
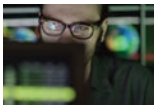







How AI will transform the CFO's role

As smarter automation takes over rote tasks and AI is deployed alongside analytics, finance leaders will become instrumental in guiding business strategy.

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Introduction

In every industry, chief financial officers (CFOs) must contend with a variety of challenges, including sluggish growth, new competitors, an evolving workforce, changing business models, exploding amounts of data, greater regulatory complexity and a persistent need to cut costs. In this environment, it's no longer enough for CFOs to be the financial stewards in their organisations, ensuring finance reports are accurate and complete. In addition, they now need to harness the data flowing through the organisation to take on a more strategic role, helping fellow business leaders see not only where the organisation stands at any given moment, but also where it can and should be next week, next month and next year.

Technologies such as robotic process automation (RPA), intelligent process automation (IPA) and artificial intelligence (AI) — combined with various analytics approaches and tools — can help CFOs move forwards on this path and ultimately transform the entire finance function. According to PwC's Finance Effectiveness Benchmarking Report 2019, 61% of finance leaders believe that finance functions could become more effective with improved technology.¹

In fact, CFOs are uniquely positioned to lead a broader organisational shift into digitisation. They have insight into all business units and how they interact with one another, helping leaders from all areas of the organisation understand the why of finance data — not just the what — and ultimately leading to smarter business decisions throughout the enterprise.

There's a logical sequence for how CFOs can lead this change. It starts with basic automation tools to handle routine, predictable processes like reporting and reconciliation (leading to increased efficiency and lower costs), and to improve the performance of a given function (improving accuracy and speed). After standardising and automating repetitive tasks, the finance department can start applying more advanced tools such as AI and analytics to interpret data, more accurately predict what will happen according to a variety of factors, and plan for various scenarios. In other words, CFOs would follow a path starting with descriptive analytics and proceeding through more accurate diagnostic, predictive and prescriptive analytics (see exhibit, next page).

¹ PwC's Finance Effectiveness Benchmark Report 2019.

Exhibit: The path to digitising the finance function



By progressing in this linear manner, the finance function can generate the momentum to apply those solutions to other parts of the business. At public utility Duke Energy, based in Charlotte, North Carolina, for example, CFO Steve Young says, “We started in finance, with a few software robotics that now perform bank reconciliations, account reconciliations and financial statement compilations. A lot of those tasks were done quickly. So, I could say, ‘Hey, we’re doing it here in finance. You need to start doing it in your department.’”²

Every CFO will have a different approach, based on the industry that the person works in and the level of digital maturity in the organisation. But you’re more likely to succeed if you focus on five priorities:

- Set clear aspirations for target outcomes and benefits
- Directly involve frontline employees in designing and implementing solutions
- Define your area of focus across people, processes and performance
- Put the right governance structure in place, both for data and for AI overall
- Prepare your workforce

² Minaya, E., and Shumsky, T., 13 May 2019. “How Automation Is Changing the Workplace at Duke Energy,” *Wall Street Journal*.

1

Set clear aspirations for target outcomes and benefits

For many CFOs, plans for where to implement automation and AI will be closely linked to broader digital transformation goals for the entire enterprise. As PwC's latest Digital IQ survey showed,³ those goals can be broken into four categories, which are increasingly complex but also hold the potential for unlocking more value:

- Efficiency — executing existing processes faster and at lower costs
- Effectiveness — executing those processes better (for example, at higher levels of accuracy)
- Expansion — taking on new tasks or entering new markets
- Disruption — finding new ways to create value, such as business model innovation

RPA is well suited to the first two of these objectives — increasing efficiency and effectiveness by automating time-consuming finance functions. For example, the subsidiary of a global reinsurance firm implemented two bots to increase the speed and accuracy of certain routine finance processes. One bot converts broker statements into a data format that allows them to be processed automatically. The other supports quality checks in the consolidation process.

To tackle more complex objectives like expansion or disruption, organisations need to use more advanced tools, such as AI and machine learning. These tools will help them make better decisions and uncover new market opportunities. For example, Microsoft sought to reduce its risk exposure and ensure compliance with the Foreign Corrupt Practices Act (FCPA) in its dealings with global resellers.⁴ The resulting analytics-based solution conducts real-time compliance reviews during the life cycle of a sale. Using RPA, IPA, machine learning, AI and data visualisation, the company can flag potential corruption risks by identifying trends, patterns, relationships and anomalies in individual sales. Human staffers can review transactions flagged by the analytics solution and take action — including cancelling potentially risky deals before they're finalised.

³ PwC Digital IQ 2018: "The no-excuses way to win in a digital world."

⁴ PwC Case Study: "Prioritising ethics and integrity: How Microsoft uses data analytics to fight corruption."

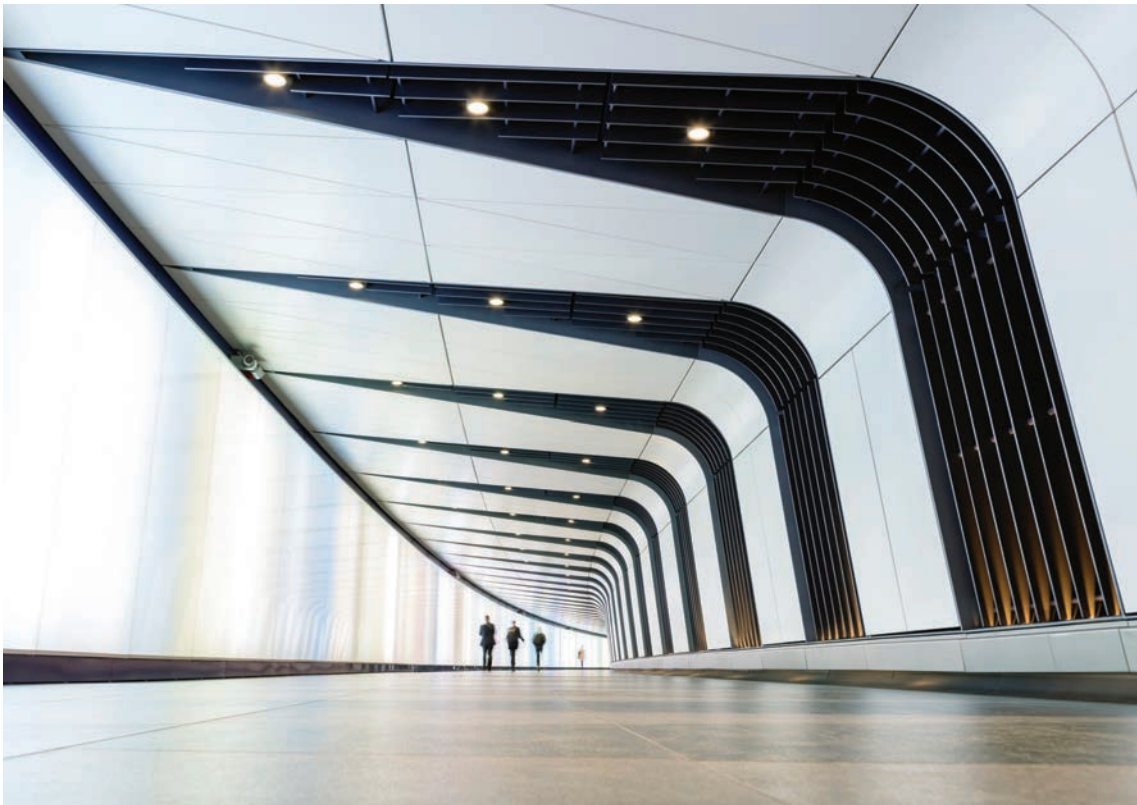
Similarly, financial institutions are increasingly turning to AI to combat money laundering and other financial crimes. In one case, regulators directed a global bank to review about 20m business customer transactions going back several years. The bank partnered with an AI software developer to analyse the transactions, identify patterns and flag outlier behaviours, which human staffers could then investigate more closely.



Read more

[Prioritising ethics and integrity: How Microsoft uses data analytics to fight corruption](#)

[PwC's Finance Effectiveness Benchmark Report 2019](#)



2

Directly involve frontline employees in designing and implementing solutions

From a cultural perspective, CFOs need to understand that automation and analytics can seem like a disruptive threat to many employees. During the implementation phase, organisations need to position the new tools as an opportunity to do more interesting, value-creating work, rather than something that will replace human staff. In many cases, organisations can overcome resistance and generate buy-in by giving people the training, tools, autonomy, incentives and appropriate governance structures to get involved in designing and implementing solutions.

Citigroup offers an example of employee-led innovation. As part of a broader strategy initiative, the global financial-services company gave a subsection of its finance workforce a hands-on role in developing and deploying a digital tool kit that used RPA, data visualisation and natural language processing (NLP, a way for AI systems to understand human speech patterns and enable human-machine communications). This has allowed employees to automate everything from simple finance reporting to more complex activities, such as generating management commentary about financial results.

Meanwhile, insurance companies are starting to tap the combined expertise of actuaries and data scientists to build predictive analytics models that help them improve in various areas, including underwriting and pricing life insurance plans, risk and capital management, policyholder engagement, and reserves (the money set aside to pay policyholders who have filed or are expected to file legitimate claims on their policies).⁵ These initiatives capitalise on the insights of actuaries, who have always been an elite group at insurance companies, and empower them to do more with data and analytics.



Read more

[OrgDNA: The key to unlocking your company's potential](#)

[Three governance considerations to unlock the power of AI](#)

5 PwC, March 2018. ["How do actuarial and data science skills converge at life insurers?"](#)

3

Define your area of focus across people, processes and performance

Automation for its own sake isn't the objective. CFOs should use automation as part of a broader transformation to a modern finance function, balancing their focus across people (upskilling and creating new career paths that improve the employer value proposition of the finance function), processes (making that function more effective) and performance (generating bottom-line financial results for the company). There is clearly a lot of room for improvement: as recently as two years ago, 60% of the global organisations surveyed for PwC's Finance Effectiveness Benchmark Study were still working with Excel spreadsheets in an effort to gain year-end financial insights.

The corporate tax team at medical device maker Boston Scientific took this challenge on directly. The team had been burdened by manual tasks that were so time-consuming employees often had to work overtime during busy periods. In addition to paying overtime expenses, the company was finding it difficult to retain top tax talent. Seeing an opportunity to free their team from repetitive work by automating a variety of tasks, tax leaders tested the possibilities with a few processes at first, then built on those successes by automating others. The automation software they implemented reduced the time required to complete manual tasks by 85% and created a better work-life balance for employees in the corporate tax and finance functions. Moreover, establishing an RPA centre of excellence helped ensure that tax leaders could scale up automation and the company could replicate their team's success elsewhere.⁶



Read more

[PwC case study: Boston Scientific boosts efficiency and job satisfaction with robotic process automation](#)

[How do actuarial and data science skills converge at life insurers?](#)

⁶ PwC case study: "Boston Scientific boosts efficiency and job satisfaction with robotic process automation."

4

Put the right governance structure in place, both for data and for AI overall

Data is fuel for automation initiatives — without data, nothing runs. PwC's Finance Effectiveness Benchmarking Report 2019 found that top-performing finance functions spend 75% of their time on data analysis.⁷ Your goal should be to create a governance structure that lets finance pull data from the right sources, ensure that it is accurate and clean, and give access to the right people at the right time — when that access can lead to better decisions. Don't overlook external, unstructured data that you can integrate with your internal data to help you provide strategic guidance to the business in order to mitigate risk and ensure compliance, for example, or economic data to run what-if scenarios and feed predictive analytics.

Helping business leaders use the data often requires presenting it in new ways, through visualisations, dashboards and other tools. This may mean you need to provide dynamic self-service dashboards that allow business users to create custom comparison views and link to more detailed data to give them the necessary context for specific data sets. Governance also requires restricting access to data in order to prevent sensitive information from getting into the hands of people who don't need it.

More generally, governance applies both to the broader concept of AI and to the models themselves. As AI begins to affect all areas of the business, including marketing and HR, companies need to provide structures for model governance. Several companies have already generated headlines by deploying AI that replicated hidden biases in their data, was difficult to control or was prone to being fooled. Part of responsible AI is ensuring end-to-end governance, from definition of an organisation's AI strategy, through training, testing, deploying and monitoring AI and the data used to train it.



Read more

[A practical guide to responsible artificial intelligence \(AI\)](#)

[Five standards for responsible AI use](#)

⁷ PwC's Finance Effectiveness Benchmark Report 2019.

5

Prepare the workforce

The best technology will not deliver results if a CFO doesn't have a workforce with the right capabilities. Why not? Because technology alone is never the solution. Employee adoption — supported by appropriate training and a mechanism for continuous improvement — is what makes the difference. Structured training and upskilling programmes can help give frontline employees the skills they need in a finance function where more tasks and processes are automated.

Although few transaction-level employees are likely to be transformed into data scientists, their expertise should nonetheless be mined as thoroughly as possible. Their real-world insights into how processes and tasks actually get done can make them a useful interface between the finance team and the technical team implementing the automation tools. Moreover, such workers often have valuable suggestions about where to start. One German company developed a 'build your own bot' programme in which nontechnical finance staff identified specific processes that could be automated to increase efficiency. In other words, these employees are not coding bots, but they're highlighting ways to make bots more useful.

This is not to say you should assume a lack of technical skills in your ranks, either. We surveyed the members of a client's finance team to get a better understanding of their skill sets and were pleasantly surprised to learn that 20% of the company's finance employees had some coding experience.

Some finance organisations may need a culture shift among their employees as well. In the past, finance rewarded adhering to rote processes and avoiding risk. Finance has traditionally been concerned with certainty and accuracy of historical data. The changes you want to encourage, ideally by adjusting your own perspective, should help your team cultivate a more exploratory, proactive mind-set.



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Conclusion

When CFOs begin automating rote processes, the finance function runs more efficiently and effectively, with greater speed and accuracy and lower costs. And when CFOs start applying such advanced tools as AI, they shift from descriptive to predictive and prescriptive applications, helping finance anticipate changes and becoming a true source of business intelligence in the organisation. These tools do not replace human staff but rather augment them.

For CFOs, the only question regarding automation and AI is how to begin. Implementing technology today is a different matter than it was in the past. It happens faster, and it prioritises real-world pilots and experimentation rather than planning and deliberation. For CFOs, after thinking through the points above, the final step is to embark on some initiatives: identify use cases involving automation through straightforward tools like RPA, move into more ambitious AI-powered initiatives and build on that experience over time. Only by doing so will you begin to create and equip a truly modern finance function, with the capabilities to compete today and into the future.

Contacts



Bob Woods

Partner, PwC US

+1-206-398-3341

robert.f.woods@pwc.com

Bob Woods is a finance transformation leader for PwC US in the technology, media and telecommunications sector. He specialises in consulting and risk services to public and private client CFOs, COOs and CIOs in the high-tech, software, cloud and Internet industries. His experience includes business and digital transformation initiatives across finance, operations, IT, HR, customer support and infrastructure functions, particularly their impact on the overall finance function and the role of the CFO during business model transitions to SaaS and cloud services.



Gori von Hirschhausen

Partner, PwC Germany

+49-89-5790-6698

gori.von.hirschhausen@pwc.com

Gori von Hirschhausen is the initiative leader for PwC's CFO think tank, Future of Finance, and finance consulting leader in Europe. Throughout his almost 20 years in management consulting, he has supported a large number of global corporate transformations. He is a well-known and esteemed keynote speaker at client symposiums, CFO conventions, academic institutions and universities around the world.



Anand Rao

Principal, PwC US

+1 617 530 4691

anand.s.rao@pwc.com

As the global and US leader for PwC's artificial intelligence practice, Anand leads efforts to bring innovative AI methods in machine learning, deep learning, natural language processing, simulation and reinforcement learning to practical client problems to enhance and augment human decision making. He advises clients in financial services, insurance, healthcare, auto, and technology companies.



Brian Furness

Partner, PwC UK

+44-0-77409-23515

brian.j.furness@uk.pwc.com

Brian Furness is the global leader of PwC's finance consulting business across all industry sectors. He advises CFOs and their finance teams on a broad range of topics, including operating model design, technology and automation within finance, how to build an efficient and effective finance team, regulatory compliance, process redesign/standardisation, developing talent within the finance team, internal and external reporting, and financial control.

He regularly speaks at conferences and CFO events and is the coauthor of PwC's Finance Effectiveness Benchmarking Study.



Florian Puppe

Manager, PwC Germany

+49-160-530-3724

florian.puppe@pwc.com

Florian Puppe is a management consultant with a strong background on back-office transformation and digital finance. He is part of PwC's Future of Finance initiative and is leading the finance innovation lab in Europe.

The following PwC colleagues also contributed to this report:
Michael Baccala, Hamish Clark, Michael Graham, Kevin Kroen,
Abhishek Mitra, Austin Morris and Stephen Pillsbury.

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