

A Practical AI Strategy for FP&A

Setting the Foundation for Success

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Artificial Intelligence Will Transform FP&A Processes

The use of artificial intelligence (AI) that harnesses machine learning (ML) will be the single most important trend in business software this decade because it can multiply the investment value of such applications and provide software companies an important source of differentiation to achieve a competitive advantage. Our Analytics and Data Benchmark Research demonstrates that this movement is already underway, as it found that 59% of organizations regard AI and ML capabilities as either important or very important.



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It is a common misperception that putting AI to work always or often will require the skills of data scientists—it will not. AI software continues to be made more accessible to those with different skill levels. Financial Planning and Analysis (FP&A) groups in particular will benefit from AI-enabled capabilities to accelerate planning, forecasting, budgeting, analyzing and reporting processes. However, FP&A leaders and finance executives must recognize the importance of creating a solid data foundation for the successful use of AI.

AI is Already Here and at Work

Ventana Research defines AI and ML as the use of technology to process information in much the way humans do, including improving accuracy in recommendations, actions and conclusions as more data is processed. While AI may seem futuristic, it is already at work in a lengthening list of use cases. For example, recommendation engines are common in consumer-facing services such as retail or entertainment. Navigation applications “learn” the best routes for time or distance at specific hours of the day, while spam filters automatically adapt to evolving attempts to evade them. Road warriors routinely use their smartphones to take pictures of receipts and expense-management applications convert the images to business-useful data used for automating expense processing. And voice recognition makes it possible for individuals to quickly interact with computer systems that utilize natural language processing.

Because AI conjures up images of computer systems that are entirely independent of humans—which they are not—some technologists prefer to use the term “augmented intelligence” to emphasize that these are systems designed to enhance the capabilities of the humans employing them, especially in improving decision-making and eliminating the need for an individual to perform the rote parts of a process. This is more in line with the intent of what is meant by AI in its use by the finance department. Moreover, while for some purposes



AI requires data scientists, they are not necessary for almost all of what FP&A needs to do. Software providers will be able to design features and capabilities that are available as part of the core functionality and ready to be trained with the customer's data. Because AI is so versatile, Ventana Research asserts that by 2025, almost all vendors of software designed for finance organizations will have incorporated some AI capabilities to reduce workloads and improve performance.

Within the areas of financial and operational planning, analysis and reporting, some of the likely uses of AI will be for:

- Analytics, to automate report creation, supplement staff skills and accelerate production.
- Task supervision, to spot errors and omissions in data entry.
- Anomaly detection, highlighting possible errors, outliers and inconsistencies.
- Machine-assisted bottom-up planning and forecasting for demand, sales and headcount as well as financial planning and budgeting.
- Recommendations for task completion, best fit, staffing and so on.
- Story generation for narrative reporting.
- State supervision to ensure timely completion of work.
- "Autofill" task management (not full task automation) for repetitive routines.

These capabilities will not happen all at once but will be introduced by software providers gradually over time (as they perfect them) so that they do not frustrate customers or fail to perform as promised. Some capabilities such as anomaly detection are relatively straightforward, while a more complex task such as automatically generating a first version of a business unit's budget based on top-down guidance and historical patterns is likely to take time to be sufficiently reliable to be useful.

Laying the Data Foundation

AI capabilities by themselves will not be enough right out of the box. Historically, one of the biggest difficulties with using AI in business applications has been the shortage of the clean, consistent and readily available data necessary to enable rapid and accurate training of AI systems. A significant recent development that can help finance departments achieve rapid time to value from AI has been the availability of a dedicated data store for an individual software application.

Digital Finance
Market Assertion

By 2025, almost all vendors of software designed for finance organizations will have incorporated some AI capabilities to reduce workloads and improve performance.

Robert Kugel
SVP & Research Director

VENTANA RESEARCH



The dedicated data store is designed to address a persistent and common problem, especially when moving data across fragmented data sources: the time spent on preparing data for analysis and on reviewing data for quality issues. As our research confirmed, 69% of organizations spend a significant amount of time simply preparing data for analysis and 64% on reviewing data for quality issues. The data store is designed to preclude the need for such work since the data structure is designed specifically to be used by business users without the ongoing assistance of IT professionals. Unlike a general-purpose data warehouse, this dedicated data store has all the data ingredients—and only those ingredients—that anyone needs for a specific function or task. The data is readily available and easy to find, not deeply buried in a data warehouse or scattered in fragmented data stores and analytical tools.

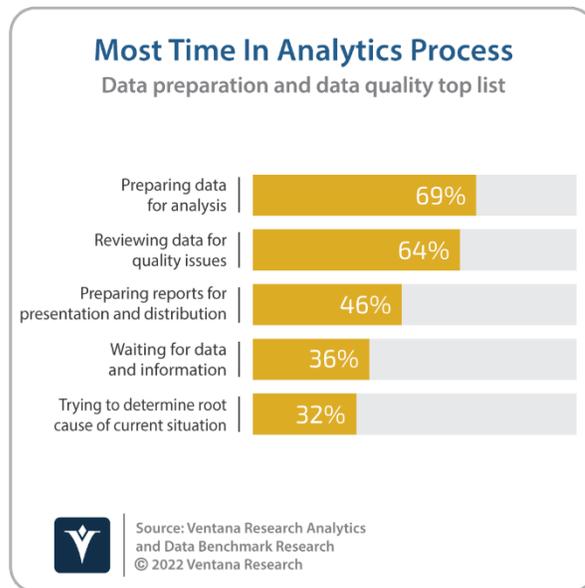
This dedicated data store is similar to the concept of a data mart but is constructed for a specific application and its users. Because of this, the data has labels that are instantly recognizable and readable to those that need to work with the data. In technical terms, this means the semantic layer is designed for a specific application or use case, not a general-purpose metadata label that makes sense mainly to the IT professionals who created it. This is important because our research found that only 16% of organizations are satisfied with their semantic modeling.

From a technology standpoint, the use of an application-specific data store is part of a larger trend toward unifying data management at an enterprise level while recognizing the need to give different parts of an organization the flexibility to consume that data in whatever way is necessary for its requirements. Technologies such as application programming interfaces (APIs), robotic process automation (RPA) and data-cleansing automation have almost completely eliminated the need for departments to manually orchestrate data movements, saving a considerable amount of time. The result is a hands-free process that produces the clean and consistent datasets necessary for achieving the benefits of AI for specific users and use cases.

Considerations for the Data Store

There are four aspects of assembling the right data for AI that organizations should consider:

- Managing the movement to, and ingestion of the data into the data store.
- Using both financial and operational data for machine learning, including pricing changes or formula alterations.





- Including external data such as economic data, market data or competitive events to avoid “missing variable” errors.
- Scalability to meet the needs of the organization.

Automating the assembly of the data necessary to perform both the initial training and ongoing machine learning of the AI system is necessary to ensure that all the information needed is accurate, consistent and in the form and format necessary. There are multiple options for how this can be done, and organizations need to investigate their options on how best to execute the process, especially with respect to their specific data store. A manual approach is not an option because of time constraints and data quality issues.

The data necessary for training a system used by FP&A groups for planning, forecasting and analysis must include both operational and financial data if the system is to be accurate,



A broader set of data enables an AI system to find and define more useful relationships.

relevant and useful. A broader set of data enables an AI system to find and define more useful relationships. Stated simply, using cost data without units of input, production or output is useless for assessing performance or forecasting the future. Similarly, organizations need to use data about conditions outside the organization to identify drivers that influence results. Information about economic and market conditions, weather and calendar events (such as the number of days between the U.S. Thanksgiving and Christmas, the Lunar New Year or Ramadan) are

easily obtained. Industry data specific to the organization, its suppliers and customers also can be used to improve forecast quality and the relevance of recommendations. However, our research shows that only 35% of organizations regard economic data as important for their analytic efforts. For market data it is 30% and just 27% say that census and other government demographic data is important. The amount of data used by a company for training its AI system is likely to be large because it will cover multiple years of monthly, weekly or daily data, it will contain considerable detail and it will include information from a wide range of systems. For that reason, the data store must be able to scale to the current and foreseeable needs of the organization.

Use AI for Improved Performance and Competitive Advantage

Early on, extravagant claims were made about AI automating anything and everything. However, over the next five years, software aimed at the finance department will incorporate a steady stream of incremental innovations that will enable FP&A groups to improve their operations and empower them to support improved performance in their organization through more timely and accurate forecasts, plans and analysis. Much coverage of the topic has dwelt on the importance of data science, giving the impression that everyday use of AI



requires the skills of data scientists. On the contrary, software is being designed specifically for ordinary business users. Those FP&A groups that focus on utilizing AI capabilities immediately as they become available (while understanding its limitations) will be in a position to enhance the competitive position of their entire organization. To do so, they will need to establish a solid foundation for utilizing AI by having all the data they need to train their AI-enabled system and support ongoing machine learning.

About Ventana Research

Ventana Research is the most authoritative and respected benchmark business technology research and advisory services firm. We provide insight and expert guidance on mainstream and disruptive technologies through a unique set of research-based offerings including benchmark research and technology evaluation assessments, education workshops and our research and advisory services, Ventana On-Demand. Our unparalleled understanding of the role of technology in optimizing business processes and performance and our best practices guidance are rooted in our rigorous research-based benchmarking of people, processes, information and technology across business and IT functions in every industry. This benchmark research plus our market coverage and in-depth knowledge of hundreds of technology providers means we can deliver education and expertise to our clients to increase the value they derive from technology investments while reducing time, cost and risk.

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