

A group of four business professionals (three men and one woman) are engaged in a conversation in a modern office setting. The background features a large, curved wall with a grid pattern. The man on the left is smiling and gesturing with his hands. The woman in the center is looking towards the man on the right. The man on the right is holding a tablet and looking at it.

Agile Finance Unleashed

The Key Traits of Digital Finance Leaders

ORACLE
Cloud

 **AICPA & CIMA**

Table of contents

Page

3	Foreword
5	Key findings
7	Introduction: The digital divide widens
9	Digital impact: The link between digital finance and enterprise digital success
16	Digital finance operating model: The key pillars of Operational Excellence, Digital Intelligence and Business Influence
17	– Operational Excellence
24	– Digital Intelligence
28	– Business Influence
32	Industry leadership: Digital finance by sector
46	Conclusion
48	About the survey Acknowledgements



Foreword

I've been hearing about artificial intelligence (AI) for years, but it was always a future promise. Today, thanks to high-performance compute capabilities and the ability of software to manage and analyze data, any CFO can now easily access cloud-based AI and machine learning technologies to build new, more agile finance operating models better equipped to support the demands of today's nonstop digital economy.



Safra A. Catz
Chief Executive Officer,
Oracle

When routine tasks can be automated and new data insights generated from connected processes, finance teams can be unleashed to focus on what matters most: identifying where the next growth markets are and how to capitalize on them.

Over the past five years, Oracle has partnered with the Association of International Certified Professional Accountants to understand how the operating model for modern finance is changing in response to digital disruption. We are proud to sponsor the Association's latest study, *Agile Finance Unleashed: The Key Traits of Digital Finance Leaders*, which examines the link between digital finance and market success in a global economy increasingly driven by customer expectations and technological innovation. This research couldn't come at a better time, given today's market volatility and the need for digitally-savvy CFOs able to help their companies address the business challenges that lie ahead.

Here at Oracle, we've always believed that the finance function is a true co-pilot to the business, working in tandem with the CEO to ensure that strategic investments in digital business models and transformation initiatives pay off. I hope you find *Agile Finance Unleashed* useful as you look to modernize finance in support of your own digital objectives.

Focusing finance on what matters most

"Artificial intelligence and machine learning are radically transforming how business operates, especially finance. Routine tasks are being automated so that finance professionals can focus on what matters most: identifying the next growth markets."

Safra A. Catz,
Chief Executive Officer, Oracle

Technology is the main lever of change for business and society today. However, in business, we are seeing a widening gap between those companies using advanced technologies to innovate and those being left behind in the transformation game.



Andrew Harding FCMA, CGMA

Chief Executive, Management Accounting,
Association of International Certified
Professional Accountants

This report, co-produced by the Association of International Certified Professional Accountants and Oracle, is timely. In talking to CFOs and other senior finance leaders, it offers insight on how those companies currently behind the leading pack can catch up. It builds on the *Agile Finance Revealed* report published two years ago, which described a new type of finance function and how it can support agile businesses.

This follow-up report, *Agile Finance Unleashed: The Key Traits of Digital Finance Leaders*, looks at the link between finance agility and digital success. It also shows how a small group of finance functions are achieving operational excellence through automation and uncovering better intelligence through data analysis.

The research also looks at how finance is operating as a business partner; around half of respondents say the finance function plays a significant and influential role in partnering with managers to improve decision-making and performance management. One factor preventing teams from better fulfilling this role is a lack of digital technologies in the finance function, including artificial intelligence. Without these tools to automate mundane tasks, finance teams remain burdened with transaction processing, manual controls and compliance, leaving them little time to focus on business strategy.

That's why digital competency is at the heart of our qualification programs. We develop the digital skills and mindset of Chartered Global Management Accountant (CGMA) designation holders so that they can successfully lead companies to actively seek out new business models, disrupt rather than be disrupted, and respond to fast-changing priorities.

This report is critical reading for finance professionals to ensure they and their organizations are out in front and remain there.

Key findings

CFOs see slow progress in enterprise digital transformation and are concerned about the ability of their teams to drive momentum.

- Only 10% say their finance team has the skills it needs to support the organization's digital ambitions
- Only 16% of senior finance professionals surveyed feel that their enterprise has driven down costs and transformed process efficiency through robotic automation
- Less than half (42%) say that their organization identifies new digital opportunities and risks more quickly than their competitors do

But in those organizations with more advanced finance teams—the “Digital Finance Leaders”—the enterprise is much more likely to be a digital “superstar”.

- 85% of Digital Finance Leaders say their organization has created a compelling digital customer experience, but this drops to 30% for the non-leaders
- 83% of Digital Finance Leaders say their organization is quick to meet customers' fast-changing technology expectations, but this drops to 28% for the non-leaders
- 86% of Digital Finance Leaders say their organization has a digital-first and cloud-first mindset, but this drops to 41% for the non-leaders
- Only 15% say finance is widely recognized for its strategic awareness of new technologies such as artificial intelligence, and their ability to drive new business models



“For me, robotic process automation, advanced analytics, and machine learning are three legs of the same stool. The combination of those technologies and the ability to deliver them in an agile manner without long lead times and extensive interface complexities creates a tremendous opportunity to capitalize on some really big efficiency gains in virtually every staff function. The big win for us is to liberate that time and move finance up the value chain in what it delivers to the organization.”

John Merino,
Chief Accounting Officer, FedEx

Key findings (cont.)

CFOs need to accelerate finance transformation across three dimensions to deliver digital finance leadership:

1. Operational Excellence

- Only 13% have scaled robotic process automation across the finance function, and only 12% have done the same for intelligent process automation
- The No.1 barrier to using process automation technologies is “concerns about data and information security”
- 73% of finance leaders in large organizations say that “centralizing finance subject matter expertise in global CoEs” is a critical priority for the future finance operating model

2. Digital Intelligence

- Over a third (37%) spend more time collecting data than analyzing it, with 59% of large organizations saying that “difficulty extracting data from legacy platforms” is a major challenge to achieving their analytics goals
- Only around 1 in 10 (11%) have implemented artificial intelligence, at scale, in the finance function
- Only 39% say they have highly effective capability in integrating financial and non-financial data

3. Business Influence

- 48% say finance is playing a significant and influential role in partnering with managers on decision-making, but only 33% are playing a similarly influential role in mapping future scenarios for a more disrupted and volatile future
- The No.1 challenge to finance playing an influential role in digital strategy is “we have to give our focus to core finance responsibilities, such as compliance and control”
- Only 15% say finance is widely recognized for its strategic awareness of new technologies such as artificial intelligence, and their ability to drive new business models

Introduction: The digital divide widens

The headlines say it all: “Amazon buys Whole Foods.” “Apple in talks to manage veterans’ medical records via iPhones.” “Instacart’s new \$7 billion valuation is a bet on the future of grocery delivery.”¹

Every week seems to bring news of a technology behemoth or an agile startup elbowing its way into a new industry, putting traditional industry leaders on notice that it is no longer business as usual. The response to these threats has been a wave of industry consolidation in sectors ripe for disruption, from the Aetna and CVS merger in healthcare, to the acquisition strategies of Disney and Comcast to win the hearts and minds of viewers worldwide.

According to McKinsey, the top 10% of global firms account for 80% of the world’s economic profit.² In the United States alone, Amazon now accounts for 45% of online retail sales, while Disney and Comcast control 40% of all programming spend. These digital “superstars” are capturing the lion’s share of market demand, capital investment, and skilled talent, thanks to higher levels of digitization; more investment in talent, innovation and intellectual assets; and a relentless focus on delivering a superior customer experience. Companies that have not embraced this digital, customer-first way of working are struggling to stay relevant in their industries and with their customers.

As these digital superstars redefine what success looks like today, how is the finance operating model evolving to deliver against new success metrics in areas such as customer experience, digitization, innovation, and talent? And where are digital finance leaders investing to build the right capabilities to influence strategy and deliver better outcomes for the business?



“When I think about who is best positioned to disrupt the healthcare industry, it isn’t the disruptive startups. In my view, it’s the Apples and Amazons of the world, organizations that have aggressive ideas, that have capital, that are willing to spend time, money and energy investing in new ideas, new technology and new ways of operating.”

Jac Amerell,
Vice President and Controller,
Blue Cross Blue Shield of Michigan

¹ Del Ray, Jason, “Instacart’s new \$7 billion valuation is a bet on the future of grocery delivery,” *Recode.net*, October 15, 2018.

² “Superstars: The Dynamics Of Firms, Sectors, and Cities Leading the Global Economy,” *McKinsey Global Institute*, October 2018.

Introduction: The digital divide widens (cont.)

Two years ago, the Association published *Agile Finance Revealed: The New Operating Model for Modern Finance*, ground-breaking research that identified the key elements of a new, more agile finance operating model and how finance teams were performing against it across a number of dimensions, including systems, operating structures, and finance talent.

We found that businesses supported by these “agile finance leaders” were much more likely to have demonstrated agility and achieved profitable growth than their peers.

Agile finance functions were already taking advantage of cloud technologies to improve efficiency, centralize process management and subject matter expertise, make greater use of analytics to contribute insights, and deploy multi-disciplinary teams to partner with decision makers.

Our latest research initiative, *Agile Finance Unleashed: The Key Traits of Digital Finance Leaders*, seeks to understand the link between digital finance and enterprise digital success. In particular, this report looks at the evolution of the finance function across three dimensions:

- 1. Digital impact:** We examine the link between digital finance and enterprise readiness for the digital age. The findings show that a small group of more digitally advanced finance functions—classified as *Digital Finance Leaders*—are helping drive greater levels of transformation for the wider business.
- 2. Digital operating model:** We examine the evolution of the modern finance operating model in an age of increased digitization and a heightened focus on the customer experience. Our research indicates that the finance model has evolved to encompass three key attributes: Operational Excellence, Digital Intelligence, and Business Influence.
- 3. Industry leadership:** We examine how key industry sectors are evolving their enterprise digital strategy and progressing towards the agile finance operating model.

A digital-first approach to finance at Instacart

Privately-held Instacart is shaking up how consumers get their groceries with a valuation of more than US \$7 billion and partnerships with over 300 North American retailers, including Albertsons, ALDI, Costco, Kroger, Loblaw, Publix, Wegmans and Sam's Club, among others. “We are a technology company disrupting the grocery delivery industry, and we want to be ahead of the game on the finance side as well,” notes Javier Cortes, head of finance at Instacart. “My team is focused on utilizing technology to establish processes that are agile enough to support the company today and in the future. Artificial intelligence in particular will be critical to the finance department as we scale because it will allow us to focus more on strategic priorities and less on easily-automated processes.”

Digital impact:

The link between digital finance
and enterprise digital success



Agile finance evolves in response to digital transformation

In 2017, we uncovered a dynamic new operating model for finance that was resilient, responsive and predictive (Figure 1).³

In this new research effort, we wanted to survey senior finance leaders about the progress their teams have made in implementing the agile finance operating model we identified two years ago.



Digital Finance Leaders have not merely implemented the agile finance operating model. They are pushing it to *evolve*—moving beyond efficiency into a more radical transformation of finance's contribution to the business.

The majority of respondents indicated that they are still far behind in achieving an agile finance function, and we will examine the reasons for this below. However, we uncovered a small group of finance leaders who display the following key traits:

- They have **implemented robotic process automation** at scale, focusing on automation of transactional tasks such as record-to-report
- They prioritize the **re-engineering of legacy finance processes** to transform finance efficiency
- They have driven scalable deployment across the finance function of **advanced analytics tools**
- They have a clear view of **what data has the greatest value** to their organization and which has the least value
- They play a **significant and influential role** in partnering with other lines of business to help improve decision making and performance management
- They are **widely recognized by business stakeholders** for displaying commercial acumen and business understanding.

We categorized this vanguard of high-achieving respondents as *Digital Finance Leaders*. They have not merely implemented the agile finance operating model; they are pushing it to *evolve* in response to new digital business models and the accelerated adoption of new technologies. Digital Finance Leaders are moving beyond efficiency into a more radical transformation of finance's contribution to the business.

Framework for the agile finance operating model

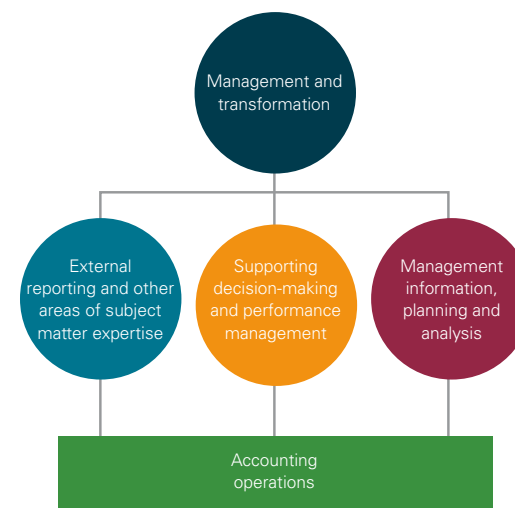


Figure 1: Framework for the agile finance operating model

³ Agile Finance Revealed: The New Operating Model for Modern Finance, AICPA, 2017.

Agile Finance Unleashed: How digital finance leaders are driving evolution of the agile finance operating model

Service area	Digitally enabled, agile	Digitally transformed
Accounting operations	Focus on improving efficiency with an emphasis on making greater use of shared service centers, whether in-house or outsourced. Robotic process automation applied to steps in core processes.	Focus shifts from cost reduction (with a view to improving efficiency) to investment (to enable Operational Excellence that is both efficient and effective). Embedded controls and machine learning enable intelligent automation.
Subject matter expertise	Multi-disciplinary teams concentrated in centers of excellence. Allocation of work to trained subject-matter experts.	Machine learning and natural language processing analyze and deliver expertise as “robo-writers” or “robo-assistants” that augment human intelligence.
Management information	Focus on providing better information: self-service business intelligence provided to managers via dashboards to monitor performance. Finance a champion of evidence-based decision-making and a broker of information, including advanced analytics.	Focus on Digital Intelligence, including insights into external developments and the assessment of responses to potential future scenarios. Traditional FP&A role expands to a wider range of data and advanced analytics, spanning financial and non-financial business drivers, to better predict and manage performance.
Decision support	Finance more influential, with Business Partners deployed to support decision-making and performance management. Focus on taking a measured, rational and responsible approach, “as though the CFO were watching.”	Finance armed with Digital Intelligence, strategically aware of the potential in new technologies for business model innovation. Finance has credibility as a discipline that must be engaged to improve the business’s prospects and performance.
Management and transformation	Finance plays an expanded role in enabling business agility.	Operational Excellence in finance seen as fundamental to enterprise-wide excellence needed to deliver value propositions and customer experience expected in the digital age. Finance as champions of enterprise transformation for the digital age.

Digital impact: The link between digital finance and enterprise digital success (cont.)

Many finance teams are concerned that their enterprise is losing the digital race.

Digital Finance Leaders are in the minority. In 2017, 38% of the research sample were identified as leaders; today, it stands at 32%. This reflects the fact that digital transformation is an ongoing process; even those who are digital leaders look to evolve as new customer requirements emerge and new technologies come online.

The majority of survey respondents are concerned about whether their wider organization is keeping up with the pace of digital change, with only a third of those surveyed indicating that they are actively looking to disrupt their sector. Similarly, only 16% of finance executives feel that they have made progress toward optimizing processes through automation technologies such as RPA.

Reactive mode	Slow progress
35%	16%
Only around a third (35%) say they look to disrupt their sector rather than wait to be disrupted	Only 16% feel they have driven down costs and transformed process efficiency through robotic automation, with 66% saying "Limited progress so far"

Why the limited progress? According to McKinsey, CFOs most often attribute slow progress in automation to a lack of clear understanding of all the digitization opportunities available. Organizational silos and a lack of digital skill sets within the finance function are also commonly cited as major impediments.⁴

For digital finance leaders who have gone through the automation journey using the cloud, it's not just about about automation for automation's sake. "Automation has to be done thoughtfully, and has to work within the total end-to-end process and within the control environment," notes Donald Robertson, vice president of accounting at Western Digital, a leading provider of data storage solutions. "To me, one of the things that we don't have enough of is what I call a finance data architect—someone who understands the finance systems, data elements and end-to-end processes which can in turn architect what that future vision looks like." Robertson speaks from experience, having piloted RPA solutions and actively supported the implementation of cloud solutions to modernize the finance, FP&A and procure to pay functions at the US\$20 billion revenue technology manufacturer.

Changing consumer tastes down under

With over 430 restaurants across Australia, Hungry Jack's is one of the world's largest Burger King master franchisees, serving every Australian four to five times annually. But with growing competition from the likes of Uber Eats and other digital providers, Hungry Jack's isn't taking its position for granted. "We're completely reassessing everything within our company due to the changes that are going on in the marketplace," says Nigel Everard, CFO of Hungry Jacks. "From the old world of convenience, you have a restaurant close by and people would drive through and get their food. This used to be considered convenient. That's no longer convenient. The digital world now is that you sit in your kitchen or your lounge room at home and you look at your app and you order from there."

⁴ Eklund, Steven, Michele Tam and Ed Woodcock, "New Technology, New Rules: Reimagining the Modern Workforce," McKinsey & Co., November 2018.

Correlation between Digital Finance Leadership and organizational success

When we look at Digital Finance Leaders, we find that there is a strong correlation between organizational strength and finance agility. The more successful the organization, the more likely it is to have invested in the finance skills that support new, digital business models.

“I believe my role is that of a change leader,” says Jessica Ross, vice president and controller at Stitch Fix, a pioneer in the online fashion retail space that provides one-to-one personalization to its clients through a combination of data science and human styling.

“Finance and retail are both at inflection points right now, and it’s a really exciting time to be in finance at Stitch Fix. For the first time, the technology is available that is creating the space for us to be better partners to the business. As a leader, my number one priority right now is to help my teams transition to the new digital operating model, and make sure they have the skills and competencies to be successful in the future.”

Organizations with positive revenue growth are more likely to have digitally savvy finance teams. When asked about revenue growth over the previous 12 months, close to half of Digital Finance Leaders (46%) said their organization had achieved positive growth; this drops to less than a third (29%) for non-leaders.

Other indicators of enterprise transformation also show a correlation with digital finance. In particular, there is a strong connection between digital finance and the extent to which the wider enterprise is digital-ready. Our framework for digital-age readiness is illustrated in Figure 2.

Enterprise digital-age readiness

Have you exploited digital innovations to create new business model opportunities and value propositions?

1 Value proposition

Are you quick to meet your customers’ fast-changing technology expectations?

Have you created a compelling and personalized digital customer experience?

2 Processes, channels and “intangibles”

Have you driven down costs and transformed process efficiency through robotic automation?

4 Costs and revenues

Do you integrate financial and non-financial information?

Interrogate data effectively?

Measure the intangible drivers of value?



3 Resources and relationships

Have you built a digitally-connected and agile supply chain?

6 Management and development

Do you identify new digital opportunities and risks more quickly than competitors do?

Do you exploit data as a strategic asset to drive real-time insight into opportunities and risks?

5 Structure, scale and culture

Do you look to disrupt your sector rather than wait to be disrupted?

Do you have a digital-first and cloud-first mindset?

7 Digital ecosystem, may include own “digital platform”

Have you developed a digital ecosystem for consumer sales, supplier collaboration or enhancing your value proposition?

Figure 2: Enterprise digital-age readiness

Agile Finance Unleashed: The Key Traits of Digital Finance Leaders

Digital impact: The link between digital finance and enterprise digital success (cont.)

In preparing for the digital age, a business might respond by taking advantage of new technologies. Improving the customer experience is certainly a current priority for many businesses. A more holistic approach recognizes that the customer's experience depends not just upon the user-friendliness of interfaces but upon aligning these with the operational capabilities needed to fulfil the customer's expectations.

A more radical approach goes further. It does not assume that it will suffice to update the current business model, but explores how the whole business model, from the value proposition down, could be transformed for the digital age.

A business model tells the story of how a business creates value. Discussions of business model change usually focus on the value proposition, the external resources and relationships, the internal processes or operations needed to deliver the value proposition, and, of course, how the business makes money.

However, the structure, scale and culture of the business influences its digital potential. In addition, the business model is dynamic, so how it will be managed and developed must be considered. Furthermore, in the digital age, value propositions are often assembled or

delivered in collaboration with other businesses over a digital ecosystem, where the boundaries between each business become blurred.

In order to explore digital-age readiness, we asked representative questions as indicators of change in each of these building blocks of a business model. The ability to relate a finance function's digital progress to the business's digital readiness has yielded some important insights. Among them: 86% of Digital Finance Leaders say their organizations have "a digital-first and cloud-first mindset," but this drops to just 41% for non-leaders. It is a consistent trend across many dimensions of enterprise digital readiness:

Proactive response to digital disruption	Digital Finance Leaders	Non-leaders
We have a digital-first and cloud-first mindset	86%	41%
We are quick to meet our customers' fast-changing technology expectations	83%	28%
We look to disrupt our sector rather than wait to be disrupted	43%	29%
Driving enterprise digital transformation		
We have created a compelling and personalized digital customer experience	85%	30%
We have exploited digital innovations to create new business model opportunities and value propositions	70%	27%
We have built a digitally-connected and agile supply chain	63%	39%
We have a digital ecosystem we use for consumer sales, supplier collaboration or enhancing our value proposition	68%	29%

"I didn't go into Apple because it was a tech stock. I went into Apple because of the value of their ecosystem."⁵

Warren Buffett,
Berkshire Hathaway

⁵ Seessel, Adam, "Investor Revolution," *Fortune*, Dec. 1, 2018, p. 107.

Digital impact: The link between digital finance and enterprise digital success (cont.)

The research also shows that 83% of Digital Finance Leaders believe their organization is quick to meet customers' fast-changing technology expectations. At Royal Bank of Scotland (RBS), customer focus drives finance transformation. "Everything we do is based on our obsession with the customer," explains Stuart Wray, head of implementation, future finance at RBS. "And because technology is moving at such a pace, we can't stay still. We are looking at chatbots, blockchain, and artificial intelligence as ways to modernize the finance function at RBS. All of these different technologies will help us better serve our customers and respond to their needs, while also reducing costs and creating a really solid control environment."

At Hungry Jack's, a digital-first, cloud-first mindset has transformed finance's role in delivering on customer expectations. "We are really conscious of what's going on in the consumer market, how people's behaviors are changing, and we're making sure that we're getting ahead of the curve with AI and machine learning to understand what finance can look like," explains CFO Nigel Everard. Everard and his team replaced a legacy finance system that wasn't integrated to other key data sources, such as point-of-sale systems, with a cloud ERP system that delivers full visibility into customer behavior and operations. "This has changed the way that the business thinks of finance, from the score keeper to the real business partner who can talk to the business around a future strategy."

How can CFOs accelerate the journey to Digital Finance Leadership?

Our research has shown a compelling link between digital finance and enterprise digital productivity and growth. But with only around a third of finance functions qualifying as leaders today, how can the rest catch up and help the wider organization achieve superstar status? Three dimensions will be critical in driving finance transformation—Operational Excellence, Digital Intelligence, and Business Influence.



Digital finance operating model:

The key pillars of Operational Excellence,
Digital Intelligence and Business Influence



The leaders in our survey have embraced the three key pillars of agile finance: Operational Excellence, Digital Intelligence, and Business Influence. They use highly efficient digital operating models to pivot to fast-changing enterprise priorities. They offer sophisticated, data-driven intelligence to determine the strategic upside and risks of digital opportunities, and they have the credibility and skills to influence decision-making and digital strategy across the organization.

Operational Excellence

For many years, CFOs have been relentless in their determination to improve the efficiency and effectiveness of finance and accounting. “I’ve tried to give my team the task, every year, that finance should be a profit center and not a cost center,” says Andy Stephens, director of finance at Loughborough University in the UK. “Whether that’s procurement savings, tax efficiencies, identifying loss making or waste elimination within the academic activities of the university—we should be saving more than we’re costing every year.”

Many other efforts, however, are undermined by isolated initiatives that tackle only one piece of the jigsaw, or a failure to take technology solutions from isolated success to scaled deployment. Our research shows that very few finance functions have managed to drive down their operating costs; in fact, close to a third said that finance costs have risen. To move forward with Operational Excellence, finance leaders should focus their efforts to drive broad-based change.

We believe two areas are particularly important:

- Exploiting the potential of advanced technologies
- Delivering the next-generation operating model

Decreased	Stayed flat	Increased
2%	66%	32%
Just 2% said that the cost of the finance function has decreased as a percentage of the organization’s revenue	Around two-thirds say the cost of the finance function has not changed	Close to a third said the finance function is now a proportionately higher cost to the organization

Reimagining the finance operating model at Highmark Health

Reimagining the way people work is the focus of a CEO-led initiative at Highmark Health designed to completely transform the employee experience at the second-largest integrated healthcare delivery and financing system (IDFS) in America. As part of this corporate initiative, the financial executive team is creating a new operating model for its department, supported by a move to cloud ERP and EPM. “To start, we are rolling out data visualization tools, advanced analytics, and process automation initiatives,” notes Janine Colinear, senior vice president of finance at Highmark Health. “Utilizing these tools in a cloud-based environment will support our goals of reducing systems complexity, consolidating operations in our shared services model, and becoming more metrics-driven. People have a bit of a cultural aversion to giving up control of what they own, so to ease the transition, we plan to put stringent service line agreements in place to show that we can do things more efficiently in our new operating model.”

Exploiting the potential of advanced technologies

When we published *Agile Finance Revealed*, there were relatively few C-level discussions around emerging technologies such as artificial intelligence, machine learning or blockchain. Now, only two years later, these technologies are the topic of board-level conversations.

Many CFOs understand the imperative for change, but focusing time and resources can be difficult when finance teams face such significant pressures, such as increasing regulatory scrutiny and the intense day-to-day demands of core responsibilities.

Our research indicates that the majority of finance functions have yet to achieve the potential of advanced technologies. Only around one in ten (13%) say they have deployed robotic process automation, at scale, across the global finance function. And 61% of efforts around intelligent process automation are only at the stage of isolated pilots (Figure 3).

Automation deployment: scalable deployment vs isolated pilots

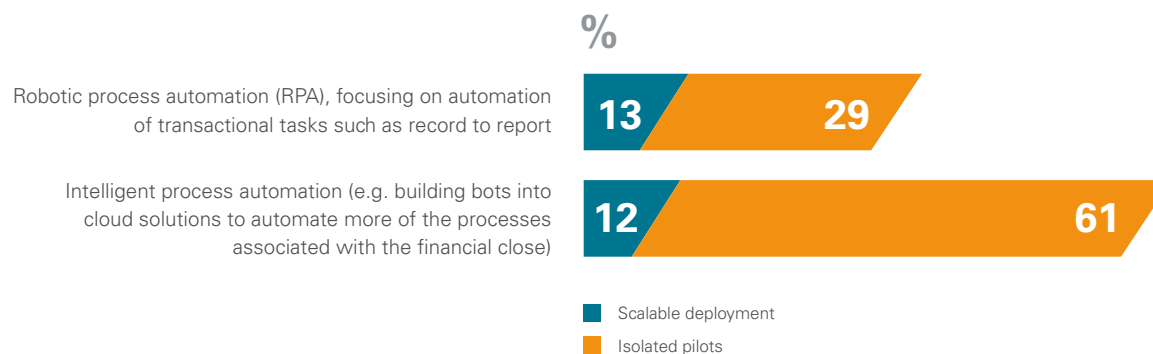


Figure 3: More to be done to drive automation

Digital finance operating model: The key pillars of Operational Excellence, Digital Intelligence and Business Influence (cont.)

With cloud acting as the delivery mechanism for both robotic process automation and intelligent process automation—as well as other advanced technologies such as blockchain—we found that a cloud-first mindset was a critical characteristic of Digital Finance Leaders:

- 86% of Digital Finance Leaders say they have a digital-first and cloud-first mindset (where cloud technologies are seen as the primary choice for delivering business value).
- This drops to 41% for non-leaders.

At RedMart, an online supermarket based in Singapore, CFO Jim Boland sees legacy, on-premises systems as a headwind to agility. “We were native cloud from the beginning, never relying on on-premises solutions.” RedMart has driven impressive results through its cloud-first approach; without cloud, the company would have needed up to 65 full-time employees just to process its fast-growing volume of invoices.

RedMart has also achieved best-in-class month-end close results since going live on its cloud ERP solution, with a low occurrence of issues, fast and solid resolutions, and virtually zero downtime. As a result, the team spends the majority of their time providing strategic advice to the business and much less on transactional processing.

Oracle has had a similar experience deploying its own cloud ERP system across the company’s global operations, which support over 430,000 customers in 175 countries. “Being on the same ERP cloud as our customers has been transformational for us,” notes Maria Smith, senior vice president and assistant corporate controller for Oracle.

“For example, we reduced our manual accounting by 14% in one quarter and are really excited by the potential reduction that is possible on the cloud. Our team is closing global inter-company reconciliation in 5 hours, including all our M&A, with no reconciling items. The technology is there, it’s up to us in finance to innovate and make the most of it.”

Maximizing the potential of RPA at FedEx

FedEx is an early adopter of RPA, piloting an RPA Center of Excellence to automate a number of routine finance tasks. “One of the things that we observed early on was that because the [RPA] software is so inexpensive, people deploy bots all over, then find out that they very quickly lose control,” notes FedEx Chief Accounting Officer John Merino. “You’ve got to know where it is being used, how it is being controlled, and how to monitor it.” Early on, Merino and his team established an appropriate governance process that allows business users to directly engage in the development and deployment of RPA, but with an oversight that ensures that quality control is there. “RPA is a lot closer to an IT task than a traditional finance task, so we found that there wasn’t as high a percentage of the business users who were actually able to develop and deploy it. That required a bit more technical oversight and capability.”

Public policy debates around automation have been dominated by fears about the impact on jobs. However, our research shows that finance leaders are much more concerned about data and information security risk. We found that close to two-thirds (63%) point to “concerns about data and information security” as a barrier to automation, but only 22% cited “employee concerns about the impact on jobs” and only 24% pointed to employee resistance (Figure 4).

Most significant barriers to using process automation technologies in finance

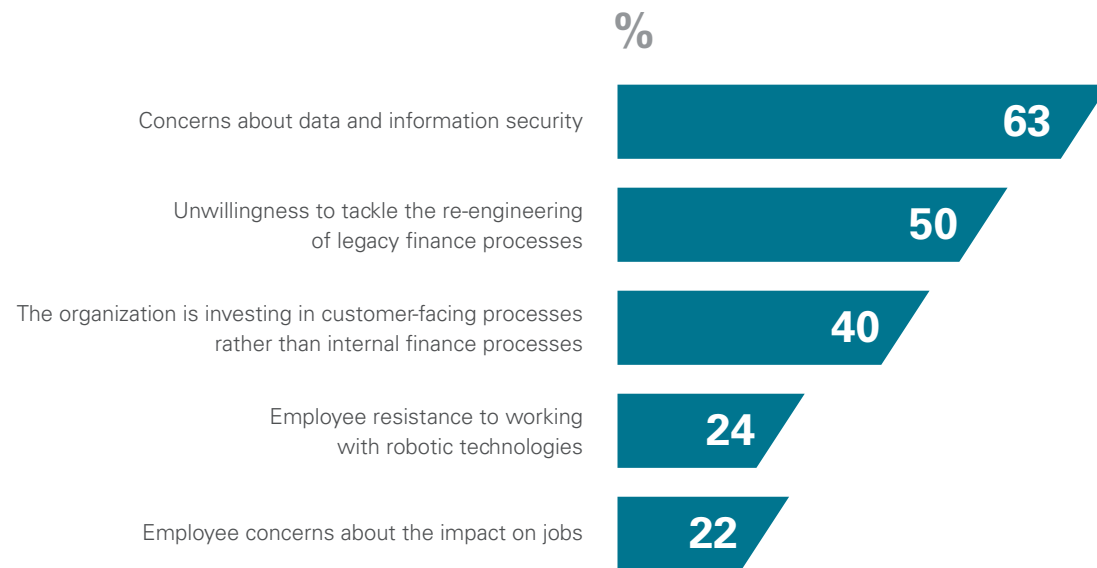


Figure 4: Information and data security the key barrier to progress in automation

Finance leaders need to ensure that concerns about information and data security do not hold back progress. Being confident about data security will require changes in many areas—from the enterprise’s data culture to its data governance arrangements—but technology changes will be critical too. Recent research as part of the *Oracle and KPMG Cloud Threat Report 2018* found that 83% of respondents rate cloud security as good as, or better than, on-premises security.⁶

Driving Operational Excellence: Key emerging technologies and their uses cases in finance	
Intelligent process automation	Reduce operating costs for transactional services Automate processes associated with the financial close Automate tasks associated with account reconciliation, eliminating manual labor and reducing the likelihood of errors Simplify XBRL filing for regulatory reporting
Blockchain	Improve cash position by better managing receipts
Blockchain / IoT	Track provenance of goods and services, to reduce costs associated with product and/or food recalls

⁶ Oracle and KPMG Cloud Threat Report 2018, Oracle and KPMG, 2018.

Delivering the next-generation operating model

Today, many finance functions face ever-increasing demands to deliver strategic guidance to the business. The urgency of these demands appears to be well understood by nearly all senior finance executives.

“As technology changes how finance teams work, they are going to need to unlock more of the softer skills in their competencies,” says Gayle Wells, strategic head of financial management at Mersey Care Trust in the UK. “They’ll need to lose the transactional stuff, and add in analysis, and the value of conversations around performance, and really become strategic advisors, as opposed to traditional number crunchers. Once the technology takes over the transactional stuff, relationships will be what we have left, and that will be where we need to focus our skills.”

Yet outmoded operating models for finance are making the shift difficult. The critical currencies of data analysis—information, skills, and processes—are spread across staff and lines of business. Most finance teams spend more hours gathering and reconciling data than interpreting it, leaving little time to focus on analysis and guidance.

Finance-specific Centers of Excellence (CoEs)—which consolidate capability in key areas, from data analytics to corporate reporting—are therefore a critical element of the agile finance operating model. In large and complex organizations⁷, it is a priority for close to three-quarters of respondents (Figure 5).

Critical priorities for building the smart finance operating model of the future: large organizations

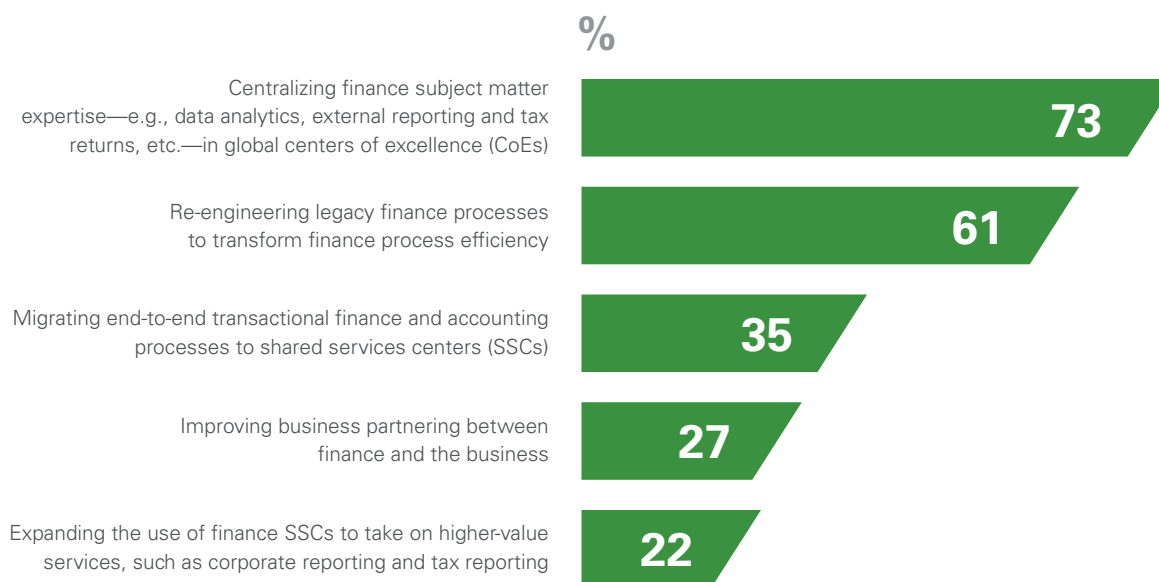


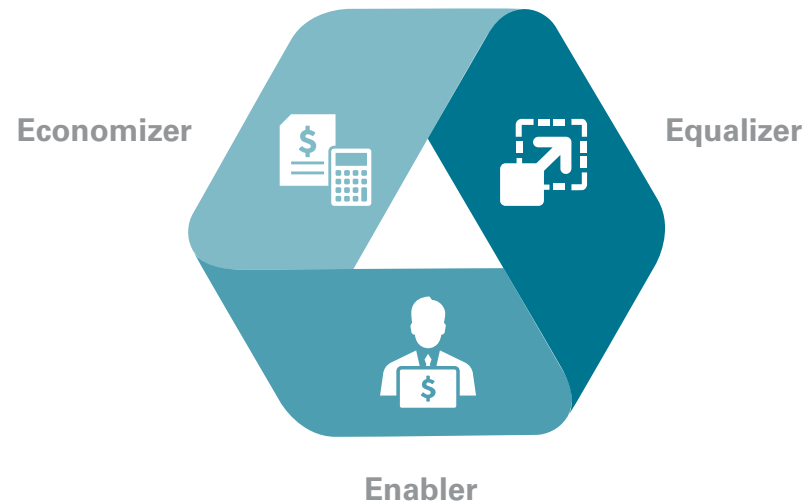
Figure 5: Effective CoEs a critical element of the agile finance operating model

⁷ In this report, 'large organizations' are those with revenues of \$5 billion or more and more than 10,000 employees.

Rolls Royce's Stuart Parfitt is head of group planning and analysis for the manufacturer's defense and aerospace business. Parfitt underlines the importance of structuring finance into centers of excellence as a key element in the push to business partnering. "We have CoEs for areas such as tax, treasury, and statutory reporting, and there is a central M&A team," Parfitt notes. "Rather than focusing on the accounting, we can get them more purely focused on the business partnering. This will also allow them to get up to speed on what's being done in terms of new technologies—but the overall focus is on taking away the accounting, so they can get more focused on what really matters."

And at Western Digital, shared services are taking on increasingly higher-value tasks, with "virtual" centers of excellence focused on specialized areas. "We're increasingly demanding a higher level of understanding and service and capabilities within our shared service centers," notes Donald Robertson. "What maybe started with some account reconciliation has moved up to revenue recognition. In terms of centers of excellence, given our global footprint, we haven't centralized everybody in one location. I would call them more virtual centers of excellence. This is where we have identified the key people that are necessary for areas like reporting, complex accounting and tax, but these aren't people that all sit in the same spot. We utilize conference calls, Webex, video and other collaboration tools to create more virtual centers of excellence at this time."

Cloud has changed the equation for shared services



Economizer

Global Business Services support corporate strategic objectives in a performance driven, enterprise-wide, integrated multi-functional center that is core to the operating effectiveness of the company. Cloud enables increased automation opportunities that can drive the costs of shared services down.

Enabler

Global Business Services combined with cloud systems provide an operational platform for continuous adaptability, flexibility, and scale that promotes business and operational innovation.

Equalizer

Leaders of Global Business Services are integral business partners who enable collaboration and strategic alignment that transforms the business. Access for all business units to these services enables scaling at any size.

Source: Oracle

Digital Intelligence

Finance has always been powered by data. However, in today's digital economy, finance teams have access to more data than they ever have enjoyed before—both financial and non-financial. Digital Finance Leaders recognize that these data sets can not only be used for financial reporting and analysis, but also to help the wider organization anticipate a disrupted digital future—managing risk and identifying growth opportunities.

“The real value driver here is the ability to accelerate and refine the delivery of critical business intelligence to operations so that they can manage in real time and not wait for traditional report generation, which in the past has often been too late to be responsive to the business,” notes FedEx's Merino. “With our move to the cloud, we were able to eliminate a number of reporting tools in our legacy applications and replace them with real-time dashboards, and to me that is the secret sauce.”

Highmark Health's Colinear says the importance of Digital Intelligence helped drive her organization's choice to move planning and budgeting to the cloud. “All of our budgeting and forecasting processes were primarily Excel-based,” she explains. “It limits your ability to drill down into the data, so that's what drove our data aggregation effort. I think that the movement to a planning and budgeting cloud is certainly giving us better transparency into the data. There's also some predictive analytics inherent in this tool that we're excited about using.”

Many of the respondents to our survey see an agile finance function playing a central role in enterprise-wide data analytics and governance. (Data governance is critical for effective analytics, as without rigorous governance, enterprise data will be fragmented, leading to inaccurate analysis and poor insight.) This is particularly true in large and complex organizations:

61%	47%
Over 60% of respondents from large organizations say the CFO should lead the enterprise approach to data governance in the organization	Close to half of finance leaders in large organizations say finance teams should use their expertise to advise other parts of the business on advanced analytics

However, while many have lofty ambitions for the function's role in data analytics, a successful finance transformation will need to overcome some significant challenges. With data locked into legacy platforms, many finance people spend most of their time just collecting data rather than adding value by analyzing it:

51%	59%
In large organizations, over half say they spend more time collecting data than they do analyzing it for insight	59% say that “difficulty extracting data from legacy platforms” is a major challenge to them achieving their analytics goals

To overcome these challenges, and accelerate transformation to an agile finance function, CFOs should focus on two areas:

- Upgrading finance's intelligence technologies
- Building analytics skills and people capability

Upgrading intelligence technologies

Cognitive computing offers a significant opportunity for agile finance functions to accelerate and transform their insight capabilities. Artificial intelligence can be used to identify underlying patterns in data, and machine learning can be used to predict scenarios, which is of increasing importance in a world defined by significant disruption and volatility.

However, we found that few finance teams have implemented advanced, insight-driving technologies at scale:

11%	56%
Only 11% of organizations said that they have implemented artificial intelligence, at scale, across the finance function	Over half said they were not deploying artificial intelligence at all at this stage

One explanation could be that finance needs to build its understanding of the potential these technologies offer and the specific use cases that relate to finance’s strategic priorities. During a recent AICPA webcast, a live poll of finance executives in attendance found that the number one barrier standing in the way of implementing digital technologies was *“lack of understanding of technologies and their use cases in finance.”* For a technology like artificial intelligence, finance leaders should map the potential use cases,

selecting those that are most relevant to their critical priorities. They also need to assess the potential benefits, along with the complexity of implementation.

Driving Digital Intelligence: Key emerging technologies in finance and their use cases	
Machine learning	Identify patterns in large data sets, to speed up analysis and get to accurate forecasts more quickly Extract insights from real-time data—both financial and non-financial—without information overload Automate more tasks associated with project management, to deliver projects faster and improve efficiency Recommend supplier-specific discounts to optimize cash on hand
Data visualization	Instantly gauge global sales and profitability
Advanced analytics	Better predict revenue, costs, and overall business performance
In-memory computing	Shorten the time needed to develop plans, budgets and reports, and to update what-if scenario models

Digital finance operating model: The key pillars of Operational Excellence, Digital Intelligence and Business Influence (cont.)

Interestingly, organizations that have seen positive growth (revenue has increased in the last 12 months, compared to the previous 12 months) are more likely to be deploying AI compared to those where revenues are flat or have declined (Figure 6).

Building analytics skills and people capability

Today, finance functions have access to more data than they have ever had before. To exploit that data, they will need new capabilities—from awareness of new technologies to skills in data science and advanced analytics.

Attracting and retaining the right talent turns out to be one of the biggest pain points for finance leaders. Only one in ten (10%) said that their “finance team has the skills it needs to support the organization’s digital ambitions” (Figure 7).

Organizations that are currently deploying artificial intelligence, at scale, across the finance function

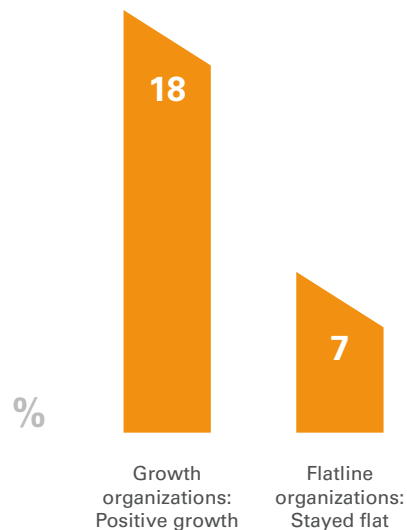


Figure 6: Growing organizations making greater progress with artificial intelligence

Respondents who agree that their finance team “has the skills it needs to support the organization’s digital ambitions”, by annual revenue

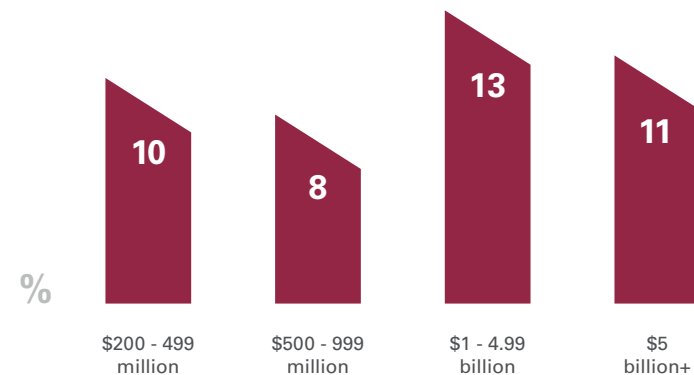


Figure 7: Few finance teams have the skills today to support the organization’s digital strategy

Many finance leaders feel that their teams lack the data analytics skills to exploit the rich seams of data at their disposal.

Across a range of areas, less than half of respondents said they had highly effective people capabilities (Figure 8). For example, only 44% say they have highly effective capability in “interrogating data effectively.”

Building the necessary skills will require action on a number of fronts. On a pragmatic level, finance leaders need to conduct an audit of existing skills and identify gaps. Beyond that, however, finance teams should also look at recruiting people with a wider range of skills and backgrounds. This means abandoning traditional notions of what constitutes “finance talent” and challenging recruitment orthodoxies to widen the talent net.

Jac Amerell, controller at Blue Cross Blue Shield of Michigan, has taken the unusual—and forward-thinking—step of providing his finance staff with six sigma, robotics, and other technology training. “I’m trying to help people develop new skills that we are going to need in the future. I challenged people: learn the new skill, practice the new skill, pick somewhere you’re spending significant time and energy and build yourself a bot. Who can save the most time in their daily jobs? I feel as a leader, if we are changing the world people live and work in, we have an obligation to help them step into it.”

At Austrian-headquartered Addiko Bank, the CEO and CFO of the group’s Bosnian arm, Sanela Pasic, puts significant emphasis on shifting the dial in terms of what constitutes finance talent.

“In finance, many people spend the majority of their time producing reports and they don’t have the time to drive the organization strategically based on skills they have,” she says. “Whenever I’m in a new CFO position, I try to shift this. We always have a very clear training

plan that goes beyond what we need currently, looking at what we will need in the future. As a member of our country’s banking association, I’m very active in the field of training. And, in previous organizations, I’ve always used cross-functional people. For example, I used people that were sales experts for customer behavior prediction. This can get you to the position where you have the credibility to shift the business. I think it’s the CFO’s responsibility to make this shift and to guide and challenge business units.”

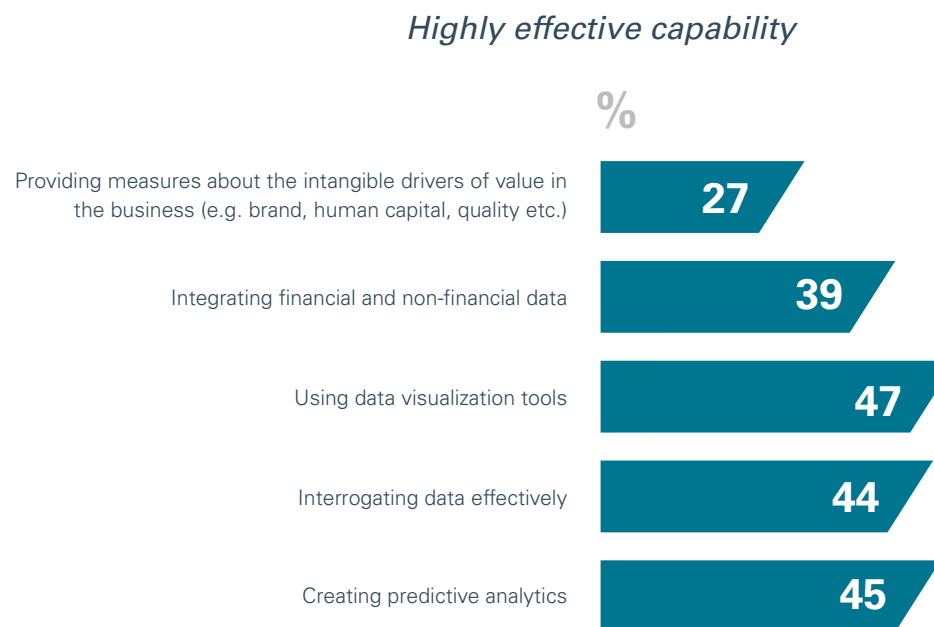


Figure 8: Less than half of respondents rate finance as highly effective in key skills

Business Influence

Finance has been driving business partnering for many years now, improving its ability to play an influential role in the business's strategy and performance. At USEN Corporation in Japan—which provides comprehensive music and information broadcasting to subscribers such as restaurants, shops and offices—CFO Shohei Mabuchi outlines how finance plays a key role in assessing the market, including competitive risk and new opportunities. “We are always researching possible competitors,” he explains. “Competition for us could come from traditional telecom companies or it could come from internet leaders like Amazon or a Chinese player. We also research start-ups where there may be an opportunity for an alliance.”

This role—where finance executives are involved in business decision-making and advice—requires a finance person with both hard and soft skills, including commercial awareness and the perseverance to overcome any setbacks.

3M Japan, for example, has a team that specializes in financial planning and analysis, partnering with the lines of business to provide advice and guidance. “We have already automated a lot of our transaction processing,” says Masahiko “Mike” Kon, vice president of finance for 3M Japan. “We spend only about 30% to 35% of our time on traditional finance activities, with 65% spent on business influence.”



Close to half of our survey respondents (48%) say that their CFO and finance function play a “significant and influential role” in partnering with managers to help improve decision-making and performance management. This key influence role has taken hold at varying levels by region, with the weakest levels being in Asia Pacific (Figure 9).

Organizations look to the CFO and finance function to provide data-driven intelligence and guidance about managing the risks and opportunities of a digital economy. Yet, while progress has been made in business partnering, we find less progress in terms of finance helping the organization understand future disruption. Just 33% said that the finance function plays an influential role in “mapping future scenarios for a more disrupted and volatile future.” This can constrain finance’s ability to guide and influence business model innovation.

At Addiko Bank, the finance function has the forward-looking influence to shape business model strategy. “We start from where we want to be in terms of our return on equity in three to five years’ time, and work backwards from there to say, ‘OK, people, this model does not work—we need to improve our ratios in the following manner,” explains Sanela Pasic. “We set up a framework for them which would eventually result in a desired return of equity. And then we work out how we deliver that product-wise, with our business lines in retail and corporate, as well as operations-wise.”

CFOs and finance play an influential role in partnering with managers to help improve decision-making and performance management

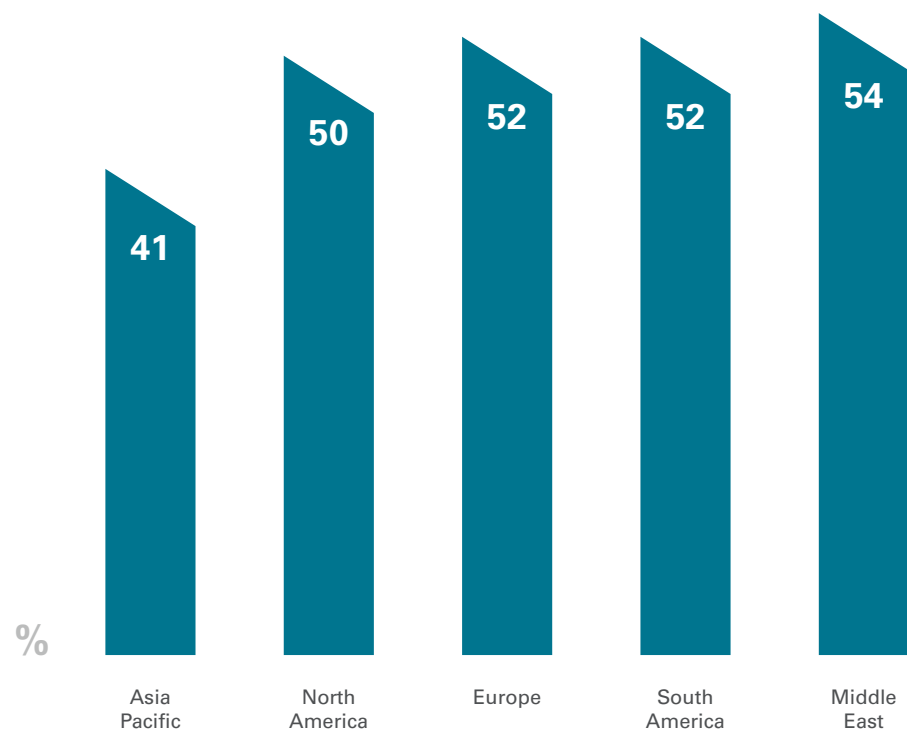


Figure 9: Business partnering takes hold across the world

Digital finance operating model: The key pillars of Operational Excellence, Digital Intelligence and Business Influence (cont.)

To maintain its influence and play this important foresight role, CFOs will need to focus on two areas:

- Freeing up their people from time-consuming tasks so they can play a greater role in mapping out the enterprise’s response to digital disruption
- Shifting the perception of finance’s “digital IQ” in the eyes of key stakeholders

Freeing up people to focus on disruption and influence digital strategy

Our research shows that the number one barrier standing in the way of finance teams playing this role is that they have to focus on core compliance and control responsibilities (Figure 10).

To move forward, organizations need to shift from a manual focus on compliance to the use of smart technologies that mimic human capabilities and

decision-making. Compliance and control are, after all, data-intensive processes, most of which can be automated using software. The addition of emerging technologies, such as AI and machine learning, further accelerates this automation; when the software finds a potential violation, it asks a human being to intervene. As humans instruct the software on what to do next, the machine “learns” from those responses and, over time, can begin to follow this new procedure in future.

Top 5 challenges that stand in the way of finance playing an influential role in the organization’s digital strategy	
1	We have to give our focus to core finance responsibilities, such as compliance and control
2	We are not involved from the beginning in investment decisions for new digital technologies
3	We do not have the insights into future scenarios and potential disruption on the horizon
4	We are unable to work effectively across organizational boundaries and silos
5	We have to spend too much time on low added-value finance processes

Figure 10: Compliance and control responsibilities leave little time for digital strategy

By dramatically increasing automation, finance functions can free up team members to focus on key areas of influence, such as scenario planning.

Shifting the perception of finance teams' "digital IQ"

To play an influential role in the organization's response to a disrupted future, finance must increase its "digital IQ" and demonstrate the shift to key stakeholders. Only 15% of respondents said their finance function is widely recognized for its strategic awareness of new technologies (such as AI) and ability to drive new business models. This is a common issue, across both large and mid-size organizations (Figure 11).

For FedEx's Merino, raising finance's digital IQ starts with a simple strategy: Invest in technology savvy employees, especially the younger Gen Z and millennials who have a high engagement with technology. "It is essential that we incorporate new technologies and the skills that can capitalize on them into our finance jobs," he says. "So we've got to identify these technology savvy employees, and bring that analytic capability into the finance profession and into our companies. Additionally, schools have to be building that capability into their curriculums."

To build finance digital skills and awareness among existing employees, training and development—as well as career paths—will need a rethink. We found that 40% of respondents said they look to develop team capabilities by "rotating finance professionals to other functions, such as IT, to pick up new skills." Cross-functional collaboration between finance, IT, and other operational parts of the business will be critical.

Finance is recognized for its strategic awareness of new technologies, such as artificial intelligence, and their ability to drive new business models

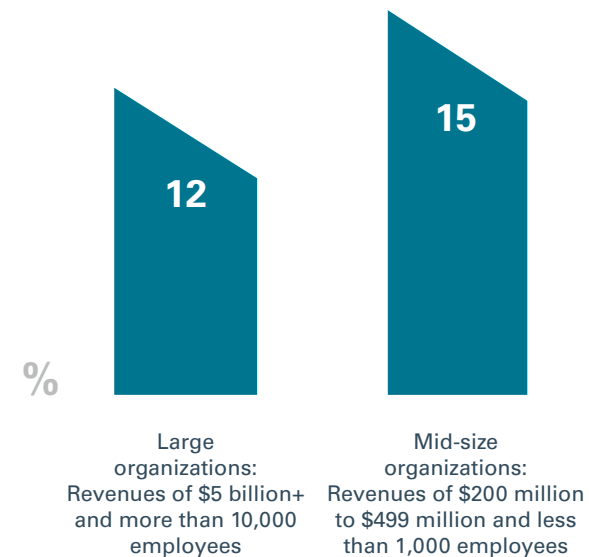


Figure 11: Finance needs to do more to build its digital reputation

Industry leadership:

How finance advances the digital agenda



Manufacturing

Industry Spotlight: Western Digital

Western Digital, a leading provider of data storage solutions, acquired two major competitors in recent years: HGST and SanDisk.

The company ended up with three ERP systems across three Fortune 500-sized companies—which drove Western Digital to look to cloud ERP as a solution. The company wanted the ability to quickly integrate and onboard any future acquisitions.

“When you go through a consolidation like this, we’ve found that there were certain areas that probably hadn’t been looked at in a while from a controls or data transfer perspective—especially with financial transactions that impact accounts payable,” explains Donald Robertson, vice president of accounting at Western Digital. The move to a single cloud ERP “allowed us to really streamline the number of banks, number of suppliers, our ways of doing business, which I think limits the risk that we have in the overall business. It’s an example of how we’re thinking about simplification and how we manage it efficiently.”

Robertson adds that moving to cloud also offered the opportunity to reassign finance talent to more value-added work and partner more effectively with the business. “Speed of the accounting close is paramount to free up resources to do more analytical work. As we automate, as we’re able to close faster, to give data faster to the leaders, then we have more time to do more analytical work. That by far is the item that I’m most excited about.”



Industry leadership: How finance advances the digital agenda—Manufacturing (cont.)

Highlights

- **23% of our respondents in the manufacturing sector met our criteria for Digital Finance Leaders.**

This would be relatively high compared to other industries, but allowances must be made when comparing sectors. For example, margins are tight in manufacturing, so management accounting has long played an important role in performance management. Also, digital transformation in B2B manufacturing might be more about improving the efficiency of the current business model than about transforming the business model.

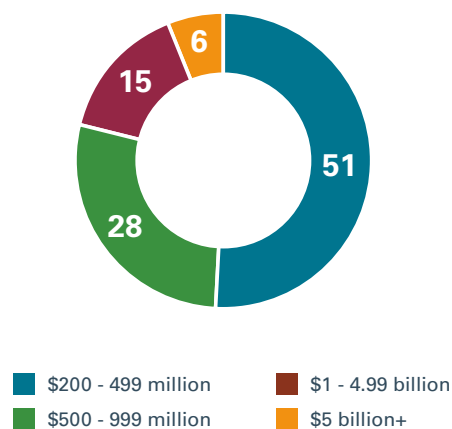
B2B sectors have a greater focus on taking advantage of developments in technology to improve the efficiency of the supply chain and operational processes.

- **Finance leaders in manufacturing are the most confident in their teams' ability to support the organization's digital ambitions.** Manufacturing organizations tend to have very complex supply chains, requiring strong, cross-functional collaboration that can boost the Business Influence of finance teams.

- **The sector's finance leaders are also relatively positive about their teams' "Digital IQ."**

Nearly 1 in 5 (19%) say that stakeholders recognize the finance team for its understanding of how emerging technologies (such as blockchain) can be used. Out of all the sectors we surveyed, manufacturing, along with financial services, tops the list in that regard.

Manufacturing respondents by revenue



The journey to enterprise digital leadership

44%	18%	27%
"We are quick to meet our customers' fast-changing technology expectations"	"We have driven down costs and transformed process efficiency through robotic automation"	"Our finance team is seen as moving quickly enough to support the organization's digital ambitions"

The finance transformation journey to digital finance leadership

Operational Excellence	Digital Intelligence	Business Influence
15%	20%	19%
"We are deploying robotic process automation at scale across the finance team"	"We are deploying advanced analytics tools at scale across the finance team"	"Finance is clearly recognized by stakeholders for its strong understanding of potential uses for emerging technologies such as blockchain and machine learning"

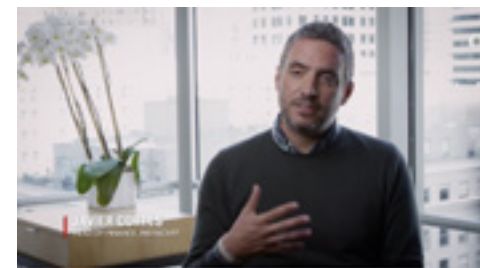
Consumer products and retail (CP&R)

Industry Spotlight: Instacart

In just six short years, online grocery delivery service Instacart has rocketed from start-up to superstar. Today, the company partners with national, regional, and local retailers across North America delivering groceries from more than 15,000 stores across 4,000 cities to customers in all 50 states in as fast as an hour.

“To be successful in a high growth company, we always have to think ahead,” explains Javier Cortes, head of finance at Instacart. “That means making sure your team is not just focusing on what they do today, but that they’re building processes and controls that will help the department and company look to the future.”

Scaling for growth was the driving force behind Instacart's decision to move to cloud ERP. “Before the cloud, we didn't have a very agile or collaborative financial system in place, and scaling my team from 3 people to 20 was becoming a challenge for data reliability and process efficiencies,” Cortes explains. “Moving to an ERP that gives us the flexibility to report accurate numbers in a more timely manner was critical for us.” Cortes also believes that emerging technologies, such as chatbots and AI, will be crucial to future growth: “It will allow the finance department to focus more on strategic priorities and less on easily automated processes.”



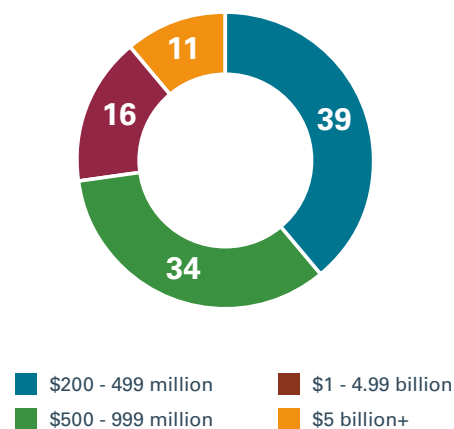
Video: Oracle ERP Cloud Supports Explosive Growth at Instacart

Industry leadership: How finance advances the digital agenda—Consumer products and retail (cont.)

Highlights

- **21% of our respondents in the consumer product and retail sector met our criteria for Digital Finance Leaders.** This is relatively high compared to other sectors. CP&R is a sector where online sales are challenging traditional business models. It is also a sector where a wealth of data about customers provides valuable insights.
- **Out of all the sectors, CP&R's finance leaders are the most confident that their enterprise is quick to meet customers' fast-changing technology expectations.** This is the only sector where a majority (58%) believe this to be the case. As the industry is transformed by changing customer demands, such as omni-channel shopping, CFOs clearly feel that their organizations are responding strongly.
- **CP&R's finance leaders also feel relatively positive about their progress in deploying advanced analytics at scale across the finance team.** Close to a quarter (24%) believe this to be the case, making it the strongest industry performer alongside technology, telco and media. With customer data analytics key to the industry's priorities, such as delivering personalization, the sector's finance teams are also on the path to advanced finance analytics.

Consumer products and retail respondents by revenue



The journey to enterprise digital leadership

58%	9%	21%
"We are quick to meet our customers' fast-changing technology expectations"	"We have driven down costs and transformed process efficiency through robotic automation"	"Our finance team is seen as moving quickly enough to support the organization's digital ambitions"

The finance transformation journey to digital finance leadership

Operational Excellence	Digital Intelligence	Business Influence
16%	24%	17%
"We are deploying robotic process automation at scale across the finance team"	"We are deploying advanced analytics tools at scale across the finance team"	"Finance is clearly recognized by stakeholders for its strong understanding of potential uses for emerging technologies such as blockchain and machine learning"

Financial services

Industry Spotlight: Royal Bank of Scotland

The Royal Bank of Scotland (RBS) describes itself as “customer-obsessed.” To better serve its customers, the finance team is tasked with modeling various strategies and scenarios tied to the bank’s products and services. This proved a challenge with legacy finance systems.



“Our models took ages to update,” says Stuart Wray, head of implementation for future finance, Royal Bank of Scotland. “We weren’t able to model scenarios quickly because of the number of spreadsheets we had.”

To improve the speed of business, RBS decided to move a number of finance functions to the cloud—including planning and budgeting, strategic modeling, financial forecasting, predictive analytics, profitability and cost management, and the financial close. As a result, RBS can now adjust its strategic models in minutes.

Wray says, “The cloud has really helped us improve the pace at which we’re able to produce scenarios. And it’s not a case of just building the model and it’s finished. Our users are able to evolve their models on a regular basis, in a safe and controlled way.”

RBS outlines 5 benefits that it achieved in moving to cloud:

- 1 Cost effectiveness**
- 2 Better insight and control**
- 3 Simplified processes**
- 4 Continuous innovation**
- 5 A move towards zero-touch rolling forecasts**

“Zero-touch forecasting is our aspiration,” Wray says. “We feel that the cloud will help us move to autonomous forecasts; what we mean by that is that the forecasts will run themselves. We’re not quite there yet, but the cloud has put a great base in place for us to start to build towards that.”

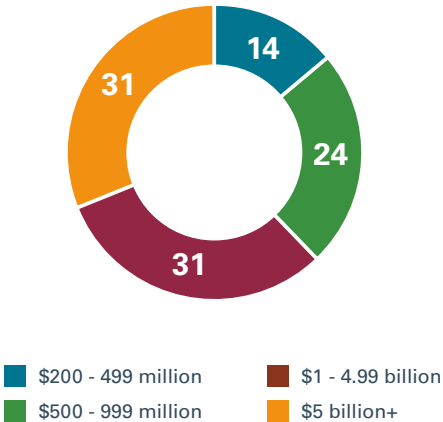


Video: Royal Bank of Scotland Future-Proofs Finance with Oracle Cloud

Highlights

- **21% of our respondents in the financial services sector met our criteria for Digital Finance Leaders.** This is relatively high compared to other sectors. It is also a sector where data about customers can provide valuable insights. This is an industry in which the product or service is digital; online banking has made many previously unprofitable customers cheaper to serve. New technologies provide further opportunities to make customers “self service.”
- **Finance leaders in financial services are relatively downbeat about the progress of process automation in the wider enterprise.** Only 14% say that their business has “driven down costs and transformed process efficiency through robotic automation” across the business.
- **This is reflected by automation levels within the finance function itself.** Only 13% of finance leaders say they are deploying robotic process automation at scale; the top barrier to automation is “concerns about data and information security.” This reflects the fact that the financial services sector holds a wealth of information about consumers—including sensitive information such as bank account numbers and spending habits—and any breach would have significant consequences.

Financial services respondents by revenue



The journey to enterprise digital leadership		
45%	14%	26%
"We are quick to meet our customers' fast-changing technology expectations"	"We have driven down costs and transformed process efficiency through robotic automation"	"Our finance team is seen as moving quickly enough to support the organization's digital ambitions"

The finance transformation journey to digital finance leadership		
Operational Excellence	Digital Intelligence	Business Influence
13%	22%	19%
"We are deploying robotic process automation at scale across the finance team"	"We are deploying advanced analytics tools at scale across the finance team"	"Finance is clearly recognized by stakeholders for its strong understanding of potential uses for emerging technologies such as blockchain and machine learning"

Life sciences and healthcare

Industry Spotlight:

Blue Cross Blue Shield of Michigan

Jac Amerell is vice president and controller at Blue Cross Blue Shield of Michigan. He's also a futurist.



When asked about the future of the insurance industry, he cites an example of an insurance model he recently encountered: “Everything is digital. You apply online, submit a claim online along with a short video, and artificial intelligence reads facial expressions in the video to assess truthfulness when the claim is submitted. If you compare the cost structure of that organization versus an old brick-and-mortar insurer, it's dramatic—they can't compete. As a finance leader, I feel a responsibility to lead into change, to push to be more efficient and effective, to lower the finance price point and raise the value of information delivered. It's my obligation to help an organization and its people continue to evolve.”

As healthcare costs globally continue to rise, margins for providers and insurers alike continue to shrink. The healthcare sector is seeking new revenue streams, and Amerell is on a mission to transform his finance team into business strategists who can uncover new opportunities.

“A lot of things that finance people do every day, they have to do because their systems don't facilitate the transactions. Tomorrow, the system is going to facilitate that. For me, we should spend that extra time analyzing data, instead of collecting and reconciling it.”

Amerell is excited about the benefits that his finance team will realize by moving BCBS Michigan to the cloud. “We will have standardized processes, standardized governance, versus various, disparate processes and governance,” Amerell predicts. “We will have one source of truth for finance information. Controls will improve—we will have rules and logic that calculate stat, GAAP, tax—all housed in one central location. The efficiencies that come from being able to go to one spot for information, versus having to go to multiple spots, will be dramatic.”

Amerell has also taken the unusual—and forward-thinking—step of providing his finance staff with six sigma, robotics, and other technology training. “I'm trying to help people develop new skills that we are going to need in the future. I challenged people: learn the new skill, practice the new skill, pick somewhere you're spending significant time and energy and build yourself a bot. Who can save the most time in their daily jobs? I feel as a leader, if we are changing the world people live and work in, we have an obligation to help them step into it.”

Industry leadership: How finance advances the digital agenda—Life sciences and healthcare (cont.)

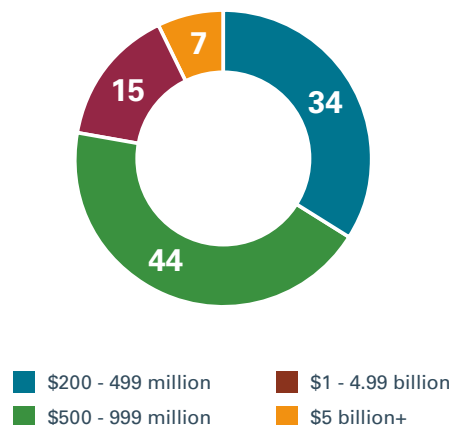
Highlights

- **16% of our respondents in the life sciences and healthcare sector met our criteria for Digital Finance Leaders.** This is modest compared to other industries. In a sector where clinicians are the dominant profession, it may be a challenge for the finance profession to be influential.

- **Life sciences and healthcare's finance professionals are the most confident that their organizations have driven down costs and transformed process efficiency through robotic automation.** More than 1 in 5 (22%) believe this to be the case, making it a highly-ranked sector in this regard.

- **However, the sector's finance leaders are less positive about the extent to which their teams are seen as digitally-savvy by stakeholders.** Only around 1 in 10 (12%) say that finance is recognized for its understanding of how technologies such as machine learning or blockchain can be exploited. With these technologies key to the sector's future, there is an urgent need to upskill existing finance staff and understand critical talent gaps.

Life sciences and healthcare respondents by revenue



The journey to enterprise digital leadership

45%	22%	20%
"We are quick to meet our customers' fast-changing technology expectations"	"We have driven down costs and transformed process efficiency through robotic automation"	"Our finance team is seen as moving quickly enough to support the organization's digital ambitions"

The finance transformation journey to digital finance leadership

Operational Excellence	Digital Intelligence	Business Influence
11%	16%	12%
"We are deploying robotic process automation at scale across the finance team"	"We are deploying advanced analytics tools at scale across the finance team"	"Finance is clearly recognized by stakeholders for its strong understanding of potential uses for emerging technologies such as blockchain and machine learning"

Energy and natural resources

Highlights

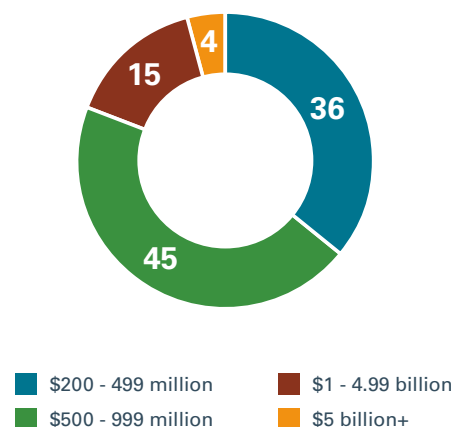
- **12% of our respondents in the energy and natural Resources sector met our criteria for Digital Finance Leaders.** This is low relative to other sectors.
- **CFOs across energy and natural resources are the least confident in the wider enterprise's ability to meet customers' fast-changing technology expectations.** Only 35% feel their organization is doing so, making it the lowest-ranked among the sectors. The industry's segments—such as power utilities—face significant

customer-facing digital disruption. New entrants from the digital sector are moving into the space, and smart grids are driving companies to develop new capabilities. Many of the sector's finance leaders are clearly concerned about their organization's ability to win these battles.

- **This relatively downbeat assessment is also reflected in leaders' concern about how finance is perceived.** Only 6% say that finance is recognized for its understanding of how technologies such as machine learning can be used—the lowest ranking

among the sectors we surveyed. This reflects the seismic shift the industry is going through, as data becomes an increasingly important currency. As smart grids, the Internet of Things and cloud technologies become increasingly critical, the industry is now collecting huge amounts of data. Industry CFOs recognize that there is an urgent need for finance teams to transform their "Digital IQ" to meet the challenges ahead, particularly in terms of the advanced technologies that can turn massive volumes of data into insight and value.

Energy and natural resources respondents by revenue



The journey to enterprise digital leadership

35%	18%	19%
"We are quick to meet our customers' fast-changing technology expectations"	"We have driven down costs and transformed process efficiency through robotic automation"	"Our finance team is seen as moving quickly enough to support the organization's digital ambitions"

The finance transformation journey to digital finance leadership

Operational Excellence	Digital Intelligence	Business Influence
8%	15%	6%
"We are deploying robotic process automation at scale across the finance team"	"We are deploying advanced analytics tools at scale across the finance team"	"Finance is clearly recognized by stakeholders for its strong understanding of potential uses for emerging technologies such as blockchain and machine learning"

High technology, telco and media

Industry Spotlight: Oracle

Oracle has been a leading name in technology for more than 40 years, and has recently transformed itself for the cloud era.



"Oracle's strategy is customer success," says Maria Smith, senior vice president and assistant corporate controller at Oracle. "As part of our transformation we have moved from our on-premise ERP solution to Oracle ERP Cloud—the same cloud application that our customers use. The move has been transformational for us, and my team is exploring how we can help our customers be successful in the cloud."

Oracle created a new "Finance Transformation and Automation Team" to lead the deployment. It also created a "Global Customer Collaboration Team," with the aim of sharing Oracle's experience at global events, conferences and forums. "This is a learning opportunity in so many ways, as it requires new skills and knowledge, and is far away from the classic accounting role," Smith explains. The skills required for her team go beyond accounting into soft skills such as networking, relationship-building and collaborating with customers.

Oracle has achieved a number of benefits by moving ERP to the cloud. Among them:

- Higher levels of automation, reducing manual accounting 14% quarter-over-quarter by moving from on-premise to cloud
- Reduced time, risk, and errors, with the ability to reconcile global intercompany accounts for hundreds of subsidiaries in just five hours
- Freedom for finance staff to focus on value-added activities, such as developing global subject-matter expertise

"Our vision is to have an autonomous close," Smith continues. "We plan to eliminate manual accounting or automate it by working with our machine learning team. We have a pilot project to create statutory accounts templates, which can be populated directly from our statutory GL. We can also look to standardize, simplify and automate compliance with IFRS and other regulations. We plan to implement data analytics—and we look forward to reduced audit times with all of the above."

Smith is excited about the possibilities of what her team can do with cloud. "The technology is ready," she says. "Now it's up to our people and processes to drive innovation and share that success with our customers."

Industry leadership: How finance advances the digital agenda—High technology, telco and media (cont.)

Highlights

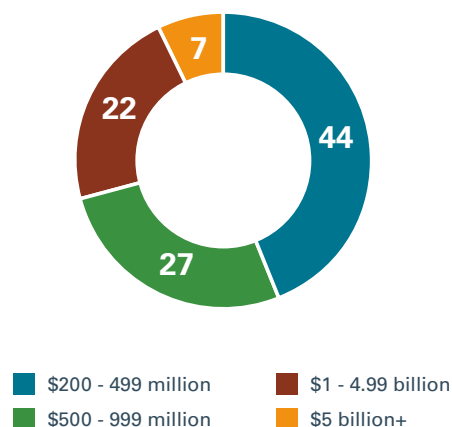
- **Only 8% of our respondents in the technology, telco and media sector met our criteria for Digital Finance Leaders.** This is low compared to other sectors.
- **This sector's CFOs are relatively downbeat about their firms' abilities to meet customers' fast-changing technology expectations.** Today's consumers expect technology to change on a monthly basis, and they're constantly on the lookout for the next big innovation. High tech, telco and media companies cannot merely meet customer expectations, they must

anticipate them. This means having your finger on the pulse of customer attitudes, knowing the experiences they expect, and understanding what drives loyalty. This last point is key in a sector that can suffer from high customer churn.

- **Anticipating what customers want, and winning their loyalty, relies on data, and this sector is awash with data.** This partly explains why the sector's CFOs are more positive about data analytics in

finance. Almost a quarter (24%) say they are deploying advanced analytics at scale across the finance function. This places them at the top of our sector rankings in this area, alongside another data-rich sector, consumer products and retail. For industry finance leaders who do not have this scaled capability, it will be increasingly urgent to put in place the technology tools, people capability, and data governance frameworks required to get ahead.

Technology, telco and media respondents by revenue



The journey to enterprise digital leadership

38%	14%	19%
"We are quick to meet our customers' fast-changing technology expectations"	"We have driven down costs and transformed process efficiency through robotic automation"	"Our finance team is seen as moving quickly enough to support the organization's digital ambitions"

The finance transformation journey to digital finance leadership

Operational Excellence	Digital Intelligence	Business Influence
12%	24%	16%
"We are deploying robotic process automation at scale across the finance team"	"We are deploying advanced analytics tools at scale across the finance team"	"Finance is clearly recognized by stakeholders for its strong understanding of potential uses for emerging technologies such as blockchain and machine learning"

Higher education

Industry Spotlight:

University of California, Los Angeles

More than half (51%) of the higher education respondents we surveyed agreed that they are “quick to meet our students’ and clients’ fast-changing technology expectations.” UCLA (the University of California at Los Angeles) has provided a strong example of this over the course of its 100-year history as one of the leading universities not just in California or the United States, but worldwide.



UCLA has two major groups of stakeholders—students and faculty—and the finance department supports both, according to Allison Baird-James, the university’s Associate Vice Chancellor / Controller. In addition to supporting everyday student needs such as collecting tuition and housing payments, distributing student financial aid, and providing student IDs, the finance team has developed close business partner relationships with faculty members and their associated staff.

“At any given time, we have faculty members in 60 to 70 percent of the countries in the world,” says Baird-James. “Many tend not to work in the main city hubs. Instead, they are out in the field—often in very rural locations that don’t have a lot of support. We need to develop payment options (local currency, paycards, electronic currency) for them so they can pay locally for the things they need for their research—for example, if they’re out in the bush on an archaeological dig, paying day laborers and providing meals for their crews. We are in process of creating a unit to connect the faculty member to the administrative departments designed to assist them internationally. Therefore, the faculty member will not have to worry about whether to call risk management or legal or procurement. Instead, they call a knowledgeable finance person specializing in international projects, and that person connects them with the appropriate resources.”

This type of client focus is why UCLA is investing in a digital finance function capable of leading the University’s continued success over the next 100 years, powered by cloud-based ERP applications. “Our faculty members develop many innovative ways of doing things—let’s say, a specialized brain scan using new equipment they’ve developed—they want to be able to provide those scans to other entities outside of UCLA for research purposes,” Baird-James continues. “We help them create a business model that enables them to do it. We want to make our processes simple and easy to get through, so that faculty spend their time on their research rather than trying to get through administrative red tape. A lot of our work is trying to enable these very creative thinkers to focus on the mission that they’re trying to fulfill.”

Working with creative thinkers requires creative finance talent. “Obviously, you want highly skilled people,” Baird-James explains, “but you also need risk takers and people who are engaged. They are flexible, creative, curious, and have a sense of urgency—not just someone who’s a follower. You really are looking for someone who’s a different kind of communicator. I spend my time talking to people and envisioning the future. More and more, I need leaders underneath me who are doing the same.”

Industry leadership: How finance advances the digital agenda—Higher education (cont.)

Highlights

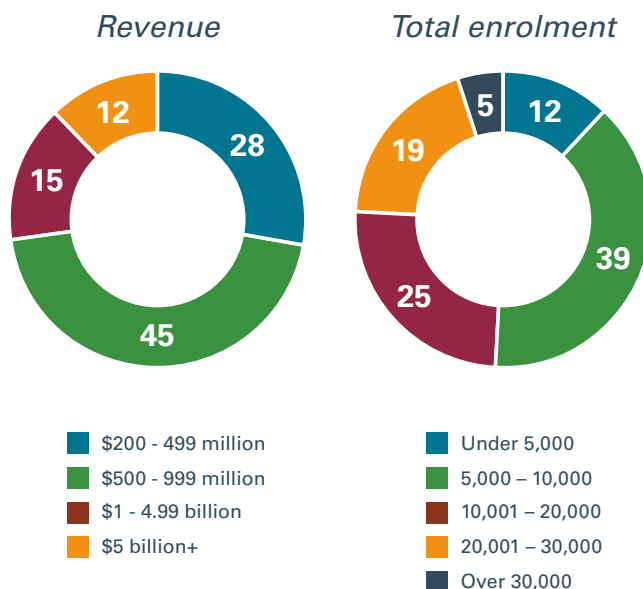
- **12% of our respondents in the Higher Education sector met our criteria for Digital Finance Leaders.** This is relatively low compared to other sectors.
- **Higher Education's finance leaders are confident that their institution is quick to meet students' and clients' changing technology expectations.** We found that over half (51%) said that finance is quick to meet the fast-changing technology

expectations of their students and clients, which puts them close to the highest performer in this regard—consumer products & retail. At the same time, 41% said the finance team moves quickly enough to support the organization's digital ambitions.

- **But the sector's finance leaders are much more downbeat about the progress of automation and back-office finance operations, which offers a significant untapped opportunity.**

In particular, automation maturity is notably low, with only 4% saying that they have made significant progress in driving process efficiency through automation. The challenge is significant: finance processes in higher education are complex, designed to meet strict compliance requirements and drawing on the knowledge of finance experts across the business. Realizing the potential of automation in the sector will mean tackling a wholesale reengineering of finance processes; otherwise, the sector could compromise its ability to meet the needs of clients and students.

Higher education respondents by



The journey to enterprise digital leadership		
51%	4%	41%
"We are quick to meet our students' and clients' fast-changing technology expectations"	"We have driven down costs and transformed process efficiency through robotic automation"	"Our finance team is seen as moving quickly enough to support the organization's digital ambitions"
The finance transformation journey to digital finance leadership		
Operational Excellence	Digital Intelligence	Business Influence
1%	39%	12%
"We are deploying robotic process automation at scale across the finance team"	"We are deploying advanced analytics tools at scale across the finance team"	"Finance is clearly recognized by stakeholders for its strong understanding of potential uses for emerging technologies such as blockchain and machine learning"

Conclusion

In a world where technology is widening the gap between digital leaders and laggards, the finance function plays a critical role in ensuring the organization is not left behind. This means CFOs will need to confront difficult technology and human challenges—while at the same time meeting finance’s intensive, business-as-usual demands.

CFOs need to understand where different technologies will have the greatest impact and then have the boldness of vision to experiment and innovate. On the human side, they will have to build on finance’s traditional skills with more progressive people capabilities in areas such as predictive analytics. At the same time, they will need to manage the tensions that arise when smart machines and people need to work together.

Next steps for businesses

As finance leaders take on greater responsibility for digital transformation within and beyond finance, several key strategies stand out that Oracle sees consistently applied by digital leaders around the world:

- **Take a customer-first, holistic approach to organizational change.** Rather than focus on optimizing or improving standalone business processes, look at optimizing the end-to-end customer and employee experiences, based on the customer value they will create.
- **Focus on platforms, not products.** In today’s economy, it’s no longer about products but experiences and digital ecosystems that bring together users and providers to create shared value.
- **Use data as a strategic weapon.** Digital leaders place an economic value on data and look to monetize it, versus just managing it.
- **Foster a change-ready culture.** Adopt an agile approach to change that is iterative, empirical, and continuously improving. Businesses that are highly motivated to change and experiment are the ones that see the greatest success.
- **Secure a top-down, executive mandate.** To radically change your culture, you need more than just management buy-in; you need an executive mandate to adopt a customer-first approach to business that permeates every organizational function.

Conclusion (cont.)

Next steps for management accountants

For accountants in business, the findings in this report are not all flattering—for example, with regards to their awareness of the potential of new technologies. However, this research also shows a clear correlation between progressive finance teams and enterprise digital transformation. This presents an opportunity for accountants to keep up to date and become more influential.

As 2019 marks the centenary of CIMA's formation, it is instructive to note that the first syllabus included a paper on the principles of mechanics. If they are to contribute to decision-making and performance management, it is as important now as it was then that professional management accountants should understand how the business works.

Back then, electricity was gradually changing how the world worked. Today, the digital age is rapidly driving an equally seismic change. It is also changing the nature of knowledge work. To remain relevant, management accountants need to be strategically aware—alert to threats and opportunities such as the potential in new technologies. In addition to technical knowledge, they need a commercial mindset so as to develop an understanding of business models and the drivers of cost, risk and value across the business' value chain. They must also be able to join the dots between data about those drivers and how it might be analyzed through to financial outcomes. They must be able to work with others to make things happen.

Management accounting is about informing and guiding the management and control cycle. That is an iterative learning cycle where performance is constantly reviewed and corrective action is taken. As professionals, management accountants are obliged to take a similar approach to life-long learning. Knowledge goes out of date, so they are obliged to keep up. They must each draft a personal professional development plan that builds upon their key skills and capabilities, so they can play a leading role in driving digital finance and supporting enterprise digital transformation.

The AICPA and CIMA, working in association, are well positioned to enable students and members to develop the skills that are needed today and into the future.

About the survey

To create this report, the Association engaged Longitude to carry out an extensive global survey of over 700 senior finance leaders.

Of the finance leaders surveyed, 20% were CFOs; 23% were either Finance Directors, Chief Accounting Officers, or Financial Controllers. The remainder were senior executives in finance, including directors of finance transformation.

Respondents were split across North America (US, Canada); South America (Brazil, Mexico); Europe (UK, France, Germany); Middle East (UAE, Saudi Arabia); and Asia Pacific (Australia, Singapore, India, Japan), as well as across selective sectors.

Acknowledgements

The principal contributors were:

Anne Ozzimo, Senior Director CFO Marketing at Oracle Corporation

Peter Simons, Associate Director of Research—Management Accounting, Association of International Certified Professional Accountants

Our thanks go to Longitude, our research and thought leadership partner, for their contributions to the research report.

Association of International Certified Professional Accountants

The Association of International Certified Professional Accountants (the Association) is the most influential body of professional accountants, combining the strengths of the American Institute of CPAs (AICPA) and the Chartered Institute of Management Accountants (CIMA) to power opportunity, trust and prosperity for people, businesses and economies worldwide. It represents 650,000 members and students in public and management accounting and advocates for the public interest and business sustainability on current and emerging issues. With broad reach, rigour and resources, the Association advances the reputation, employability and quality of CPAs, CGMAs and accounting and finance professionals globally.

aicpa-cima.com

The Oracle Cloud offers complete SaaS application suites for ERP, HCM and CX, plus best-in-class database Platform as a Service (PaaS) and Infrastructure as a Service (IaaS) from data centers throughout the Americas, Europe and Asia.

For more information about Oracle (NYSE:ORCL), please visit us at [oracle.com](https://www.oracle.com)

