

E-BOOK

CFO 3.0 – Digital Transformation Beyond Financial Management

Discover How Your Business Can Leverage Digitalization to Challenge the Status Quo and Establish Market Leadership



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Digital Transformation Beyond Financial Management

Executive Summary



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Digitalization is not new. It has just meant different things throughout the years, as we made the shift from typewriter to computer, from fax to email. Every technological evolution marks an uptick in productivity and performance. And the most successful and resilient businesses make sure they are ready to accept the challenge to change and adapt.

The digitalization of the finance industry is fundamentally changing how the accountancy profession is conducted in its entirety. But rather than replacing traditional systems, we are adapting business models to utilize technology and provide better systems and services for our customers.

In the beginning we had **CFO 1.0**, the first edition of the chief financial officer who would keep the company books up to date and reconcile profit and loss. A historian, they were forever looking in their rear-view mirror—as financial reporting was about showing what happened yesterday (or last week, or the previous month), rather than forecasting potential.

Today, most companies exist in a state of **CFO 2.0**, a situation where we analyze data in the present. We have some great tools to help us, such as automated finance processes, financial management technology and sophisticated data sets. Living in the present, we are staring impotently at the road ahead of us.

Enter **CFO 3.0**. A new era where the amalgamation of Robotic Process Automation (RPA), Artificial Intelligence (AI) and Machine Learning (ML) delivers us to a new nirvana. CFO 3.0 is a new breed of trailblazing finance leaders who use data and emerging technology to create a vision for the future. They embrace new techniques, such as predictive analytics, to drive digital transformation to new frontiers of its capabilities.

To truly understand this transition from CFO 1.0 to CFO 3.0, at Sage we commissioned a study that enabled us to better comprehend the opportunity and challenges our fellow finance professionals are experiencing. We spoke to more than 500 U.S.-based CFOs to gain their perspectives on what their future job descriptions might look like and get a feel for the real impact tech is having on their day-to-day tasks. In our report, **CFO 3.0 Digital Transformation Beyond Financial Management**, we share your stories

Many of you told us that your job has changed faster in the past five years than at any time in the past. And although many have embraced automation and the latest in financial management tools, you shared that you, too, suffer from chronic time pressure and bureaucracy. As a CFO, you are spending too much time on day-to-day tasks due to manual processing. At the same time, you also have to grapple with and master the latest in technology developments.

There is no doubt that the mindset and mentality of Millennials and Generation Z is also driving change. They enjoy working and interacting with the latest technology. They think nothing of remote working or adapting social channels to the workplace. To attract and retain the best talent, including the newest generation, you need to adopt the same technology and attitude—it's what is required today to be a top organization.

As the CFO, you are in a unique position to see across the business in real-time. You now have the freedom to become visionary business leaders, strategists and the essential confidant to the CEO. And for those of you looking for a new challenge, the door is open to taking a larger leadership role within your company.

This is the new era – enter the world of CFO 3.0.

We hope you enjoy reading the report as much as we relished the opportunity to engage with our peers, customers and future leaders to understand the industry from your side of the desk.

Chapter One

CFO 1.0 — Driving Digitalization

Those at the start of their accounting journey are at the level of CFO 1.0. This is the traditional model of the Chief Financial Officer, who would keep track of cash flow and financial planning as well as analyze the company's financial strengths and weaknesses. Many of the day-to-day tasks are still manual and any corrective actions they propose for the running of the business are based on out of date statistics and figures.

The CFO 1.0 is, for all intents and purposes, looking backwards, in the rear-view mirror—running processes and making use of financial reporting tools that traditionally show what happened yesterday (or last week, or the previous month). Their focus is on reporting accurately what has happened, and often this is their only focus.

But in the last few years we have seen a transformation in the way people work. They are mobile, social, flexible and adept at change. The Millennial generation is always-on and data-savvy, open to sharing their information with the world. They trust data and expect technology to provide a solution for almost everything.

The effects of the changing forces of digitalization cannot be underestimated. During the past decade, many jobs for which people were trained and educated have significantly evolved because of digital technologies.

It's not just increasing interaction between Baby Boomers and the digital-native Millennials and Gen Z, who often lead adoption. It's also a rapid adaptation of technology that's more and more intuitive in the first place. Importantly, we largely trust the technology.



This is the mindset that is changing the world. It has led to the rise of challenger banks that own no branches; rental companies that own no rooms; transport companies that own no... transport. As companies change, so too has the role of the CFO. The role has undergone significant changes in the last five years – probably more than seen in the last 50 years put together.

Say their job has changed in the past 5 years.



Believe CFOs drive digital transformation in their business.



Facing increased demand to provide overall business counsel



0%

100%

Millennials have often led the older generation in their adoption and use of technology. But there has been significant growth in tech adoption since 2012 among the older generation, too – particularly Gen Xers and Baby Boomers.



Silent Gen
Born before
1945



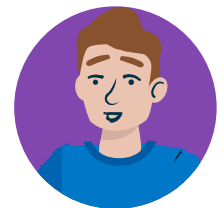
Baby Boomer
Born between
1946 - 1964



Gen X
Born between
1965 - 1979



Millennial
Born between
1980 - 1994



Gen Z
Born between
1995 - 2015

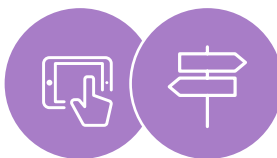
Research indicates that 93% of Millennials own smartphones but are almost identically matched by Gen Xers with 90% of this generation having smartphones in their pocket. Only the Baby Boomers and Silent Generation begin to tail off in terms of mobile phone adoption.

The digitalization of the finance function

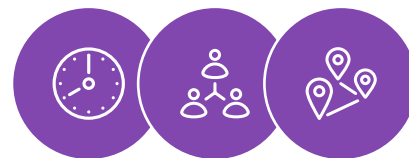
There is a big difference between digitization and digitalization. They sound similar but the subtle difference is crucial for ensuring business success. Digitization is simply the conversion of analog to digital, such as switching a manual ledger to Excel.



Digitization is putting roadmaps onto CD-ROM



Digitalization is creating early versions of Google Maps



The future is Waze: the incorporation of real-time and event interpolation for a predictive (and recommended) future.

Digitalization, on the other hand, is how digital technologies and digitized data impacts how work gets done, transforms how customers and companies engage and interact, and creates new (digital) revenue streams. It is the process of creating an environment for digital business, whereby digital information is freely flowing at the core of the business.

This is the crucial intersection between the CFO 1.0 and CFO 2.0 – the latter have embraced the move towards a digitalization of their entire business processes. It is not a replacement for the traditional systems but integration of technology across all areas of a business changing how they operate and deliver value to customers – whether these are internal or external changes.

Digitalization is now a realistic goal for the finance function because of a range of technological advances. These include the widespread availability of business data; teams' ability to process large sets of data using now-accessible algorithms and analytic methods; and improvements in connectivity tools and platforms, such as cloud computing.

It is the responsibility of CFOs and their teams to be the gatekeepers for the critical data required to generate forecasts and support the CEO's strategic plans and decisions — among them, customer demand, order fulfilment, supply chains, and cash flow, as well as real-time industry and market statistics.

It's clear from the **CFO 3.0 - Digital Transformation Beyond Financial Management** report findings, there is more and more demand for real-time data and a digitalization of the finance function. CFOs are increasingly being called upon to provide strategic business counsel. They can't afford to be focused on the traditional role of simply running the day-to-day business accounts. Competitors who are more innovative and disruptive in their approach will steal a march on companies who fail to adapt to the times.



What are the driving factors that have transformed the role of the finance professional in the past 5 years?

46%

Increased demand to provide overall business counsel

44%

The availability of real-time data

41%

Compliance requirements and government regulations

39%

Overall digitalization of the industry

Today's CFOs are being asked to be the drivers of change. They are the ones responsible for digital transformation. They need to help organizations navigate through this transition given they are at the nexus of productivity and performance decision-making.

This is driving them to the era of CFO 2.0.

Chapter Two

CFO 2.0 – The Evolution of Finance

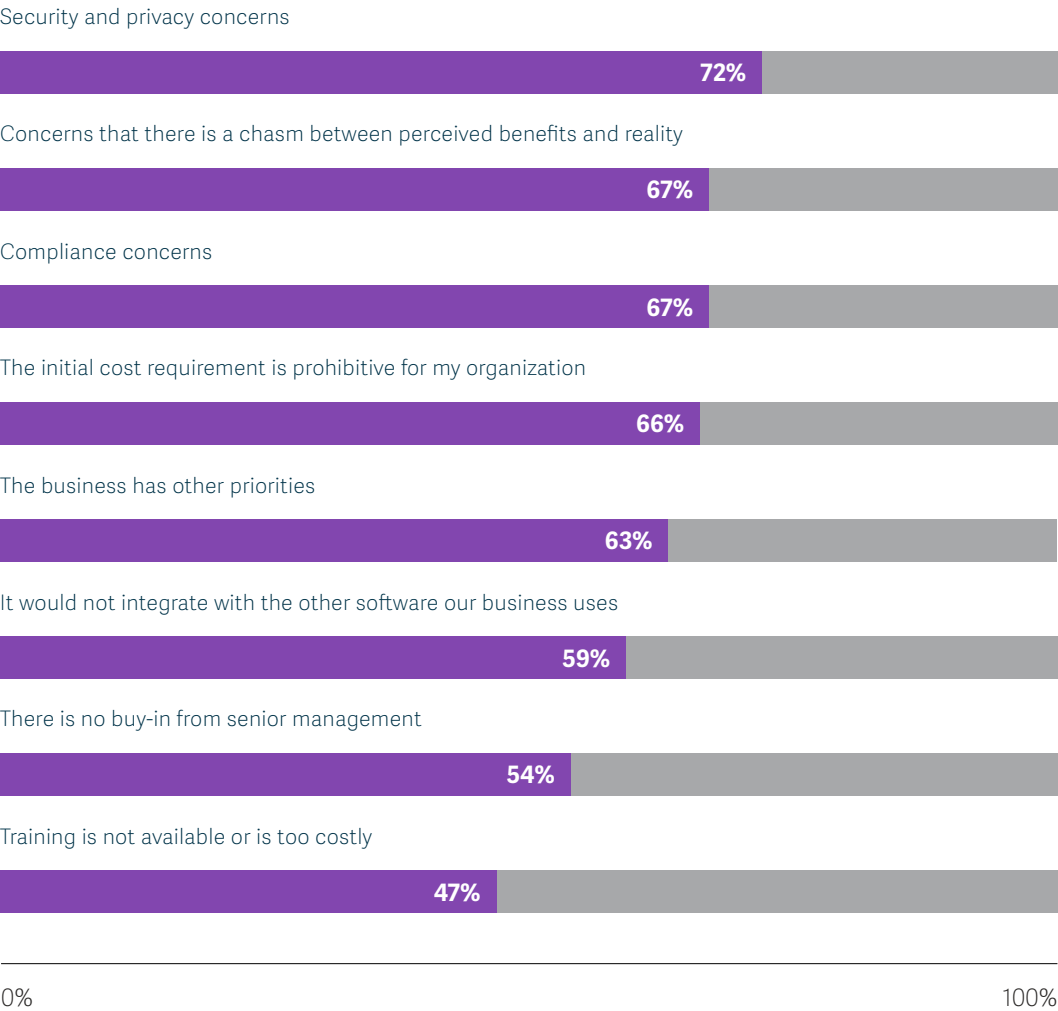
When moving into the era of CFO 2.0, the finance team has many of the most modern tools available to help automate the accountancy function. Cloud-based Financial Management and business intelligence tools, and a host of new user-friendly finance apps, enable accountancy teams to run professional, up-to-date operations. They can now analyze data in the present time.

Many of the manual processing and time-consuming tasks from the days of CFO 1.0 have been consigned to the trash can. This is accountancy in the present time, when books and ledgers are as up to date as they can be.



Virtually all (98%) of financial decision-makers say Financial Management Tools can benefit their business. This is split evenly between on-premises (48%) and cloud-based systems (51%).

Reasons for not using Cloud-based financial management systems

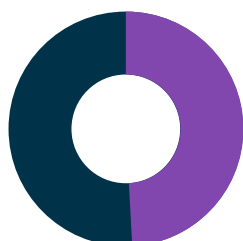


Gartner predicts that, through 2025, at least 99% of cloud security failures will be attributable to user error. The analysts suggest rather than ask “is cloud computing secure?”, — businesses should be asking, “am I using cloud computing securely?”, more companies now seem comfortable in adopting public cloud hosting than using on-premises systems, representing a tipping point in terms of cloud usage and adoption.

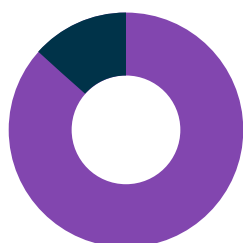
When asked what is holding organizations back from embracing greater innovation in Financial Management (FM), roughly 4 in 10 (42%) cite the overwhelming amount of manual or duplicative data entry as a major challenge when they try to embrace more innovative FM approaches. A further 45% cite job security as a major challenge when they try to embrace more innovative FM approaches. More than 8 in 10 (82%) are also concerned their organization’s culture is not ready for a greater use of automation.

Even with the automation of tasks however, most heads of finance say that time management and administration are still their biggest worries.

They need technology solutions to resolve their most repetitive and time-consuming tasks. Given this additional freedom, they will have the energy and resources to be more creative and strategic to provide the consultation the CEO is looking for from the finance function.



47% state that time management is the most challenging aspect of their job



89% agree that the amount of time spent on financial administration has a negative impact on team productivity

Upskilling to meet new demands

Finance professionals will have to upskill to rise to their added responsibilities. They will have to adapt the use of their time for more strategic business pursuits and be adept at employing broader business skills.

This not only includes technical skills such as data analytics, CFOs need to be adaptable. It pays dividends for those CFOs who have spent time outside the finance functions, in marketing or operations for instance. Analyst McKinsey says 39% of CFOs hired since 2009 have experience outside the finance function, compared to 17% prior to 2009.

McKinsey's research also shows communication is a vital skill for CFOs, as their roles increasingly require influence and team leadership. Not only are they responsible for investor relations, but five functions, other than finance (including risk, regulatory compliance, and M&A transactions and execution, IT, digitalization and cybersecurity) now report to the CFO. Innate human skills such as creativity are also highly valued when it comes to finding innovative ways to utilize data to achieve growth.

CFOs, after all, are alone in a privileged position to have a holistic view across the whole of the business. They can now see themselves as business leaders and take a unique position as the consul and right-hand adjutant to the CEO. Of those who say their organizations are already employing automation, nearly all (92%) say it has improved productivity. Nearly the same number are comfortable (93%) with technology performing more of the day-to-day accounting tasks in the future.

With change, however, comes a certain amount of uncertainty. Almost half (45%) of CFOs said concerns over job security is one of their major worries.

Experts predict that AI will create far more jobs than it will replace. The emphasis is on “skilled” employees. Artificial Intelligence will provide job opportunities that didn’t exist before – with data analysts gathering vast amounts of information and developing their strategic input to power business’ success.

If CFOs are on top of the latest technologies, such as AI, ML and RPA, then their skills will be in high demand.

The benefit of automation is finance workers of the future will spend far more time on analysis, prediction and decision-reporting than manual accounting or data processing. They will need core competencies in analytical skills, digital technologies and automation. According to *Forbes*, those with AI, ML and data skills will be the most in-demand next year. There is an estimated global workforce of less than 300,000 fully qualified AI specialists and yet millions of unfilled data analytics positions.

In order to succeed, finance teams will have to go through a period of transition – either retraining or upskilling those who lack core competencies or relying on ‘gig’ or contract workers to fill gaps where needed. Companies will need a degree of flexibility and versatility to meet the changing needs of the finance function.

Happy for tech to carry the weight and carry out daily accounting tasks



Are not yet culturally ready for more automated technology



Concerns over job security as a major challenge faced by organizations



Manual data entry is a major challenge when trying to embrace more innovative FM approaches



0%

100%

The good news for finance chiefs is they are the architects of change. The responsibility of driving through wholesale IT upgrades for the finance function and beyond will ultimately fall to the CFO. They alone will know what data they are looking for and lead the charge in employing technology that will holistically benefit the business.

Finance chiefs need to use data tools to provide the answers a CEO is looking for in how to effectively run a thriving and successful business. It's all there, hidden in the data. But finance leads need the right tools to exploit and utilize it to their best advantage. It is their responsibility to drive that change.

CFOs on top of the latest technologies, such as AI, ML and Robotic Process Automation will be in high demand.



Around three-quarters of financial decision-makers drive digital transformation in their business.

CFOs are in a position to exploit the opportunities they have to be strategic decision-makers in their organizations. Decision-makers are well positioned to help educate their stakeholders, not only to correct misconceptions but also because they recognize the immense value data can deliver to their role. Key areas they see positively impacted by emerging tech include: forecasting / strategic financial planning (73%); mitigating cybersecurity risks (72%); automated period-end reporting (72%); greater efficiency / accuracy; enhanced customer experience (71%); and data governance (70%).

CFO 2.0 is the position a lot of companies find themselves in today.

They are familiar with automation tools such as RPA and Field Marketing Organization (FMO). Although time management and manual processing are still a concern, CFOs are beginning to use finance in an increasingly strategic way.

Although CFOs worry that innovative FM approaches will impact job security and manual data entry, the overwhelming majority do appreciate the positive benefit it will have on business productivity. At the same time, CFOs are happy for tech and automation to carry the weight of daily accounting tasks. There seems to be a psychological barrier, however, to further adoption of more automated technology.

The CFO 2.0 has the information they need in the present time. It doesn't give them the ability to look ahead or predict what is going to happen with a business. Traditional accounting methods can only take them so far, in the here and now.

The major 'missing' skillset is their lack of understanding or appetite to embrace AI or ML techniques. This component will hinder the CFOs transition from 2.0 to 3.0. Adopting emerging technology will enable CFOs to take flight and soar into CFO 3.0 and enter a new era of financial accounting.

Chapter Three

CFO 3.0 – The Path to Visionary

If the first industrial revolution was the era of steam and waterpower, the second the introduction of electricity and assembly lines, and the third computerization, what is the Fourth Industrial Revolution?

The Fourth Industrial Revolution takes what was started in the third, with computers and automation, and enhances it with smart and autonomous systems fueled by machine learning.



In order to harness the transformative potential of the Fourth Industrial Revolution, business leaders will be called upon to meet the challenges of this new era.

It's all part of the digitalization journey started by CFOs on the path to automation. AI and ML however have the ability to take things so much further.

The World Economic Forum (WEF) report on The Future of Jobs says, "As the Fourth Industrial Revolution unfolds, companies are seeking to harness new and emerging technologies to reach higher levels of efficiency of production and consumption, expand into new markets, and compete on new products for a global consumer base composed increasingly of digital natives."

"Yet in order to harness the transformative potential of the Fourth Industrial Revolution, business leaders across all industries and regions will increasingly be called upon to formulate a comprehensive workforce strategy ready to meet the challenges of this new era of accelerating change and innovation."

New jobs for a fresh approach

Before the aircraft was invented, we couldn't have pictured the job of an aeronautical engineer or pilot. Just 15 years ago, most people didn't even know what social media was, never mind that you could build a career around it. Likewise, if five years ago someone told you they worked in the cloud, you might have wondered what on earth they were talking about. Cloud computing has been around in some shape or form since the early 2000s but has only become commonplace and understood fully in recent years.

We are beginning to see this phenomenon in AI teams and on job boards around the globe – with emerging technology creating roles that we wouldn't have dreamed possible even a few short years ago. A great example is the role of the "conversation designer" – before the rise in popularity of bots we would likely laugh at the possibility of someone being employed to "design conversations" – but today this is a very much needed role, integral to the success of AI.

The WEF report identifies four specific technological advances that accelerate change in the Fourth Industrial Revolution: ubiquitous high-speed mobile internet, artificial intelligence, widespread adoption of big data analytics, and cloud technology.

Our survey says that more than nine in 10 (92%) financial decision-makers are hopeful that AI and ML can automate mundane or repetitive tasks. Less than a quarter (24%) say they don't trust AI. They are also well positioned to help educate the decision-makers.

This period of change is a chance to grab new opportunities. If finance professionals master new skills, like AI and ML, they will master any financial position. With massive skills shortages in these sectors, they will command a unique position as companies seek to capitalize on the possibilities presented by new technologies.

The CFO reinvented

It is time to make way for the real revolution that lies before us. We are entering a new era where the incorporation of AI and ML bring us to a new phase of accountancy. The phase of CFO 3.0 is a new finance function that lets us see into the future.

Finance leaders have traditionally relied on intuition to guide their business decisions. This was based on many factors, such as experience, habits and other variables. The point is, there was no empirical science to guide them. While they had their place, they were so focused on day-to-day tasks and decision making they hardly had the time to look at the bigger picture and make logical decisions on the company's future.

Today, CFOs have all the information they need at their fingertips to make instant decisions about the company. They have become strategists, who base their outcomes on empirical data. There is no room left for intuition, guesswork or happenstance. There are solid data-led reasons behind every business decision.

Standing still is not an option. But with change comes uncertainty. The arrival of new technology solutions, such as AI and ML, empowers the finance team to create data-led strategies for the business. Basic skills, such as data entry and bookkeeping, will increasingly be taken over by automation.

AI is here to stay, and the truth is that all emerging tech will displace some jobs, yes, but, it will more likely change what human workers do – and more often than not, that will be for the better.

Finance decision-makers can foresee many possibilities for emerging technologies to support them, however;

92% of respondents agreeing Improving productivity is one of the biggest benefits to automation

Main areas of impact for emerging technologies

Forecasting and strategic financial planning



Prevent cybersecurity risks



Automated period reporting



More accurate decision making



Enhance the customer experience



0%

100%

**Continuous Accounting:**

Using technology to completely automate all of the routine accounting activities, with the ultimate aim of eliminating “the close.”

**Continuous Trust:**

Making the best use of technology to test and validate data flowing through the system. This supports real-time visibility with real-time trust.

**Continuous Insights:**

Freeing up teams from working in compliance, audits and month-end close to focus on more strategic activities within the finance team.

Continuous data reporting

One of the most crucial changes is CFO 3.0 will now center around instant updates. The true value of AI is demonstrated when humans and machines partner to achieve the desired outcome - incorporating real-time data to produce continuous trust, continuous accounting, and continuous insights from the accounting function, delivered to the business.

While CFO 2.0 provides the most up-to-date tools and data, providing embedded analytics and strategic analysis in real time, still has limitations. Finance professionals still need to know what questions to ask and have to go away and do the research they need.

The reporting tools in CFO 3.0 presents continuous updates on the status of the business. There may be an opportunity for a business, or a risk, where the CFO needs to be notified immediately. The benefit of real-time data is they make an instant decision based on the evidence in front of them. Finance professionals can look towards the future and be more strategic.

Increased use and understanding of the power of AI will ultimately lead to the end of “the close”—the revered quarterly periods of financial reconciliation – as accounts will be instant and completely up to date.

Almost three-quarters of respondents (72%) said AI would lead to the introduction of automated period-end reporting.

There is clearly a need for further support to enable the CFO 3.0 to evolve from accountant to visionary.

Professional progression

The CFO should already be in a position to be a strategic thinker, leader and visionary for the business. CFO 3.0 is about leveraging the technology at their disposal to enable them to do their job much more effectively.

CFOs can plan their progression to the top of the company hierarchy. Where, in the past, finance professionals focused solely on accountancy skills, the CFO 3.0 must have a much broader business management background that will equip them for the top levels of management.

The CFO 3.0 will use and analyze data to predict the future direction of the organization, uncover hidden opportunities, and close information gaps.

They will use their business experience and knowledge to become a trusted right-hand person to the CEO – or, if they decide their path lies at the helm of a company, to create a clear path for themselves to become a CEO. They are in a unique position. Not only do they have their finger on the financial pulse of the business, they alone have a unique holistic view of the entire organization.

This is the path for the modern CFO. The profession has completed its journey from CFO 1.0 (looking behind them), to CFO 2.0 (living in the present). Now is the time to embrace CFO 3.0 (anticipating the future). From that position, they can provide unique insights into the future of their organization or company – a position they alone can access – putting them in a powerful position at the apex of the executive tree.

It is time to embrace that change and become a true CFO 3.0 visionary for your organization. Good luck on your journey.



Transformation Beyond Financial Management

There is little doubt that the finance function will continue to evolve. The introduction of new technologies such as AI and ML has ushered in a new era of accounting that means we are only just beginning to realize the new possibilities that are ahead of us. In many ways, we need to harness those opportunities and empower finance teams to exploit the power of data analytics.

It will mean adapting to new skill sets and a fresh mindset. Much of the institutional intransigence will be down to being set in our ways. We get too comfortable in our established ways of working. But doing nothing means the world will move on without us. Finance professionals need to step up to drive cultural, attitudinal and organizational adaptations to establish a fresh approach to finance – one that is continuous, current and curious about change.

Data

It's no longer enough to look at past data and try and interpret it for the present day. Neither is it enough to go on experience, intuition and a little bit of luck. It is now possible to manipulate and harness data as it happens for a continuous oversight of the business. This leads to a scenario of continuous accounting, continuous assurance and continuous trust. It should eventually lead to the death of "the close" – the dreaded quarterly reporting period that all publicly listed companies must go through.

Finance professionals will now have the time and the tools to become visionaries for the business and provide real-time updates on its status.

Delivery

With change comes uncertainty. Employee roles will alter. Many will worry about redundancy and job changes. Companies have a responsibility to put people first and be responsible for upskilling them to adapt to new roles. Mastering new skills, such as data analysis, AI and ML will future proof any workforce from the potential downside of change.

Those who embrace change will have the advantage of a strong business infrastructure based around cloud technology. With that comes the ability to scale up or down according to the business needs. The finance function will live up to its evolving responsibility, harnessing data and analytics to keep an organization on top of every mission-critical decision it needs to make.

Our study proves beyond doubt that today's CFOs are taking a transformational role in the majority of businesses. Standing still is not an option. CFO 3.0 has the ability to enhance the finance function, elevating it way above its traditional reporting role, and positioning it as the nucleus of any business. With it, the CFO will take a central role in the strategic direction of any business or organization.

Welcome to the era of CFO 3.0.



About the Survey

Sage commissioned the online survey which interviewed 500 senior in-house financial decision makers, including CFOs, finance directors, accountants, and controllers across USA between the dates of **October 25 and November 20 2019.**

The industries represented fell into the following broad verticals: Professional/technical/scientific services, financial insurance and real estate, non-profit and healthcare, hospitality and manufacturing. Approximately 85% of respondents were from medium sized firms, while the remainder were from small businesses, 84% of respondents hold c-suite positions with 74% having a tenure of more than 15 years.

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