, streamline resources and maximize operational efficiency for the modern financial institution.

The changing financial services landscape

In today's financial services world, there is a constant challenge of balancing innovation with maintaining cost and operational efficiencies. Many banks and asset managers grapple with the lack of a holistic view of data and technology initiatives and assets, resulting in poor execution of enterprise digitalization efforts, significantly increasing costs and decreasing margins for the business. This can be compounded by the fact that businesses demand increased amounts of data, faster insights and the use of AI. Several key factors are driving the need for data and technology rationalization across financial institutions:

Rationalizing data and technology infrastructure

The key to reducing costs and enhancing operational efficiency for financial institutions is to start with a rationalization assessment that evaluates your data and technology infrastructure. In efforts to push modernization initiatives, organizations should ensure they set the foundation for that transformation by understanding what their current state is, then measuring the gaps to get to their ideal state. This approach helps for a plethora of reasons and can be applied across any business unit, area or process across the organization. This ultimately enables financial institutions to allocate resources more strategically, foster innovation and fortify their position in this increasingly competitive financial landscape. Once rationalization is completed, firms can embark on their transformation journey from both a strategic and/or a tactical approach. Let us look at CRISIL's view on the key components of a data and technology rationalization assessment for both comprehensive (i.e., strategic transformation) and rapid (i.e., quick wins) assessment types.

Comprehensive rationalization assessment

This is the most thorough evaluation of an organization's data infrastructure, systems, processes and overall architecture, including tools and technologies. This contains components that aim to identify areas for improving data management practices, ensuring that the organization's data is effectively utilized, secured and aligned with its business objectives. It also targets the technology landscape to identify areas for optimization, cost reduction and recommendations for improvement. This provides the foundation for modernization initiatives and can be used to make large-scale transformations (i.e., strategic), or optimize specific operation workflows (i.e., tactical).

a. **Data management:** Evaluate the current data operating model including alignment of business and data strategy, roles and responsibilities, data governance guidance, policies and procedures. This can be executed by reviewing specific artifacts currently in use to execute the data operating model across the defined area of scope (i.e., business unit, enterprise wide, etc). The goal of this assessment component is to identify areas without appropriate management policies, procedures or guidelines in place to effectively manage or govern the data.

b. **Data architecture:** Evaluate the current inventory and flow of data across the data ecosystem, including data domains, authoritative sources and inventory of metadata like glossaries, dictionaries, classifications and lineage. This would include reviewing core data artifacts, repositories and outputs. Some goals of this assessment component include identifying where there could be inconsistency, redundancy, or illogical mapping of the data models, metadata, data dependencies and silos.

c. **Data quality:** Evaluate the current data quality management structure, including the DQ dimensions used, DQ scorecard, processes performed as well as effectiveness of data and system controls. This would include reviewing associated documentation, performing testing and then measuring the results against a set of criteria, calculating a certification score. This score could then be used to identify issues, risks and gaps in data quality, control the process and provide insights for improvement. Some goals of this assessment component include improving risk management, improving the quality of data being used for insights related to decision-making and customer personalization and improving operational efficiencies.

d. **Technology:** Evaluate the level of synergy and integration of the current state data tools and platforms. This includes mapping out current state architecture and technology application taxonomies, the associated business processes and data extraction procedures from these tools. For strategic drivers, the goal of this assessment component is to ultimately help define an effective target state architecture strategy and roadmap that aligns business vision with the latest innovative tools and technologies (i.e., cloud and AI). For more tactical drivers, this could mean evaluating the number of manual tools or processes that are leveraged to extract data or generate insights from the technology.

e. **Analytics:** Evaluate the use of automation tools and AI-driven solutions, which include the technology stack, current operating system, usage of open versus closed-source and cloud versus on-premise systems, performance metrics (i.e., accuracy, precision, recall, F1-score), currency of techniques employed, training and testing dataset integrity, functional purpose of outputs and downstream utilization of results, model applications and use cases and model risk score. This evaluation can be completed by mapping the end-to-end processes involved in each model and applying them to a scoring logic (i.e., relevancy, risk and performance scores) to determine the overall analytics score. The goal of this assessment component is to provide appropriate stakeholders within the organization a holistic view of how effectively and efficiently their analytics tools and techniques are being used, helping identify areas of optimization or re-evaluation of investments.

The components and methods set forth in the above approach focus exclusively on the assessment phase of this rationalization journey. To find a more detailed approach for implementation, please refer to CRISIL's previously published whitepaper, *'Enhancing Banking Architecture*[1]*.*

Rapid rationalization assessment

While the comprehensive assessment provides thorough recommendations based on in-depth analysis, CRISIL understands that in today's environment, technology leaders also need to show tangible and timely ROI. Let us explore CRISIL's view on the key components of a rapid rationalization assessment, providing a low cost, quick return initiative for your organization.

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[1] *CRISIL LLC. (2023). Enhancing banking architecture – A simplified enterprise methodology. Retrieved from Enhancing banking architecture (crisil.com)*

CRISIL's rapid approach prioritizes the review and categorization of technology assets (systems/tools), with the sole focus of quick cost reduction potential. Depending on organizational needs, this can be leveraged as an initial approach to rationalizing your infrastructure or as part of a comprehensive rationalization assessment.

CRISIL's rapid rationalization framework			
Area of focus	**Integration**	**Validation**	**Optimization**
Description	Evaluates the ability of a technology asset's capability to seamlessly integrate into existing data architecture, other tools and potential future infrastructure	Assesses the suitability of a technology asset and whether its use is justified and valid for continued use	Analyzes cost metrics of a technology asset against industry benchmarks to optimize monetary efficiency
Key measurement criteria	• Usability • Dependencies • Interoperability • Upstream/downstream processes • Adaptability • Risk	• Effectiveness • Mission criticality • Complexity • Scalability • Capability • Skills	• Tech debt analysis (initial license, ongoing maintenance, other costs) • Infrastructure requirements (technical, physical, security) • Efficiency (utilization)

A thorough understanding of your organization's technology assets helps to guide informed restructuring for rapid cost reductions, while laying the foundation for a more detailed review and rationalization of your data and technology landscape.

Benefits of data and technology rationalization

Data and technology rationalization enables financial institutions to streamline operations, enhance customer experiences, mitigate risks and efficiently leverage innovative technologies for sustainable growth and competitiveness. While benefits can be vast, here are some of the most notable ones for banks and asset managers:

Banks

1. **Enhanced customer experience:** Facilitates personalized services, faster transaction processing and seamless customer interactions across multiple channels. It enables banks to offer tailored solutions, quicker access to information and smoother user experiences, thereby improving overall customer satisfaction
2. **Cost optimization and efficiency gains:** Front, middle and back-office operations will gain efficiency through decreased manual tasks, reduction in re-work and enhancing resource allocation. This also reduces system-related maintenance, storage and compute costs and data management-related expenses
3. **Improved risk management and compliance:** Provides centralized, high-quality data accessible across systems, aiding in effective risk monitoring, fraud detection and compliance adherence. This enables better analysis and proactive risk management strategies for risk and compliance functions
4. **Scalability and adaptability:** Enables scalability so front, middle and back-office operations can meet increasing demands or market fluctuations. It enables banks to incorporate new technologies, accommodate growth without significant disruptions and adapt swiftly to changing regulatory or industry requirements
5. **Efficient AI adoption:** Enables a smoother adoption of AI solutions by providing the necessary foundation and infrastructure, leading to quicker implementation and better utilization of AI capabilities

Asset managers

1. **Enhanced client servicing:** Provides ability for more personalized and tailored services to clients. This includes better reporting, client communication and customization of investment strategies, leading to improved client satisfaction and retention
2. **Streamlined operational efficiency:** Identifies areas to automate workflows, reduces manual processes and streamlines operations, leading to increased efficiency in portfolio management, trade execution and reporting. This efficiency boost translates to faster response times and optimized resource utilization
3. **Enhanced data security and compliance:** Incorporates advanced security measures and compliance standards, safeguarding sensitive financial data and ensuring adherence to regulatory requirements. This helps in maintaining data integrity and client trust, while mitigating risks associated with data breaches or non-compliance
4. **Scalability and adaptability:** Provides scalability to handle increased data volumes and diversified investment strategies. This offers flexibility to integrate new tools or technologies such as AI, ensuring the firm can adapt to changing market dynamics and business needs
5. **Improved data accessibility and analysis:** Provides efficient storage, retrieval and analysis of vast volumes of financial data. This accessibility leads to better insights into market trends, investment performance and risk analysis, facilitating more informed decision-making processes

Illustrative example: Banking

CRISIL's rapid rationalization assessment for regional banks

40%+ reduction in technology asset costs

Problem statement: Regional banks typically face limitations in overall IT spending, heavily skewing the ratio of budget allocated for maintenance versus innovation. This leads to aging systems, slower adoption of new technology and persistent reliance on manual processes.

Solution: Perform a rapid data and technology rationalization assessment that evaluates prioritized technology assets (i.e., applications) against a specific set of criteria to highlight reducible costs for technology leaders and optimize infrastructure.

This exercise can generate tangible business benefits across data and tech architecture:

- 25-50% reduction in total technology costs, based on utilization and licensing metrics
- Rapid results (completed in 1-2 months) that provide tangible next steps for cost reduction and demonstratable ROI for the exercise
- Frees up capital for innovation (i.e., AI use case development for data monetization, cloud migration, etc)

Illustrative example: Asset managers

CRISIL's rapid rationalization assessment for asset managers

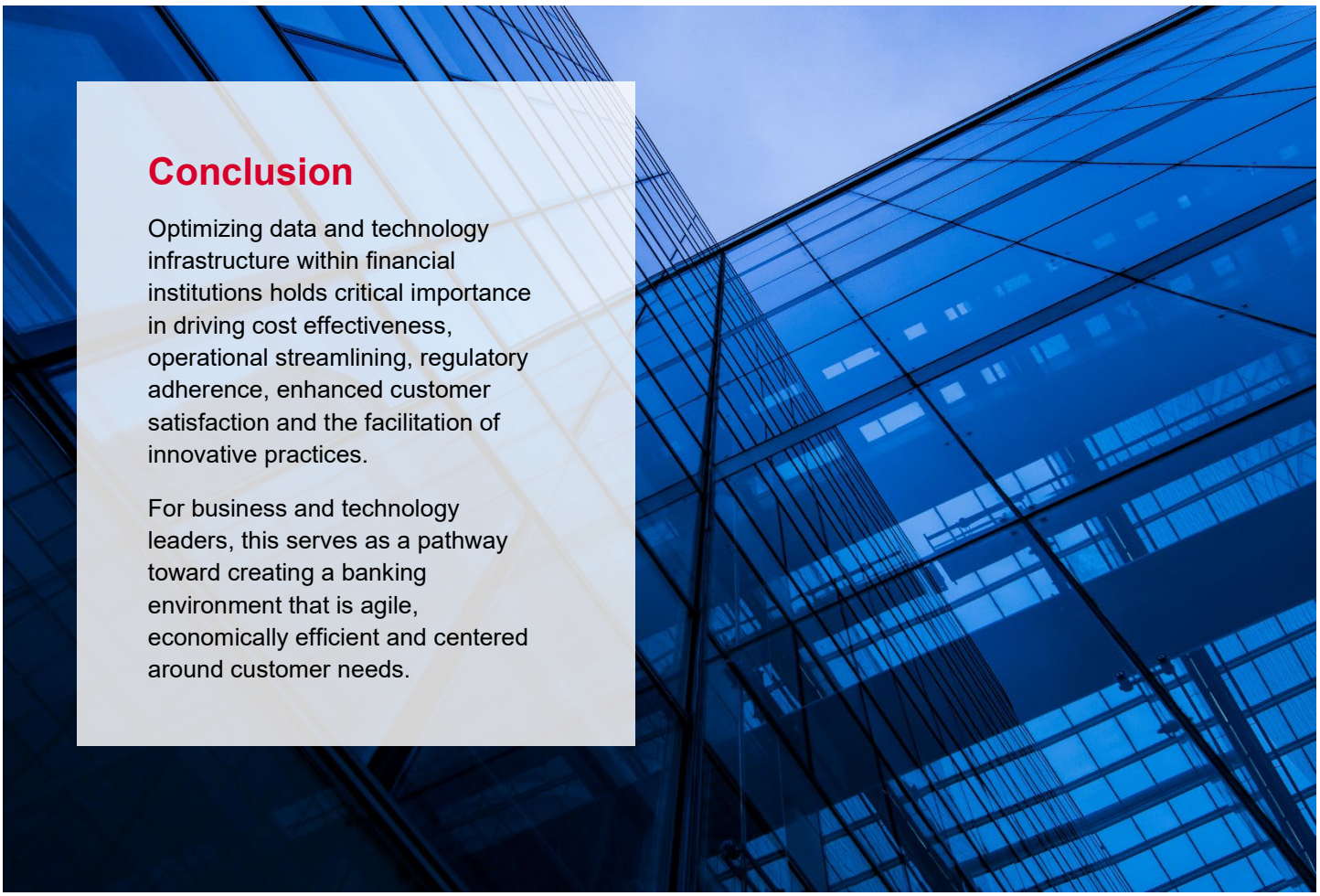
25%+ improvement in middle office workflow processes

Problem statement: Without appropriate and holistic enterprise transformation initiatives, asset managers typically have inefficiencies and redundancies in back and middle office operations, with manual processes, poor data quality and sub-optimal use of resource time.

Solution: Perform a rapid data and technology rationalization assessment that evaluates where there may be inefficiencies due to duplicated or manual efforts (i.e., manual reconciliations, duplicate workflow calculations) and usage of redundant or legacy technology assets (i.e., Excel-based data management) against a specific set of criteria to highlight where there is a lack of tool integration or scalability.

This exercise can generate tangible benefits across business processes:

- 25-50% reduction in manual data processes associated with middle office workflows
- Rapid identification (completed in 1-2 months) that provides tangible next steps for automation and tangible ROI
- Frees up human capital for higher value-add activities



Conclusion

Optimizing data and technology infrastructure within financial institutions holds critical importance in driving cost effectiveness, operational streamlining, regulatory adherence, enhanced customer satisfaction and the facilitation of innovative practices.

For business and technology leaders, this serves as a pathway toward creating a banking environment that is agile, economically efficient and centered around customer needs.

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CRISIL GR&RS is a leading provider of high-end research, risk and analytics services. We are the world's largest provider of equity and fixed-income research support to banks and buy-side firms. We are also the foremost provider of end-to-end risk and analytics services that include quantitative support, front and middle office support and regulatory and business process change management support to trading, risk management, regulatory and CFO functions at world's leading financial institutions. We also provide extensive support to banks in financial crime and compliance analytics. We are leaders in research support and risk and analytics support, providing it to more than 75 global banks, 50 buy-side firms covering hedge funds, private equity and asset management firms. Our research support enables coverage of over 3,300 stocks and 3,400 corporates and financial institutions globally. We support more than 15 bank holding companies in their regulatory requirements and submissions. We operate from 7 research centers in Argentina, China, India and Poland and across several time zones and languages.

About CRISIL Limited

CRISIL is a leading, agile and innovative global analytics company driven by its mission of making markets function better.

It is India's foremost provider of ratings, data, research, analytics and solutions with a strong track record of growth, culture of innovation and global footprint.

It has delivered independent opinions, actionable insights and efficient solutions to over 100,000 customers through businesses that operate from India, the United States (US), the United Kingdom (UK), Argentina, Poland, China, Hong Kong, Singapore, Australia, Switzerland, Japan and the United Arab Emirates (UAE).

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