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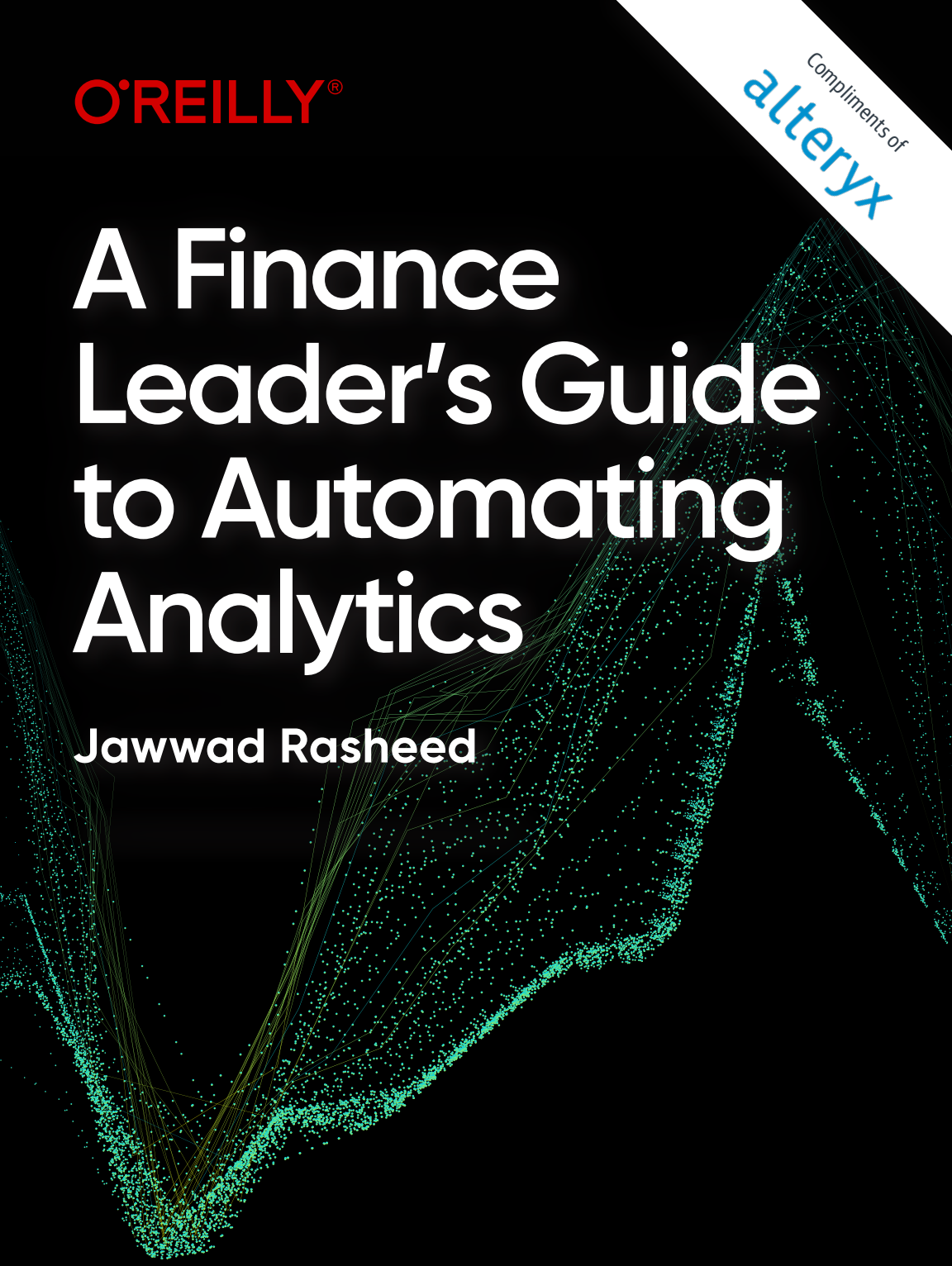
A Finance Leader's Guide to Automating Analytics

Jawwad Rasheed



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by Jawwad Rasheed

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CHAPTER 1

The Evolving Role of the CFO

In an increasingly digital and intelligent world, the CFO's role has evolved. This chapter examines the changes and highlights implementation challenges that a CFO could face. Subsequent chapters will provide guidance on automating analytics solutions in finance.

Navigating the Next Digital Revolution

The modern CFO is facing four major paradoxes:

- How do they create long-term value when they are faced with demands to cut back priority investments to deliver more immediate results?
- How do they deliver their strategic goals when traditional finance skill sets limit their company's ability to evolve?
- How do they capture value from bolder and more innovative agendas without burdening themselves and the company they serve with unnecessary risks?
- How do they derive strategic insights from data that is growing in volume and complexity?

These paradoxes have driven the role of the CFO to change dramatically in recent years. Market pressures, business competition, and larger numbers of stakeholders are forcing the CFO to respond quicker and with more granular insights on behalf of their company. At the same time, data science, AI, and innovative technologies have

emerged to provide faster and more reliable ways to manage and analyze data.

The changing demands of stakeholders have created higher expectations. CFOs fully acknowledge the need to drive digital transformations and adapt to meet these demands. The potential to unlock value through the appropriate adoption of data analytics capabilities is significant. Empowering the workforce to utilize data and analytics tools can enable CFOs to shift the focus of their business from retrospective to predictive to prescriptive. In short, improving speed and access to data creates the infrastructure needed to anticipate opportunities and mitigate risks in a continuously changing business environment.

The stakeholders of an organization need reliable information about the finances of the business to make decisions. Traditional, time-consuming methods of data extraction and analysis need to adapt. Decision-makers need a consistent, complete, and reliable view of the company, and they don't want to waste time and employee resources gathering, translating, and analyzing the data to get those insights. Additionally, data diversity and volume are growing at an exponential rate with the increase of online transactions and the Internet of Things. How can a company generate the vital insights needed by its stakeholders as close to real time as possible while also addressing the growth in data volume and variety?

The Challenges of Integrating Digital Transformation in Finance

So, what is stopping CFOs from embracing a digital transformation? Despite the tremendous needs and opportunities for new, digitally enabled finance functions, many CFOs are struggling to implement the needed changes for a variety of reasons, both technological and cultural. In 2021, McKinsey surveyed 225 finance leaders across an array of industries to determine what obstacles prevented them from adopting digital technologies. The results in Figure 1-1 illustrate that there are a wide variety of challenges facing finance leaders as they look to embrace digital transformation.

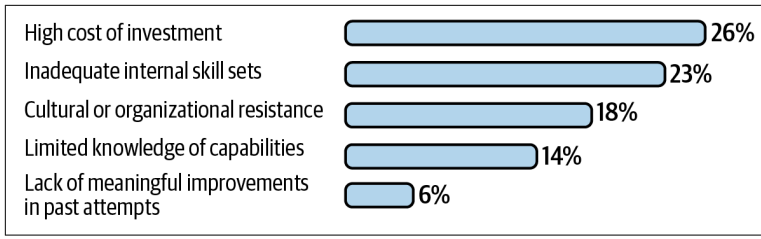

Figure 1-1. Percent of respondents indicating obstacles to adopting digital technologies[1]

The survey shows many potential obstacles that financial leaders face when looking to adopt digital technology. Let's look at these challenges as well as some others in more detail.

Cost of Technological Adoption

The high cost of investment in technology is the most-cited barrier to adopting digital technologies in finance processes. This burden can come from a variety of capital and operating expenditure sources. There is the cost of technology, such as servers, software, and the necessary infrastructure to support it. Additionally, there is the human cost of building and maintaining these technical resources. There are also less obvious costs, such as training staff and embedding the technology in existing business processes.

Talent Gap

One significant challenge that CFOs face in successfully applying digital transformation is the talent gap. According to the research advisory firm Gartner, 64% of IT executives see the talent shortage as the most significant barrier to adopting emerging technologies, up from just 4% in 2020. Finance departments need people with expertise in data analytics, artificial intelligence, robotic process automation, and other emerging technologies to help them make sense of the vast amounts of data they generate and transform it into valuable insights. Finding and retaining employees with both financial and analytical experience is a tough task.

1 Graphic adapted from McKinsey and Company's 2021 "Mastering Change: The New CFO Mandate" survey.

Cultural Barriers

Cultural barriers are another significant challenge that CFOs face in their quest for digital transformation. Many finance teams are used to traditional ways of working and may be resistant to change. There may be a lack of understanding of the benefits of digital transformation or a fear of job displacement due to automation. CFOs may struggle to create a culture of innovation and continuous improvement, or be limited by the cultural constraints of the organization as a whole. With so many competing priorities, it may also be challenging to communicate the vision for digital transformation, involve and engage employees in the process, and provide them with the necessary training and resources to adapt to new ways of working.

Limited Knowledge of What Is Possible

Another challenge facing CFOs is understanding what is possible with the available technologies, given the wide spectrum of solution providers. It may be risky to invest large amounts of money on software when the capabilities and benefits of the technology are unclear. Identifying how solutions will improve financial processes can be difficult and requires careful planning, research, and clearly defined business requirements and assessment criteria. Understanding how potential solutions augment the existing in-house ecosystem of systems and applications is also essential to ensure that data and technology strategies are aligned.

Past Failures

History does need to be a reflection of what the future holds. However, the fresh experiences of mishaps in technology initiatives may also create resistance to further attempts at innovation. The lingering memories of failing to integrate technology solutions successfully can make leaders overly cautious about challenging the status quo. This caution can lead to missed opportunities and, potentially, fewer business successes.

Reliance on Legacy Technology

Existing financial software can be a barrier to digital adoption. In particular, an overreliance on end-user computing (EUC) solutions, notably spreadsheets, is a frequent obstacle created by inflexible

applications that are unable to respond to business needs. While spreadsheets have been a useful tool for financial data analysis for decades, they are not well-suited for the growing demands of modern finance departments. As businesses evolve, spreadsheets have become unwieldy and time-consuming to maintain. Large amounts of data require manual entry, and the process is error-prone, which can be costly in terms of time and resources. Spreadsheets are simply not equipped to handle large datasets and the advanced analytics techniques that can provide valuable insights for business leaders.

Conclusion

The traditional methodologies used in finance are slow, manual, and error-prone; however, updating these legacy systems can be challenging. How does a CFO propel their business from the technology and methods of bygone years to success in the challenging and dynamic modern market? How do they overcome the potential barriers within their business to adopt a digital transformation?

Market surveys indicate that successful businesses are investing time, money, and effort into driving data literacy and analytics automation. Leading organizations are enabling employees to utilize data and analytics to be more proactive, reduce risk, drive insights, and reduce the errors and inefficiencies associated with manual processes. As a result, these organizations generate better returns, cushion the blows from adverse conditions, adapt quickly, and are more resilient to market changes.

So, how does a CFO adopt analytics automation? How do they move from traditional financial methodologies to a faster, more reliable process? This report is designed to help CFOs know where to start, how to keep moving, and how to manage a successful digital transition. It will address the benefits of analytics automation while also providing solutions to obstacles that may hinder its adoption. It will also provide beneficial insights into how other companies have walked this challenging path, overcoming the obstacles and finding market success.

CHAPTER 2
Applying Analytics Automation in Finance

Chapter 1 established the challenges modern CFOs face within their organizations. Increased demands from stakeholders require changes to traditional methods of data gathering, analyzing, and reporting. Companies require faster and more reliable information to enable data-informed decisions and remain competitive in the market. However, how does a CFO translate these demands into a digital transformation? How does the CFO overcome technical, financial, and cultural barriers to implement a system that will improve analytic performance and allow a company to compete in a dynamic and challenging market space?

Chapter 2 will provide examples of where analytics automation can best serve the needs of finance professionals. It will explore how CFO involvement can foster better data quality, data governance, and cross-department collaboration to ensure that analytics automation is more readily accepted and adopted. This chapter will also examine the impact analytics automation can have on individual departments within finance, while providing examples of how these changes have benefited other companies. The end goal is to provide a template for a strategic, coordinated approach to implementing analytics automation within an organization.

Financial Accounting and Control

Financial accounting and control teams have traditionally faced immense pressure to rapidly and accurately close the books and generate financial statements. Despite the importance of this process, many companies continue to struggle to complete this process quickly. CFOs understand the competitive advantage that comes with shortening the financial close with improved quality of financial and management reports, making it a top priority.

Figure 2-1 illustrates how analytics automation could be used to transform the end-to-end "record-to-report" cycle, which is reliant on multiple data connections, validations, account reconciliations, and computations.

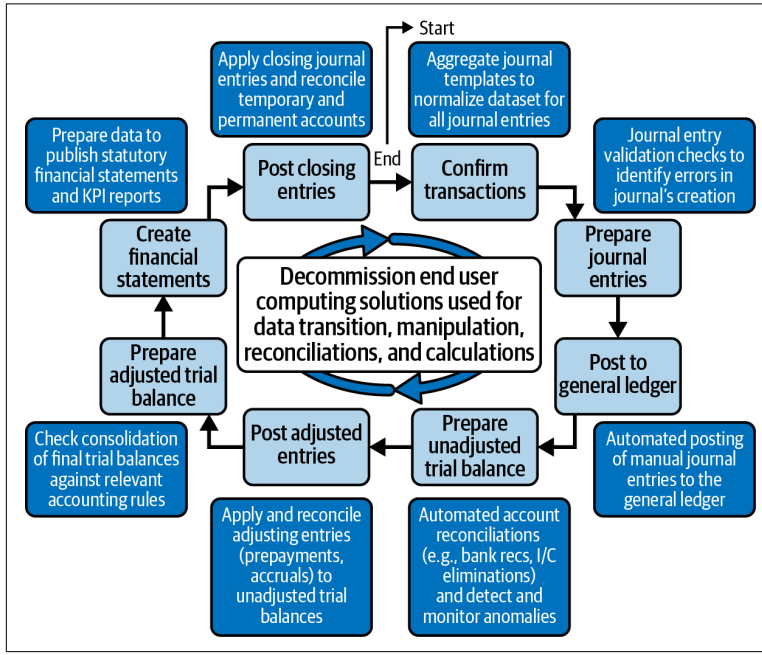

Figure 2-1. Application of analytics automation in the accounting cycle

The financial close process offers many opportunities for improvement via data and analytics automation. Accounting automation tools can consolidate and verify all necessary data, including transactions, vendor billing details, employee expense reports, and bank statements. Automation can also help streamline processes such as

balance sheet reconciliation, project accounting, financial consolidation, and payroll accounting.

Implementing data and analytical transformation in financial accounting and control offers several benefits beyond faster close times, including improved data controls, better visibility of data transformations, and higher quality of financial statements that require minimal adjustments.

Applications for analytics adoption range from automating journal processing and anomaly identification to trial balance preparation and report production. Successful automation endeavors across the accounting cycle provide a strong foundation for extension across financial departments, including financial planning and analysis, treasury, and audit, as the examples in this chapter will highlight.

In conclusion, financial accounting and control processes are well placed to realize the benefits of analytics automation, given the repetitive and standardized nature of key activities. Embracing automation can help finance teams deliver precise numbers on time, improve accuracy and efficiency of operations, and stay ahead of the competition.

Case Study: IQVIA Optimizes Shared Services[1]

Situation

IQVIA, a US-based multinational health care company, was facing challenges with its existing finance operating model. The outsourcing of multiple finance processes led to high costs, a lack of process transparency, and slow response times to business requests. These processes included accounts payables and receivables, expense management, payroll accounting, record-to-report, and statutory reporting.

Task

IQVIA's goal was to drive material saving and quality improvements by bringing processes in-house through data and analytics automation. The company believed this would standardize process execution, reduce operating costs, and improve transparency of shared service activities.

1 "IQVIA Drives Savings and Quality Improvements by Bringing Shared Services In-House," Alteryx, accessed Dec 15, 2023, *https://oreil.ly/Y46Yp*.

Action

IQVIA implemented a wide-ranging automation stack, streamlining business processes while providing insight and accountability for finances processes. This improved insights into the business and allowed for better transparency with higher-quality outcomes.

Result

Over six months, IQVIA automated over one hundred processes, resulting in 40% net annual savings, and now has the ability to create customized reports that provide better insights into the business process. Quality metrics also improved by 70%. Additionally, 30% of resources that were once required to manually process these flows and reports were freed to focus on analytical reviews rather than data and report preparation.

Financial Planning and Analysis

Financial planning and analysis (FP&A) teams are under pressure to respond to external and internal demands. Speed and agility in planning is a necessity, not a luxury. For example, assumptions for balance sheets and income statements are changing constantly, where capital and liquidity decisions are critical for long-term growth. As a consequence, CFOs are actively looking to reshape and strengthen all aspects of FP&A and establish a sustainable operating model.

CFOs are reconsidering the capabilities critical for FP&A in many areas, such as:

- Strategically driven planning approaches, including guiding "bottom-up" planning, constraint planning, target setting, and goal seeking
- Improved integration of financial planning into decision making, with better assessment of impacts across balance sheet, profit and loss, and cash flow statements
- Simulation scenarios and stress testing activities, and improved regulatory alignment through resolution planning
- Business-managed solutions, focusing on initiative planning and portfolio analytics
- Identification of operational drivers and complex capital and capacity planning

- Predictive and prescriptive FP&A, including the use of complex data and the adoption of data-driven algorithms and machine learning to improve forecast accuracy

Streamlining data collection, analysis, and reporting not only helps to minimize errors but also frees up capacity to uncover valuable insights into financial performance. Through analysis of extensive data, AI algorithms can uncover patterns and trends yielding fresh insights into financial performance and potential risks and opportunities.

Analytics automation also plays a pivotal role in enabling FP&A teams to aggregate, plan, and forecast inputs, as well as establish corporate objectives, consolidate budgets, facilitate integrated planning, and execute multiple planning scenarios. Moreover, analytics automation offers wider benefits, such as improved forecast accuracy, real-time scenario evaluations, and the extension of planning and analytics processes to the entire organization (the so-called "extended planning"). Utilizing these insights, the CFO can assume a more strategic role in driving growth and profitability.

Case Study: Siemens Transforms Multinational FP&A Operations[2]

Situation

Siemens, a German-based multinational conglomerate operating in a variety of industries such as energy, health care, and transportation, faced challenges in consolidating financial data from its global entities and integrating it with external market and productivity data. The company was using Excel spreadsheets to calculate key performance indicators (KPIs) and analyze numbers for management reporting, which was time-consuming, error-prone, and difficult to maintain.

Task

Siemens wanted to automate its data preparation and load process to reduce manual efforts, see results quickly, and avoid disconnection between the business and technical experts. The company needed a solution that would allow business experts

2 "Siemens Runs Through 50M Data Rows in Minutes," Alteryx, accessed Dec 15, 2023, *https://oreil.ly/pgxVN*.

to implement business solutions themselves within a few weeks (instead of months) and build a data literacy culture in the organization.

Action
: Siemens implemented a code-free, agile platform that enabled rapid development of analytic workflows. Via the platform, business analysts could access standardized data sources and build their own analytical content. The workflows ran on a predefined schedule, with automated data extraction from the sources and automated data loads into the target platforms. With the workflow hosted on a server, it was easy to maintain version control and visibility of workflow execution and reported outcomes.

Result
: Within six months, Siemens developed more than three hundred complex workflows with a controlled and managed deployment. Siemens utilized these time-saving workflows to scale the automation globally, removing hours of manual data tasks and unlocking valuable insights into the company. The workflows were able to grant data visibility throughout the organization, promoting a data analytic mindset and encouraging data literacy and democracy.

Treasury

More than ever, cash flow remains the lifeblood of any successful business venture. Treasury teams face increasing pressure to manage cash flows and mitigate financial risks. High interest rates mean increased cost of capital and more demand on a healthy cash position to manage funding requirements. Improved cash flow predictability is needed urgently to allow organizations to navigate during tough times and improve operational resiliency. Common challenges include maintaining cash visibility, accurate forecasting, improving capital allocation, responding to market movements, and managing market risks through confident hedging decisions.

There are multiple applications for data and analytics automation to improve and transform the treasury operating model. These include:

- Data consolidation and account reconciliation of multiple payments, transactions, or positions to create a single view of remuneration (for example, payment/settlement netting, close-out netting, or novation netting)
- Running time-series analysis and liquidity forecasts with the ability to create and save forecast versions
- Assessing hedging options through scenario analysis, including assessing volatility of interest rates or contract novations
- Transitioning to continuous, real-time dashboards (for example, for monitoring cash and liquidity positions, days sales outstanding, days payable outstanding, and working capital management) and removing reporting burdens

The business benefits of analytics automation in the treasury department include:

- Increased understanding of customer payment trends and associated behaviors
- Improved forecasting accuracy for future payments and funding requirements
- More active KPI monitoring, reduced credit and financials risk, and reduced operating costs
- Improved working capital

There are also significant opportunities to extend the benefits realized from the treasury department across the finance landscape, including:

- Better integration within FP&A to optimize resource and capacity planning based on forecast customer demand and payments
- Identifying risks and opportunities from supplier base analysis (for example, when renegotiating supplier contracts)
- Integrating demand forecasts, supplier assessment, and cash forecasts to optimize management of inventory and stock levels
- Broadening risk coverage that feeds into risk and controls assessments beyond credit and funding risk (e.g., ops risk)

Case Study: Improving Cash Flow Transparency

Situation

A global leader in natural dairy products was facing complications in managing working capital. This was exacerbated by significant limitations in complex forecast models maintained in Excel, which took hours to run and were difficult to control, and increased exposure to credit risks due to uncertain payment schedules.

Task

The company wanted to increase its understanding of customer payment trends and associated behaviors, improve forecasting accuracy for future payments and receipts, and improve predictability of funding requirements.

Action

The company was able to automate multiple steps across its account receivable process, including aggregating and reconciling invoice data from general ledger systems to create a consolidated dataset, and combining historical customer payment data across multiple systems to generate a customer-centric profile. The company was able to forecast customer payment trends and analyze order-to-cash KPIs to drive reporting and decision making.

Result

The company achieved increased accuracy of cash flow forecasts through analytical modeling capabilities, early warning of customers' likelihood of breaching insured credit limits, and a richer dataset created for in-depth credit control and receivables analysis.

Internal Audit

Organizations are facing significant market disruptions given a rapidly evolving and complex risk environment, customers demanding real-time personalized interactions, increased external scrutiny of operations and disclosures, and investors requesting greater transparency on enterprise risks. This has resulted in more pressure for the internal audit department, acting as the third line of defense.

Today's data and technology solutions provide opportunities to reduce risk, control oversight, and respond to emerging risk events effectively. But how can organizations improve control environments through a data-driven and digital approach?

The goal of analytics transformation for audit teams is to help relieve the manual burden of executing audits as well as to drive deeper insights into the enterprise control environment. This can be challenging given the heavy reliance on EUC applications, which are difficult to audit because of the lack of process standardization and the varying complexity of the macros, formulas, and calculations used on the data.

To complete an audit successfully, audit teams need a strong understanding of local laws and business processes, as well as knowledge of how to validate and verify those processes through the analysis of company data.

There are several potential applications for how analytics automation can improve the lives of audit teams:

- Comparing and reconciling accounts with original source documentation (e.g., invoices, legal documents, bank statements, and inventory records) to check for erroneous or fraudulent transactions
- Running a full transactional dataset for audit testing (such as "cut-off" transactional testing), rather than only a sample dataset
- Increasing risk coverage and reducing testing effort from collecting sample data, scoping, and documenting audit evidence
- Running revenue analysis to help identify unusual events or transactions related to sales, such as a seasonal analysis or monthly trend analysis to reveal changes and trends

There are also multiple analytics applications that focus on finance operational and statutory audits, including payroll auditing, revenue recognition auditing, and debt recovery testing. In all instances, the automation of manual tasks across audit processes—be that planning, scoping, sampling, testing, or evidencing—allows for more time to focus on the high-risk areas and problems that can arise from a lack of attention to data analysis. Sustained analytics automation efforts can help promote a "continuous auditing" approach, a vision for many organizations that are being driven to do more with less.

Case Study: Streamlining Internal Audit Processes at Aetna[3]

Situation

The internal audit processes at Aetna, an American managed health care company, were time-consuming, tedious, and labor-intensive. The audit team faced challenges in understanding business processes, control assessment, and testing a representative sample of the collected data.

Task

Aetna needed to automate the audit process to reduce inefficiencies and save time and effort. The company required a solution that would equip auditors with data, perform transactional testing on the entire dataset, provide visibility into the data process for auditors, and automate audit dashboards without the involvement of the data science team.

Action

Aetna implemented an analytics automation solution that enabled the audit team to build risk models that test all ten million transactions, visualize audit plans, create automated audit reports, and optimize resource utilization based on expertise and availability. The solution also provided process insight to auditors before the claims process began and automated audit dashboards using a self-serve analytics server.

3 "Transforming Internal Audit at Aetna," Alteryx Community, Oct 13, 2018, *https://oreil.ly/CyDQE*.

Result

Aetna achieved several benefits from integrating analytics into the audit process, including gaining high assurance on accuracy and completeness, providing visibility into data transformation processes, and automating audit dashboards without the involvement of the data science team. Aetna is now performing continuous auditing by automating end-to-end process review, monitoring transactions monthly, and addressing issues immediately. The solution provided higher confidence in the company's processes and significant cost savings by not paying out incorrect claims.

Increasing Accountability for Environmental, Social, and Governance (ESG) Factors

Appropriate attention ESG factors gives organizations an opportunity to showcase transparency and accountability, while demonstrating commitment to sustainable and ethical practices. These factors are increasingly demanded by consumers and investors, as well as employees. Organizations that embrace ESG factors within their day-to-day business activities and decision-making processes outperform others across multiple dimensions, including investor confidence, financial growth, access to capital, stability, resilience, and employee retention.

The ESG landscape is rapidly evolving, driven by demands from governments, investors, regulators, consumers, and society. ESG requirements are transitioning from voluntary to mandatory, particularly for climate-related disclosures. This is largely due to the convergence of global reporting standards and the need for standardization and comparability of disclosures. Two examples of this are efforts by the European Commission's Corporate Sustainability Reporting Directive (CSRD) to disclose sustainability risks and impacts underpinned by the EU Taxonomy, and a proposal by the Securities and Exchange Commission (SEC) in the United States to require registrants to disclose certain climate-related information in their reports, including details on scope 1, 2, and 3 emissions. Furthermore, more than 90% of S&P 500 and 70% of Russell 1000 organizations proactively publish ESG reports.

As ESG legislation increases reporting mandates, major players like BNY Mellon and Goldman Sachs have already felt the consequences of noncompliance. Though the fines were relatively nominal (less than five million), the brand damage was significant and caused nervousness to ripple across the markets. Such rulings mark a widening crackdown on corporate "greenwashing," "greenhushing," and "social washing" and set the standard for increased scrutiny from external agencies.

Driving value beyond financials is critical for companies to deliver long-term success and resilience. ESG provides executives the opportunity to evaluate their company's performance from perspectives that were previously not prioritized. Assessing this performance requires trusted and verifiable sustainability data that can be easily assembled for reporting and analysis. Given the potential penalties and negative impact on brands and the open desire to operate ethically, why do organizational leaders find it so difficult to gather, analyze, and report on ESG data? There are four common data challenges related to ESG:

Data availability
: A clearly defined ESG strategy, supported through materiality assessments, requires certainty regarding what data is available and attainable to assess efforts and address data gaps. Poorly defined ESG strategies and metrics may result in unclear data requirements. For example, for a typical manufacturing firm, 60–80% of total emissions might come from supply chain and distribution processes (that is, scope 3 emissions). It can be challenging to ascertain which benchmarks from data providers and rating agencies can be relied upon to address shortfalls in these scope 3 emissions. Issuer-provided data may not follow a common standard, so metrics produced from that data could be flawed or unclear.

Data sourcing
: Executive leaders need to bring together huge datasets with multiple variables from various partners across the supply chain. This is a significant request, and manual processes simply aren't up to the task. Data points sourced internally need to be combined with data from external organizations, which may have varied collection policies, processes, and systems, and may not share the same level of accountability or urgency. The multidimensional and decentralized nature of the data, with a

wide array of formats, further exacerbates ESG data collection methodologies and integration.

Data traceability
: Maintaining traceability throughout the data lifecycle becomes extremely challenging when attempting to piece together disparate and varied datasets, such as decarbonization data, procurement data, ERP data, and management forecasts. With more rigor expected for ESG-related audits, providing transparency of data from sources to reporting will remain a challenge as organizations reconsider legacy processes, tools, and systems. Additional effort is required to determine when and how to integrate ESG auditing with existing risk assessments and financial reporting workflows.

Data security
: Attention to data security has proliferated with the rise of big data. In addition to perpetual concerns such as anti-corruption and climate change, cybersecurity is rising to the top of the ESG agenda. The consequences of failing to protect customer data can range from a loss of assets to eroded "trust" between an organization and its customers to permanent damage to an organization's reputation. Taking a more ESG-centric approach to data security can promote digital trust, but its execution remains a challenge with the rapid growth of ESG data.

Organizations that fail to unlock value in ESG data and integrate insights into decision making will be missing huge opportunities that could provide critical differential business outcomes. Success requires not only the reassessment of performance management processes and capabilities, but also a fundamental shift in culture that democratizes analytics and applications to promote innovation. There are no shortages of data and analytical reporting solutions for ESG, though careful consideration is required to find the balance between control, flexibility, and self-serve capabilities that align with each organization's ESG strategy.

The characteristics of a viable data and analytics solution for ESG include:

- Seamless data connectivity across multiple data types, formats, and sources
- Rapid assimilation and preparation of sustainability data for reporting, analytics and KPI monitoring, and target assessment
- Increased reliability, trust, and governance for reporting with full data provenance auditability
- Flexibility and self-serve capabilities to easily accommodate changes across the evolving ESG landscape, with low-code capabilities for simpler and faster adoption

So what's the path forward for ESG efforts?

There are high expectations for CEOs and executive leaders if their organizations are serious about embedding sustainability factors into their decision-making processes, with clearer correlations required between financial and ESG data. Transitioning the management culture of the organization to focus more intently on ESG values is essential, and can be achieved with a dedicated focus on upskilling and building multidisciplinary teams that promote the organization's sustainability credentials.

Organizations should continue to monitor sustainability reporting developments, both global and regional, to anticipate business and disclosure implications. To build trust and transparency in ESG reporting and disclosures, it is critical to establish a process that is responsive to the evolving landscape, helping unlock value in ESG data and integrating the insights gained into performance management.

How Artificial Intelligence Will Further Transform Finance

No coverage of automated analytics in finance would be complete without reference to the huge leaps in AI in recent times, with exponential growth set to continue.

The possibilities with AI can stretch as wide as our imagination takes us. Existing applications in finance include:

- Reimagining the underwriting process, with solutions that allow credit lenders to make smarter underwriting decisions by using factors that more accurately assess traditionally underserved borrowers in the credit decision-making process
- Document processing that combines machine learning with human verification, allowing businesses to increase speed and accuracy when analyzing financial documents such as bank statements, tax documents, and invoices for loan eligibility
- Compliance and fraud detection, including identification of internally driven fraud and embezzlement around account and bank reconciliation, payables and receivables, expense reporting, or creation of fake suppliers to reconcile profitability leakage

Finance functions will also be at the forefront of the transformative potential of large language models and generative AI tools such as ChatGPT and Google Bard. To look beyond the hype, CFOs need a nuanced understanding of how these tools will reshape finance work in the future.

To date, generative AI tools are primarily used to process and generate text and images. Their ability to generate numerical analyses with the accuracy required in finance is still evolving. Generative AI tools can perform an initial pass at analyzing limited datasets, but the reliability of outcomes must improve before human intervention is no longer required. Traditional applications of AI in finance functions can reliably analyze numerical data for forecasting and risk assessment, among other use cases. Some use cases may therefore be specific to either generative AI or traditional AI techniques, while for others it may be possible to apply the technologies in combination.

CFOs cannot afford to be complacent as generative AI reshapes the finance function of the future and its partner functions, including marketing and HR. Embracing generative AI capabilities will remain crucial to maintaining a cutting-edge finance organization.

Conclusion

Integrating analytics automation into finance functions has multiple benefits. Adoption of automation solutions may start with reducing the time and manual effort required to do traditional financial analysis. Democratizing analytics applications will help promote a culture of trust and self-serve analytics. Giving employees the means to minimize time-consuming tasks will help increase capacity and appetite for driving insights to make better decisions for the business. This means that risks can be quickly identified and mitigated while opportunities can be realized before they pass by.

Analytics automation also opens opportunities to business insights at all levels. Automating reports ensures that stakeholders have information available to make reliable, data-informed decisions. It provides insights into the company for customers and investors, while allowing the finance team to focus on managing financial transactions rather than analyzing and reporting on data. These improvements alone are significant enough to greatly enhance the performance and profitability of a business.

But what steps does a CFO need to take to implement analytics automation successfully? We will examine that in the next chapter.

CHAPTER 3

How Finance Leaders Can Drive Success in Analytics Automation

The previous chapter shared examples of how analytics automation improves visibility into financial operations, reduces risk, and increases accuracy. Knowing these benefits, how do CFOs transition their departments to deploy analytics automation into daily operations? Where is the best place to start and what steps should be taken to achieve a successful transition? This chapter will examine factors that may influence a CFO's decisions on where to begin and how to maintain momentum. It will also examine key principles for driving the transformation across the organization and provide a plan of action for CFOs to follow to implement the process.

Considerations When Scoping Analytics Automation

Choosing a starting point and developing a transition plan are arguably two of the hardest steps when adopting analytics automation. How does a CFO decide where to start? Do they look for an area within the finance department that will experience the largest benefit from an analytics transformation, or do they look for an area with users who are more likely to embrace it and advocate the change to others? Is there a place where these two factors come together? How do they keep enthusiasm high and the adoption moving forward in a controlled yet agile manner? These are all decisions that will determine the success of analytics automation within an organization.

The following seven factors should be considered collectively when determining where to start and how to proceed with an analytics transformation.

1. Appetite for Change

The level of openness to change among teams and individuals in organizations can vary, as it can in all walks of life. Deploying an analytics solution and mandating adoption to financial professionals will likely not lead to success. Instead, identifying users that are most open to reshaping their roles and activities through data literacy initiatives may be a better path to follow. Consider methods to test the mood among the potential teams through surveys or an open forum led by team leaders.

2. Return on Investment

Having a well-defined business case for automation is critical. Most CFOs strive to maintain control with clear justification of costs and expenses. However, the concept of "return on investment" needs to go beyond the obvious metrics, such as payback period and quantifiable savings in operating costs. For example, improvement in data literacy combined with better data access can create opportunities for finance professionals to uncover valuable insights that may lead to further efficiency gains, improved outputs, or even top-line growth. Furthermore, a more purposeful and motivated individual is more likely to commit to their organization, reducing attrition and improving resiliency of the organization.

3. Extent of Manual Activities

The finance processes that can realize the greatest benefits from data and analytics automation are usually the ones that are currently executed manually. Inflexibility of core finance applications, and the need to become more nimble in finance, has led to the proliferation of EUC solutions, which act as key controls across critical business processes. With nearly 80% of manual business processes still using Excel spreadsheets for complex data and analytic transformations, there is more pressure from multiple stakeholders to reduce operational risks and improve the cost of controls. Identifying processes that have a high number of EUC solutions, or users dependent on them, may be a strong factor to consider.

4. Process Complexity

Striving to simplify and standardize processes is a valuable aspiration for any team, especially finance teams that have seen rapid growth and restructuring in recent times. Consider the benefits of simplicity, including reducing the need to define key operating procedures, minimizing hand-offs, and the ease of process walkthroughs with the audit team. Piloting data and analytics automation initiatives in more intricate processes may be a tactic to consider; if value can be proved for more complex cases, it may be easier to get buy-in for extending initiatives into less complex finance processes. On the flip side, leading pilots across simpler finance processes is a less risky venture with higher probability of success and quicker wins, aligning to the "get the easy stuff right" mantra. In all cases where process simplicity is a primary objective, organizations should carefully consider the target state for the reengineered finance processes before attempting to adopt technology solutions. Otherwise, CFOs face the risk of automating a broken process and further exacerbating existing issues.

5. Level of Business Disruption

Finding the time and capacity for data and analytics transformation is often a challenge in itself for finance professionals. Furthermore, the level of disruption that would be faced by the business is often used as a reason to limit transformation efforts. Finding the balance in "keeping the house running," rebuilding the foundations, and demonstrating recurring benefits is a challenge and something that needs to be carefully considered. Any indicators of disruption among potential beneficiaries could lead to uneasiness and potentially curb transformation efforts. Other factors that should be considered when managing the extent of business disruptions include the number of people impacted, the criticality of the finance process in the value chain, and prioritization of other transformation initiatives that are already in motion. External mandates driven by regulators or investors may be a catalyst for change or, alternatively, they can become a temporary blocker as time and effort is prioritized for those obligations.

6. Speed and Cost of Change

Organizations are no longer willing to lock in large amounts of cash for multiyear transformation programs. CFOs expect to see ongoing quarter-on-quarter capability enhancements and real, commercial profit and loss gains within the financial year. Given increased uncertainty in budget approvals with heightened cost pressure, speed of change is top of mind for finance leaders that are driven by shorter ROI timelines and faster realization of business benefits. Consequently, analytical software that promotes accelerated upskilling through low-code solutions will prove to be more advantageous in both the short and long term. In addition, organizations will need to maintain focus on simplifying data science applications for finance users. For these reasons, business-owned solutions will provide greater flexibility to control the speed of change than IT-owned applications, which can create bottlenecks for rapid deployment. In all cases, the pace of change needs to be managed so that appropriate guardrails are in place to control deployment and use of analytical solutions.

7. Cross-Border Engagement

For larger organizations where operations and markets span multiple entities, CFOs should consider whether initiating pilots close to home is preferred, or whether there is benefit to prove value across other regions early in the transformation journey. Working locally has the advantages of increased control and transparency for deployment of analytical solutions, limiting the challenges of time zone differences, and a wider spectrum of stakeholders. Equally, deployment on an entity-by-entity or business line basis may create an alienation effect, especially for those who are last in line and don't feel part of the transformation journey.

Every organization will prioritize these factors differently and may consider other elements that are important to its situation. What's critical is to have certainty and agreement on which factors have been prioritized and why, and then develop an analytics deployment plan that incorporates those factors.

Nine Principles to Drive Analytics Automation

There are many things to consider when embarking on the path to automation, but there are some key principles that will increase the chances of success. These principles are designed to establish a strong base upon which to build a culture of analytics. They should be considered as ingredients, rather than a series of steps, which in combination provide a mechanism to drive data and analytics democratization across finance and the enterprise as a whole.

1. Involve Leadership

Building a culture of analytics starts at the top, and many organizations that follow the analytics automation path identify culture as one of the largest barriers to adoption. The leaders of an organization need to not only be interested, but also invested, in applying analytics to their jobs. Doing so indicates to their employees that this process is not only important, but necessary, for the company's success. For example, some organizations have taken active steps to spend committee meetings jointly reviewing proposals with supporting facts and make evidence-based decisions. Other executives proactively engage with data analysts to build trust and get buy-in from business users. This model builds a culture that will support scaling of analytics automation and continuous improvement.

2. Spread the Data Science Love

Even if they have the time, data scientists likely have little interest in learning accounting or financial business processes. It's a simpler and more realistic proposition to build data science skills and capabilities in finance professionals, especially through investment in low-code technologies that empower users. These individuals can then become cornerstones of a data analytics culture in the business, and their knowledge can be spread by encouraging data and analytics innovation. Doing this also supports the pure data scientists, who can offload the simpler requests to business users, while they focus on the more complex and high-value analytics. In the short term, organizations could consider how to establish porous boundaries between business users and data scientists using staff rotations or even dotted management lines across business and IT.

3. Unlock Data Access for Employees

Why should data be limited to analysts alone, while business users, who have the greatest understanding of the data, have to continually make requests to ascertain insights? Democratizing analytics provides opportunities for all roles to drive insights and improve business operations. Providing up-to-date, accessible, and available data to users is a crucial factor in creating trust in data-led decisions. Organizations should carefully consider who has access to what information in line with roles, responsibilities, and governance policies. For example, consider granting access to users for a limited number of metrics, such as those related to product marketing or channel data, which may not be as sensitive as customer-related or HR data.

4. Don't Let Poor Data Limit Data Literacy

Poor data quality is often seen as the biggest barrier to becoming data-driven. Users are reluctant to consider analytics solutions until they can trust both inbound and outbound information. The concept of having perfect data is something of a myth, given the volume, variety, and veracity of data. This cycle can be broken by driving data democratization and literacy initiatives that encourage users to challenge data and improve quality. A greater number of users will help drive more consensus about what good quality data is. In addition, organizations should consider strengthening the data accountability model across the value chain, so that collective data ownership can be directed to improving data quality.

5. Think Big, Start Small, Act Fast

It's great to have a vision of analytical maturity that CFOs are striving for. Start with assessing the status quo of the finance function and define milestones for advancing up the maturity curve in line with the firm-wide strategy. From the big picture and vision, organizations can start small and focus on high-quality execution. It's important to set a precedent with operational excellence in delivery and outputs from the initial work, as this accelerates buy-in from a wider array of potential users. Defined pilots or "minimum viable products" that are simple and robust, with clarity on scope, coverage, users, and the business metrics impacted, can also support these efforts. Finally, businesses should prioritize deployment of

solutions that relieve IT dependency for change, minimize business disruptions, and enable enterprise agility.

6. Carefully Define KPIs and a Prioritization Approach

CFOs should have clarity regarding which metrics their organizations need to focus on at the executive level and the operational level (e.g., business growth, operating costs, customer satisfaction, employee experience). Organizations are most likely to succeed when they maintain consistency in deployment of analytical solutions within a metrics hierarchy and framework, so that any analytics transformation can be aligned to at least one KPI and potential target. As discussed in the previous section, CFOs should set the criteria (such as dollar benefits realized, number of users upskilled, or speed of analytics change) on which to scope and prioritize opportunities. Lastly, CFOs should consider the sequence for scaling adoption. They should remain focused on the connected finance processes and user hand-offs, such as those across the financial accounting and FP&A teams, or cross-functional data dependencies, such as those from the tax and finance teams.

7. Help Your Employees Help Your Customers

The effective democratization of data and analytics solutions should provide finance professionals with options on how to perform their daily operations. Employees will have a choice of which tasks they continue to carry out using legacy methods, and which ones (such as fetching frequently needed data or rerunning reconciliations) they can automate. The investment in self-serve data and analytical capabilities that empowers business users will build trust across management hierarchies. CFOs should test and deploy methods that motivate and incentivize employees to repurpose their roles to drive higher-value outcomes, with reward and recognition aligned. The longer-term impact of leadership demonstrating trust among employees can be significant, including an enhanced customer experience.

8. Maintain Consistency and Control

Every organization will need to gauge the right balance between creating an environment for self-service and innovation and adhering to appropriate data governance and controls. When implementing analytics deployment in finance, CFOs should initially strive for consistency and be willing to trade flexibility for consistency until clear operating principles are established. A common data language and tools can help re-enforce these principles.

Organizations may want to consider a model that creates a center of excellence and enablement. This model sets the precedent for operational excellence and manages deployment of tools and analytical solutions. This approach would also help to evolve the partnership between business and IT, particularly when IT leaders can become nervous about unlocking data access to the masses.

9. Maintain Momentum

There are various methods to create momentum for analytics. One solution might be deploying a specialized "just-in-time" approach for training and enablement, delivered when it is most critical so it can be applied immediately to pressing business needs rather than a one-off exercise that is quickly forgotten. CFOs should consider how to create healthy internal competition to drive analytical breakthroughs and challenge the existing operating model. These may include innovation hours or hackathons that reward employees for developing solutions for real business problems. This can be complemented with other methods of encouragement, such as establishing internal community groups, supporting formal certifications, or integrating data and analytics literacy targets into personal scorecards.

Taking the Reins to Modernize Finance

This chapter has proposed key factors to consider when scoping and sequencing analytics automation, alongside some foundational principles that will help achieve analytics transformation success.

Reimagining the vision and purpose of the finance team is going to be critical for CFOs. They will need to balance the roles of a tech-savvy problem solver, an insights creator, and an innovator, while still maintaining the role of controller. What could the future of

finance look like when the power of data and analytics is unlocked? Consider a finance organization that is:

- Connected, automated, and operating in near real time with minimal manual processes
- Focusing attention on what to do with the insight, not churning out data and reports
- Setting directions and steering the organization when course correction is needed
- Agile and dynamic so it can accommodate new stakeholder requirements
- Providing insights into the activity behind the organization's value
- Proactively assessing risks and identifying business opportunities
- Validating that outcomes are achievable with available capital and resources
- Improving the lives of finance professionals and actively controlling costs and investments

CFOs should set ambitions high to transition their roles to become a chief value officer and be more agile and dynamic in response to rapidly changing markets and stakeholder demands. The growing need to do more with less, and with higher-quality outputs in shorter time frames, leaves little room for negotiation. Success in data literacy and analytical transformation may become the critical differentiating factor in creating a competitive and successful business.

About the Author

Jawwad Rasheed is the Global Finance Transformation Lead at Alteryx, supporting customers to deliver their analytics innovation goals. Jawwad has extensive international experience of delivering finance modernization programs spanning two decades. Jawwad has worked extensively across the financial services sector, helping some of the largest banks and insurance companies deliver success in technology transformation initiatives. Prior to Alteryx, Jawwad was with Ernst & Young, where he led market propositions for enhancing business intelligence, performance management, reporting, and regulatory change.

In his current role at Alteryx, Jawwad brings together his industry domain knowledge with product engineering, partners, and customers to develop targeted Alteryx solutions for finance, tax, and ESG, and help clients realize the full benefits of Alteryx analytics automation. In his spare time, Jawwad enjoys playing sports, notably cricket, where he represents the MCC (Marylebone Cricket Club), and is also an amateur magician.