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Mastering data for better insights—and competitive advantage

Sooner or later—but probably sooner—many CFOs inevitably confront the need to adapt and embed advanced data-management capabilities throughout their organizations.

That need to manage data more effectively—upgrading from less advanced business intelligence and data warehouse architectures—may become a top priority as a result of a pressing competitive challenge or a strategic imperative to drive a digital transformation. And in many cases, this imperative may be accelerated by the pandemic. In the North American *CFO Signals*™ survey for the third quarter of 2020, for example, CFOs said that in response to the turbulent macro environment, their companies were making strong strategic shifts toward accelerated business digitization and remote/touchless customer interactions, as well as focusing on costs and productivity.

Still, as they assess the alignment of the company's data strategy with its business strategy, CFOs often can't help but gain a growing sense of just how complex the enterprise's data ecosystem has grown. That may be the result of accumulated "data debt," the upshot of too many short-term compromises made with little consideration of how well they would mesh in the long-run. The result can show up in data quality, data governance, or a lack of authoritative master data. Then there's the "data tsunami" that many companies face. Businesses now capture an inordinate variety and volume of data that emanates from various sources, ranging from legacy transaction systems to sensor-collected information, and traveling at various speeds. Moreover, within the same company, data is often stored, managed, and processed in different environments, including on-premises data centers and multiple cloud platforms.

In the past, addressing the problems required an ERP-sized implementation. But with some of the tools now available, such as machine learning (ML), natural language processing, and intelligent automation, CFOs can make a big impact without committing to an outsized upfront investment, prioritizing their steps based on business value.

In this issue of *CFO Insights*, we'll discuss some of those steps, as well as suggest the questions finance leaders can ask when assessing the maturity of an organization's data-management abilities. For example, how easily can you roll up finances across operating divisions/units? And what steps can CFOs take to improve the consistency and quality of data—while circumventing a large-scale investment or cross-company upheaval? The primary payoffs of these data efforts are manifold and can include mitigating data risk, creating direct business value—by leveraging the insights derived from the data to boost revenue, reduce costs, and improve operational efficiency—and enhancing management's decision-making ability.

Managing a valuable "off-balance sheet" asset

Data has often been compared to oil, a raw material of unequalled value in a digital economy. But extracting data alone doesn't constitute a competitive advantage. Companies need to cultivate a shared understanding of the data—examining its structure and isolating its common elements before committing to an overall strategy for centralizing it and enabling the required cross-functional access.

CFOs, whose functions likely feel the impact of flawed data management more than others, may have the most at stake in ensuring data integrity. From compliance to financial reporting to analytics, a finance leader's value-add often depends on delivering the right information in the desired format at the ideal time. Reconciling information or data across multiple systems is time-consuming, reducing data flexibility and possibly requiring manual intervention. From an M&A perspective, any data architecture needs to be sufficiently scalable to integrate efficiently with another entity.

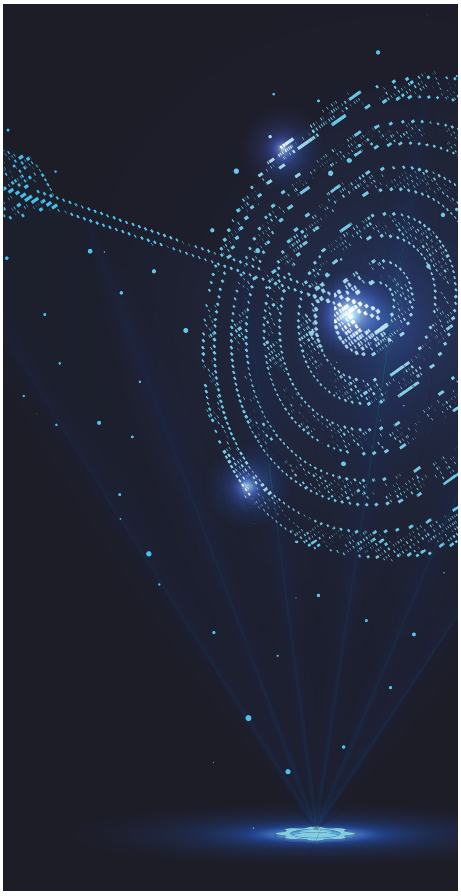
Diagnosing the company's data-borne ills starts by making an assessment of its existing data-management maturity. Perhaps members of the finance function want to analyze revenue and profitability by customer rather than simply according to product. Or they've wondered why the business can't easily match up its sales, costs, and customer data. New advanced enterprise data-management tools with ML and intelligent automation capabilities can accelerate the ability to provide a unified, standardized architecture for data, uniting silos, improving data integrity, and eradicating inefficiencies and inconsistencies.

The responsibility for improving data management may reside within the CFO's or the COO's domain; either way, IT should also be included, as well as the CEO. In some industries (e.g., financial services) more than others (e.g., life sciences), acquiring—or anointing—a chief data officer (CDO) has become the norm. Such a position can serve to create and oversee a governing body consisting of stakeholders from key functions, fostering a cross-functional perspective.

But CFOs still need to take an active role in issues that touch finance, ensuring that there is clear alignment on major outcomes and projected ROI. The participating functions should collaborate in developing a robust road map, setting out a detailed program with milestones that relate to previously determined outcomes. Given the crucial role that data plays in most businesses, revamping (or establishing) management capabilities will likely have to proceed in phases. As with any companywide change, "quick wins" can build support, boost momentum, and enable opportunities for self-funding follow-up initiatives.

In some industries, digital technologies have already reshaped certain aspects of how the finance function conducts business—lowering operating costs, effort, and risk while increasing the analytic value and transparency of financial data. The steps companies have taken within the finance function include:

- **Financial planning.** Some companies have shifted from spreadsheet models—supplemented by intuition—to automated, analytic-based models. They've also integrated cloud planning systems with data lakes to help address combined internal and external data needs. In addition, they've used technology to ensure consistent data categories and federated aggregation processes from the corporate core.
- **Finance operations.** Companies have created hierarchies that can handle evolving management, financial, and regulatory reporting. They've also streamlined workflows and automated reconciliations across sources to increase journal entry traceability and audit responsiveness. In addition, they've leveraged advanced analytics using ML for exception and risk identification.
- **Decision support.** Businesses have clarified information needs across business units, geographies, and source systems. Management has also unlocked insights using a big data or cloud-based data-staging environment so data is accessible anywhere it resides. In addition, they've created interactive reports that let users drill down through multiple layers of information.



When implementing any such data initiatives—including new tools, policies, and procedures—CFOs need to pay close attention to organizational change management. Management's strategic vision needs to translate into tactical priorities, with everyone understanding how leveraging insights will improve both the customer and employee experience. Otherwise, the pushback from those who have to implement the changes can slow the speed of progress, sub-optimizing the expected business benefits. Those who may have lost trust in the data, and therefore have begun to use it less, may need some cultivating.

From data to business insights

The stakes only get higher as companies dig more deeply into analytics tools, seeking to enable finance to extract more value in less time from the data it collects. To improve data quality and boost finance's core capabilities, consider starting with solutions using your existing systems, with an eye toward eventually leveraging new advanced data-management techniques, such as ML and intelligent automation, to enhance how data is developed, delivered, and consumed (see sidebar: "Using AI and ML to optimize data management"). You can make progress by answering these five questions:

1. **What insights do you need to run the business?** In other words, what questions do you need answered and which metrics would help answer those questions? This may involve financial results or nonfinancial information related to employees, customers, products, and market conditions.
2. **Which available data-management tools might help?** Being able to combine data from multiple sources and getting it to refresh automatically at the right frequency to meet the business need is the ultimate goal. But in the near term, see what you can start to gather easily through advanced data-management tools or even manually. Start with no more than 10 business questions so you can create visualizations of important results and explore relationships across data points. Once you begin automating your data, you can layer in more components to flesh out the picture.
3. **Is the leadership team aligned?** All key parties need to agree on what will be measured, how it will be defined, who owns it, who will be accountable for producing it, and the business mandate being addressed. At heavily matrixed companies, getting everyone on board is no easy feat, but taking the time to do this up front is crucial.
4. **Have you identified—and involved—your data ecosystem?** As the company reaches certain milestones in, say, enabling automated data feeds with data quality controls, or acquiring new tools for insight-driven decision-making, take the opportunity to test out concepts in one market or line of business, create a prototype, and socialize your idea to gauge support. Be sure to involve those who will be using the new capability you plan to introduce.
5. **Is the workforce suitably equipped?** A data ecosystem based on next-generation digital technologies can demand new or enhanced workforce skills and capabilities, such as storytelling with data, problem-solving using advanced analytics, and business partnering. Consider ways to build or acquire the talent you may need. Employees need a frictionless way to tap into the data flow, understand how to use it—and then act on it.

Using AI and ML to optimize data management

Having a robust data infrastructure is foundational to all AI-related projects. So it's not surprising that AI adopters selected "modernizing our data infrastructure for AI" as the top initiative for increasing their competitive advantage from AI, according to Deloitte's State of AI in the Enterprise, 3rd Edition (2020). To optimize your data infrastructure, you can use AI and ML numerous ways, as shown in these examples.

	Business problem	AI/ML solution
Life sciences	To prepare for a complex divestiture, the company had to determine what unstructured data to transfer to the separating entity and what to retain in-house.	**Used ML to triage unstructured data based on ownership, content, and usage; grouped data into "leaving" and "staying" buckets; and marked sensitive information for special treatment.**
Food services distributor	Following a series of acquisitions, the company was unable to identify overlapping customers and vendors listed in legacy and acquired databases.	**Used ML-enhanced clustering algorithms to identify common records across databases. The cleansed data, in turn, provided valuable insights for coordinating go-to-market strategies and margin-improvement initiatives.**
Aerospace and defense technology manufacturer	The company needed to optimize its inventory management processes to ensure customers' aircrafts would be mission-ready on schedule.	**Used dynamic algorithms and metrics visualization to address common data quality issues and data mismatches. Also created ML-based statistical models to improve data output validation.**

Source: *Crunch time: The CFO's guide to data management*, Deloitte Development LLC, 2020

Continually boosting data asset value

Armed with these insights, companies can implement new technologies in stages, investing incrementally in SaaS rather than ordering servers. In the process, consider applying the following practical lessons:

- **Start small.** Test your ideas initially in one location with a clearly defined scope.
- **Fail fast.** If something is not working, fix it or move on quickly so you do not lose momentum.
- **Focus on customers.** Engage end users early on to ensure a new capability meets their needs and that they understand how it will improve their experience.
- **Promote adoption.** Have a rollout strategy that encourages people to adopt the new solution, as well as employee "evangelists" who can testify to the

Also, if it's feasible, companies can even test different approaches in different markets, comparing results to judge what's best for the long term. Yes, there's an expense associated with doing that. And, yes, it may add to the overall timeline. But the downside pales in comparison to the cost of rolling out a company-wide advanced data-management and analytics program that proves wrong for the business.

In any case, companies have an incentive to get started right away: the volume of data is growing faster than the speed at which many businesses are tackling the issues associated with managing it. By narrowing that gap, companies can distance themselves from their closest competitors.

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