
CIBC MELLON
ActiveOps
DUCO
INTELLIGENCE AND RECONCILIATION OPTIMIZATION
IN INVESTMENT OPERATIONS
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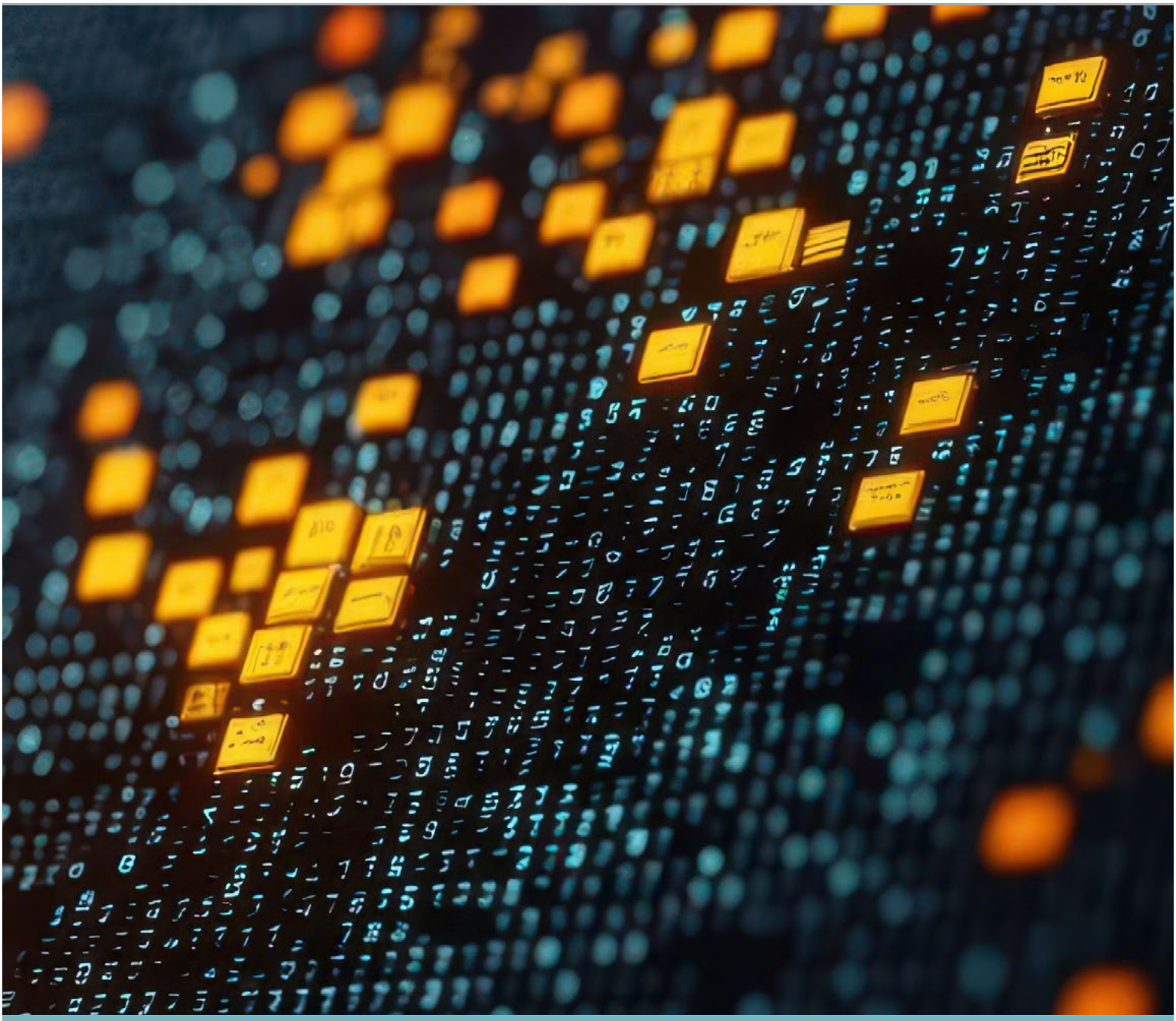
Sustainable automation is not achieved through technology alone. It requires evidence-based decision-making, thoughtful organizational design, and continued investment in people. Institutions that approach automation as an operating model discipline rather than a technology initiative will be better positioned to adapt, scale, and deliver consistent value in an increasingly complex environment.



OUR EXPERTS

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Across securities services, automation is often positioned as a solution to rising operational complexity, cost pressure and service expectations as clients seek continuous improvement and ever greater speed and transparency. In practice, however, many automation initiatives struggle to deliver sustained value. While tools are implemented and processes are digitized, underlying operating models frequently remain fragmented, and manual effort is displaced rather than eliminated.

This disconnect reflects a broader challenge in how automation decisions are often made. Too frequently, organizations automate based on the tools they already have or the capabilities vendors promote, rather than on what operational data reveals about how work is actually performed. Decisions are driven by available technology, not by evidence about people, processes, or capacity. As a result, institutions risk automating activities that are convenient rather than consequential, reinforcing existing inefficiencies, introducing new forms of operational risk, or failing to achieve meaningful improvement at scale

This article examines how a measurement-led approach can improve the effectiveness of automation in securities services. It argues that decision intelligence, defined as the use of operational data and analytics to understand how work is executed, is a critical precursor to sustainable automation. When used effectively, decision intelligence enables organizations to prioritize interventions, align automation with operating model design, and validate outcomes following implementation.

Drawing on operational transformation efforts within fund accounting at a large Canadian asset servicing firm, the paper explores how decision intelligence informed the targeted automation of reconciliation processes, how organizational design and technology were aligned to support scale and control, and how outcomes were measured and sustained over time. Rather than presenting automation as a one-time initiative, the analysis frames it as an evolving capability embedded within a broader system of measurement, governance, and workforce enablement.

The lessons outlined are intended to be practical and transferable. As securities services organizations continue to modernize, the ability to make informed automation decisions and to confirm their impact will be essential to achieving durable operational and client outcomes.

DECISION INTELLIGENCE

When used effectively, decision intelligence enables organizations to prioritize interventions, align automation with operating model design, and validate outcomes following implementation.

WHY AUTOMATION OFTEN FAILS IN SECURITIES SERVICES

Automation has become a central component of operating model modernization across securities services. Institutions face growing pressure to reduce manual effort, manage rising complexity across asset classes, and meet increasingly stringent regulatory and client expectations. In response, firms have invested in a wide range of automation tools, from workflow orchestration to reconciliation engines and advanced analytics.

Outcomes nonetheless remain uneven. While many automation initiatives deliver localized efficiency gains, fewer result in sustained improvements at the operating model level. In some cases, automation introduces new fragmentation, shifts manual effort elsewhere in the process, or creates dependency on poorly understood systems. As a case in point, this has been observed in maturity benchmarking across reconciliation operating models. Institutions operating without centralized governance and platform convergence remain structurally constrained to partial automation, where point solutions reduce local friction but perpetuate enterprise complexity. The common theme is these challenges are rarely the result of inadequate technology. More often, they reflect weaknesses in how automation decisions are prioritized, sequenced, and governed.

A recurring issue is the absence of objective visibility into how work is actually performed. Without a clear understanding of where effort is concentrated, automation efforts risk targeting processes that are visible rather than impactful, or automating activities that are poorly designed. Legacy practices, including spreadsheet-based reconciliations, manual exception handling, and email-driven workflows, persist not because they are optimal, but because their true operational cost is rarely measured.

Regulatory guidance reinforces the importance of addressing these structural weaknesses. Canada's Office of the Superintendent of Financial Institutions (OSFI) has emphasized the need for operational resilience, technology risk management, and continuous improvement, highlighting that digital innovation must be accompanied by strong governance and transparency.

Automation alone does not transform operations. Without evidence-based decision-making, mechanisms to validate outcomes, and operating model redesign automation risks become incremental, fragmented, and difficult to sustain.

HUMAN-CENTRIC AUTOMATION AND THE LIMITS OF HISTORICAL MODELS

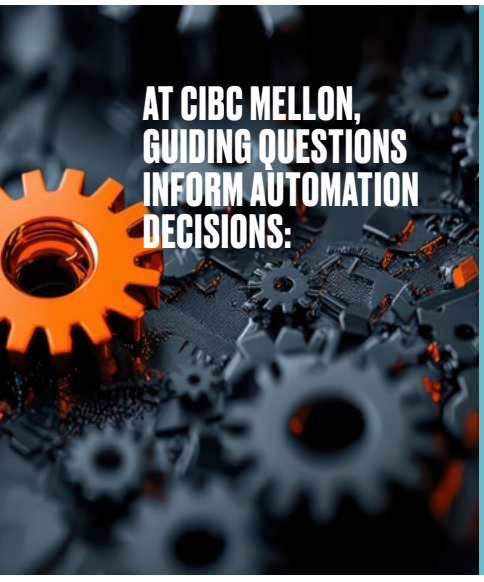
Debates around automation are often shaped by lessons drawn from other industries, particularly manufacturing. The automotive sector provides a frequently cited example of how standardization and automation dramatically improved productivity and reduced unit costs. Assembly-line robotics replaced repetitive and hazardous tasks, enabling unprecedented scale and efficiency.

However, this transformation also revealed important limitations. In many historical contexts, automation displaced workers or stripped roles of stable task content, contributing to occupational disruption and job polarization. These effects extended beyond changes in employment levels alone, altering how work was structured and experienced across affected industries[1].

The financial services industry operates under fundamentally different constraints. Accuracy, trust, regulatory compliance, and judgment remain central to service delivery. As a result, the opportunity for automation in this context is not substitution, but collaboration. Intelligent tools can relieve teams of repetitive, low-value tasks while amplifying human judgment, oversight, and analytical capability. This collaboration with tools is set to accelerate as agentic workflows enter the operating models while trust, regulatory compliance and judgement remain essential primary outcomes.

Research supports this distinction. As noted in *Why Employee Engagement Is Critical to Successful Automation Initiatives* published by the Harvard Business Review, automation initiatives are more successful when employees are engaged as active participants rather than passive recipients[2]. Early involvement, transparent communication, and targeted upskilling improve adoption and reduce resistance.

This insight reframes the automation challenge. The question is not whether to automate, but how to do so in a way that strengthens, rather than undermines, human contribution. That requires clear criteria for selecting automation candidates, mechanisms to refine workflows over time using data, and deliberate investment in workforce capability.



AT CIBC MELLON, GUIDING QUESTIONS INFORM AUTOMATION DECISIONS:

- How can automation amplify, rather than replace, professional judgment and expertise?
- What characteristics define a process that is suitable for automation, recognizing that poorly designed processes rarely improve when automated?
- How can data insights be used to continuously refine automated workflows?
- Where do friction points exist between human and digital touchpoints, and how might they be redesigned?
- How can teams be supported through reskilling in ways that encourage participation from the outset?

DECISION INTELLIGENCE AS AN OPERATING MODEL CONTROL LAYER

Addressing these questions requires more than aspiration. It requires a systematic way to understand how work is performed and where improvement efforts should be focused. At the centre of CIBC Mellon's operational transformation is the use of decision intelligence to provide this visibility.

In this context, decision intelligence refers to the use of operational data and analytics to understand how work is executed, how capacity is consumed, and where effort is concentrated across teams and processes. Rather than relying on intuition or historical precedent, decision intelligence enables evidence-based prioritization of change.

This shift represents a fundamental change in management approach. Traditional operating models often rely on lagging indicators and anecdotal feedback, which can obscure structural inefficiencies. By contrast, decision intelligence provides near-real-time insight into task volumes, time allocation, and process variability, creating a factual baseline against which interventions can be evaluated.

At CIBC Mellon, this capability is supported by ActiveOps, which provides operational data on capacity and activity insight across complex, high-volume service environments. This data is used to develop a more granular understanding of task volumes, time allocation, and process flow across teams.

Industry research supports this approach. Gartner has observed that organizations that use operational data to inform automation initiatives achieve higher returns on investment and greater agility, as technology decisions are more closely aligned with business priorities and workforce capacity[3].

This foundation became particularly important when applied to fund accounting operations, where complexity, volume, and regulatory scrutiny converge.

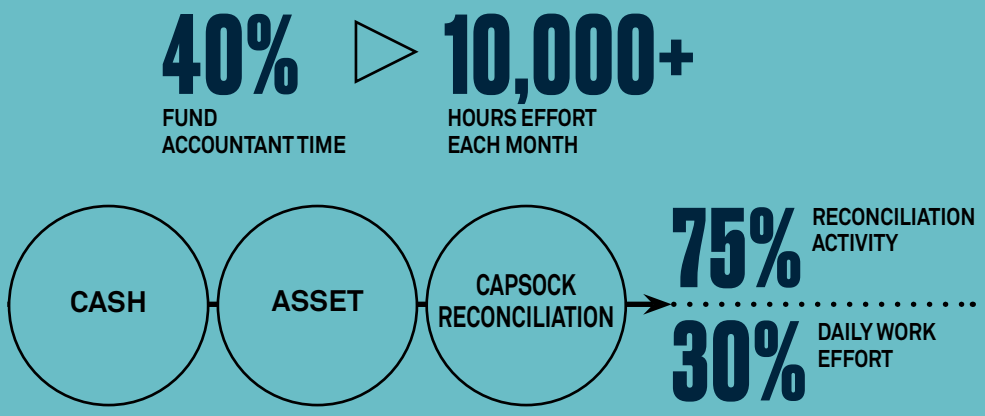
CASE STUDY: FUND ACCOUNTING AND RECONCILIATION

Fund accounting has historically relied on manual processes designed to ensure accuracy and control in an environment of growing complexity. Spreadsheet-based reconciliations, email-driven exception handling, and client-specific workflows were common, reflecting the need for customization and oversight. While effective in maintaining accuracy, these approaches were labor-intensive and difficult to scale.

As CIBC Mellon's business expanded and client complexity increased, these limitations became more pronounced.

ANALYSIS USING CONTROLIQ DATA FROM ACTIVEOPS PROVIDED A DETAILED VIEW OF HOW EFFORT WAS DISTRIBUTED ACROSS FUND ACCOUNTING ACTIVITIES. THE DATA REVEALED THE SCALE AND CONCENTRATION OF MANUAL EFFORT WITHIN THE OPERATING MODEL.

Analysis showed that reconciliation activities consumed approximately 40 per cent of fund accountants' time, representing over 10,000 hours of effort each month. Further examination indicated that Cash, Asset, and Capstock reconciliations accounted for roughly 75 per cent of reconciliation activity and approximately 30 per cent of total daily work effort.



The underlying workflow was highly fragmented. Data files were collected at the client level, loaded into spreadsheets, and processed using macros to allocate and track work across teams. Comments and exceptions were recorded manually, requiring repeated consolidation into master spreadsheets for review. This approach introduced operational drag, increased risk, and limited teams' ability to focus on higher-value analysis

Crucially, these insights did not merely confirm that automation was needed. They identified precisely where intervention would have the greatest impact. This evidence-based understanding provided the foundation for targeted change, rather than broad, undifferentiated automation.

FROM INSIGHT TO INTERVENTION: TARGETED AUTOMATION AND CENTRALIZATION

The operational insights generated through decision intelligence created the conditions for focused and deliberate intervention. Rather than pursuing broad automation across multiple activities simultaneously, CIBC Mellon prioritized areas where the concentration of effort and operational friction was most pronounced.

Based on analysis of fund accounting workflows, the organization established a centralized NAV Construction team aligned with its global operating model. Thirteen activities were identified for migration into this centralized function, with reconciliation selected as the initial focus due to its disproportionate consumption of time and its suitability for standardization.

This decision reflected two guiding principles. First, automation efforts should be informed by measured operational need rather than perceived inefficiency. Second, automation is most effective when paired with organizational design changes that support scale, control, and consistency. Centralization enabled reconciliation activity to be managed as an enterprise capability rather than as a series of client-specific tasks, reducing duplication and enabling more effective use of technology. This centralization is the basis for reductions in the number of workflow activities, and the centralization is prioritized across the processes that prove the highest value return based on insight.

With reconciliation identified as a priority, automation tools were evaluated based on their ability to support standardized workflows, manage exceptions, and provide transparency and auditability. DUCO was selected as a reconciliation platform capable of supporting these requirements, not as a tool-first initiative, but as a response to clearly defined operational needs.

To enable consistent ingestion and preparation of reconciliation data, CIBC Mellon leveraged data preparation and analytics tools to automate repeatable formatting and transformation tasks on raw files prior to upload into DUCO. This reduced manual file handling and minimized error risk, allowing reconciliation processes to be executed in a more controlled and repeatable manner.

As the centralized team expanded, additional reconciliation types, including Asset and Capstock reconciliations, were migrated into DUCO and incorporated into consolidated workflows. This represented a shift away from client-by-client reconciliation toward a fund-level approach. Where multiple clients were invested in the same fund, reconciliations could be performed once rather than repeated for each client, reducing duplication of effort and improving accuracy. Here an acceleration of value is derived from the centralized operating model and the no-code flexibility that business users have to build the optimal reconciliation process.

This intervention illustrates a key operating model insight: automation delivers greater value when it is applied at the appropriate level of aggregation, tools provide the flexibility to build the aggregation and are supported by corresponding changes in organizational structure.

AUTOMATION DELIVERS GREATER VALUE WHEN APPLIED AT THE APPROPRIATE LEVEL OF AGGREGATION, WITH TOOLS PROVIDING THE FLEXIBILITY TO BUILD THAT AGGREGATION—SUPPORTED BY CORRESPONDING CHANGES IN ORGANIZATIONAL STRUCTURE.

MEASURING IMPACT AND SUSTAINING IMPROVEMENT

A defining characteristic of this approach was the continued use of decision intelligence following implementation. Automation was not treated as a one-time change, but as an intervention whose impact needed to be measured and validated.

After reconciliation workflows were centralized and automated, ActiveOps was used to reassess task distribution, capacity utilization, and time allocation within the fund accounting operating model. This post-implementation analysis enabled direct comparison against the baseline established prior to automation, confirming whether intended outcomes had been achieved.

EARLY RESULTS FROM PROOF-OF-CONCEPT IMPLEMENTATIONS INDICATED A REDUCTION OF:

1400
HOURS OF MANUAL EFFORT

15%
RECONCILIATION-RELATED WORKLOAD FOR ACITIVITIES IN SCOPE

Beyond quantitative measures, the analysis provided qualitative insight into how work had changed. Automated reconciliation workflows reduced the need for manual file preparation and exception tracking, allowing teams to redirect effort toward analysis, review, and client-facing activities. Importantly, these changes did not eliminate oversight. Instead, they shifted human involvement toward judgment-based tasks, strengthening control and governance.

The ability to reuse decision intelligence to validate outcomes is critical to sustaining improvement. By maintaining visibility into how work evolves over time, organizations can identify unintended consequences, refine automation rules, and adjust resourcing as needed. This feedback mechanism reduces the risk of automation drift, where processes gradually diverge from their intended design without detection.

The ability to reuse decision intelligence to validate outcomes is critical to sustaining improvement.

EMPLOYEE EXPERIENCE, SKILLS, AND ADOPTION

While efficiency and control are often cited as primary drivers of automation, the sustainability of operating model change depends heavily on workforce engagement and capability development. Technology adoption that does not account for employee experience risks low utilization, workarounds, and reversion to legacy practices.

At CIBC Mellon, automation initiatives were accompanied by deliberate investment in skills development and cultural change. As reconciliation processes were centralized and automated, roles within fund accounting evolved from transaction-oriented execution toward analysis, exception management, and insight generation. This shift required new skills in data interpretation, problem-solving, and collaboration across teams.

Programs such as Skill Sprints and internal hackathons were introduced to support this transition, providing structured opportunities for employees to build digital and analytical capabilities while contributing directly to operational improvement. These initiatives encouraged participation in change and helped demystify automation by positioning it as a tool for empowerment rather than displacement.

Employee engagement data suggests that this approach supported adoption. Internal survey results indicate that:

91%
FEELING ENGAGED

90%
FEELING EMPOWERED*

**** 7% above the financial services industry norm - WTW employee survey***

Automation initiatives are more likely to succeed when employees are involved in design, equipped with relevant skills, and able to see how technology supports their professional growth. In this context, workforce development is not a parallel effort, but an integral component of operating model modernization.

IMPLICATIONS FOR CLIENT EXPERIENCE

While automation initiatives are often justified on the basis of internal efficiency, their ultimate relevance in securities services lies in how they affect client outcomes. Accuracy, timeliness, transparency, and consistency remain central to client trust, particularly as portfolios grow more complex and reporting expectations increase.

In the case examined here, improvements in client experience did not arise from direct changes to client-facing interfaces. Rather, they emerged as second-order effects of a more disciplined operating model.

REDUCING MANUAL RECONCILIATION EFFORT, CONSOLIDATING WORKFLOWS, AND IMPROVING CAPACITY ALIGNMENT.

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TEAMS BETTER POSITIONED TO MEET DEADLINES RELIABLY, MANAGE EXCEPTIONS PROACTIVELY, AND RESPOND TO CLIENT INQUIRIES WITH GREATER CONFIDENCE.

This approach avoids overstating the role of automation as a direct driver of client satisfaction. Automation alone does not create better client experiences. Instead, it enables more stable and predictable operations, which in turn support consistent service delivery. Clients benefit indirectly through reduced operational friction, improved control, and greater confidence in the integrity of reported data.

This distinction matters. Client experience improvements that are grounded in operational stability are more durable than those driven by surface-level enhancements.

By focusing first on how work is performed and governed internally, institutions can create the conditions for more reliable client outcomes over time.

LESSONS AND RECOMMENDATIONS FOR OPERATING MODEL DESIGN

Several lessons emerge from this case that are applicable beyond a single institution or operating context.

STEP 1

Measurement must precede automation

First, measurement must precede automation. Organizations should resist the temptation to automate based on perception or urgency alone. Decision intelligence provides the factual foundation needed to identify where automation will have the greatest impact and where it may introduce unintended risk.

STEP 2

Automation should be targed and sequenced

Second, automation should be targeted and sequenced, not broad or simultaneous. By focusing on a limited set of high-impact activities and pairing automation with appropriate organizational design changes, institutions can reduce complexity while increasing control.

STEP 3

Validation is essential

Third, validation is essential. Reusing the same measurement capabilities after implementation allows organizations to confirm whether automation has delivered its intended benefits and to make adjustments as needed. Without this feedback loop, automation initiatives risk becoming static and difficult to govern.

STEP 4

People as central to operating model

Fourth, people must be treated as central to the operating model. Skills development, engagement, and participation in change are not ancillary considerations. They directly influence adoption, sustainability, and the ability to extract value from technology investments.

STEP 5

Continuous improvement

Finally, operating model modernization should be viewed as an ongoing capability, not a one-time project. As client needs, regulatory expectations, and technologies evolve, organizations must retain the ability to reassess, refine, and re-sequence their automation efforts using evidence rather than intuition.

A DISCIPLINED APPROACH TO AUTOMATION THAT EMPHASIZES INTENTIONALITY, GOVERNANCE, AND HUMAN ENABLEMENT OVER SPEED OR SCALE ALONE.

CONCLUSION

Automation has become an unavoidable component of operating model modernization in securities services. However, the effectiveness of automation depends less on the sophistication of individual tools and more on how those tools are selected, sequenced, and governed.

This article has shown how decision intelligence can serve as a foundational capability, enabling organizations to understand how work is performed, target automation where it matters most, and validate outcomes following implementation. Through a focused examination of fund accounting and reconciliation, the paper illustrates how measurement-led automation can reduce manual effort, strengthen operational control, and support both employee and client outcomes.

The broader implication is clear. Sustainable automation is not achieved through technology alone. It requires evidence-based decision-making, thoughtful organizational design, and continued investment in people. Institutions that approach automation as an operating model discipline rather than a technology initiative will be better positioned to adapt, scale, and deliver consistent value in an increasingly complex environment.

SUSTAINABLE AUTOMATION REQUIRES:

EVIDENCE-BASED DECISION-MAKING

THOUGHTFUL ORGANIZATION DESIGN

CONTINUED INVESTMENT IN PEOPLE

Measurement must precede automation. Organizations should resist the temptation to automate based on perception or urgency alone. Decision intelligence provides the factual foundation needed to identify where automation will have the greatest impact and where it may introduce unintended risk.

FOR MORE INFORMATION

CIBC Mellon is pleased to engage with clients on this front and continue the conversation. Please contact your Client Manager if you would like more information.

FOOTNOTES:

1 Autor, D. H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. Journal of Economic Perspectives, 29(3), 3–30.

2 “Why Employee Engagement Is Critical to Successful Automation Initiatives” (Harvard Business Review, 2021).

3 “Data-Driven Decision Making in Financial Services” Gartner (2021).

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