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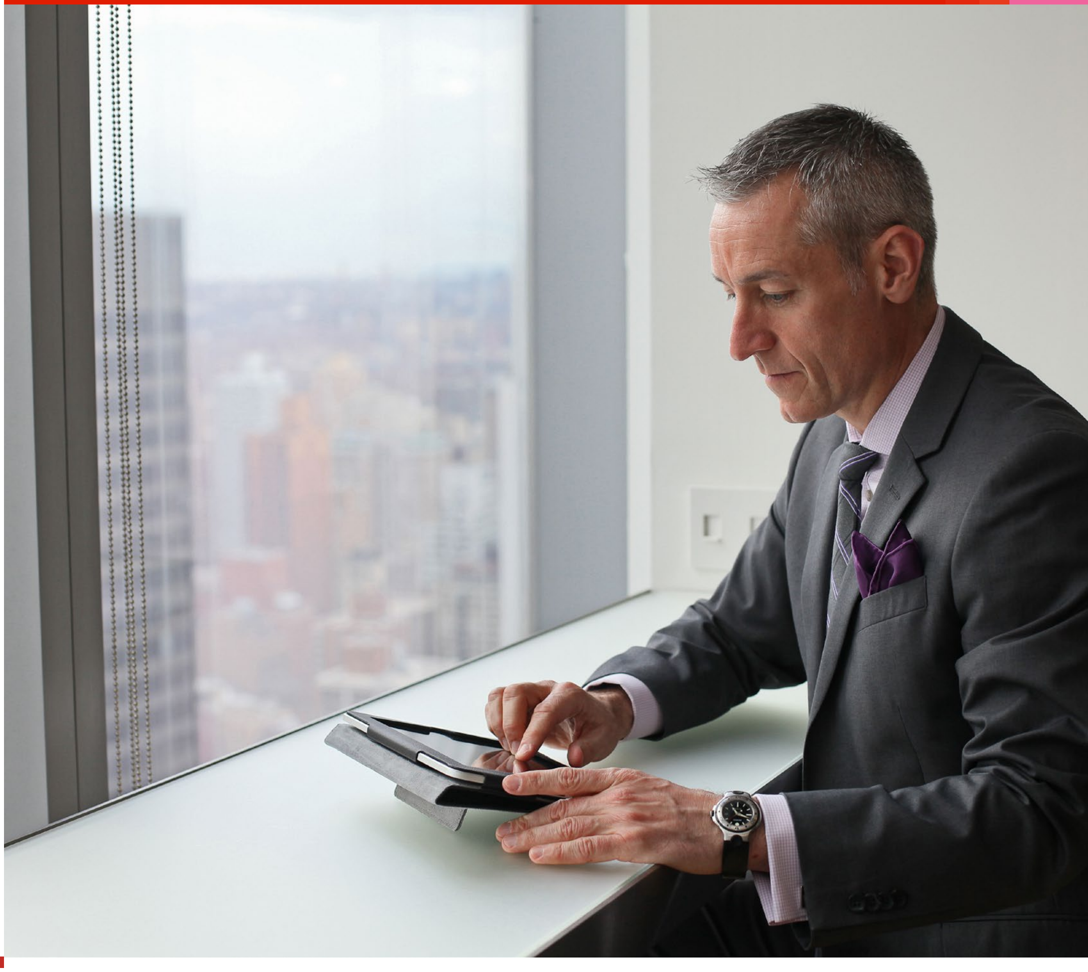
Leading from the front: Redesigning finance for the digital age

SAP Edition

Making sense of the changing role of finance in the digital economy



We're pleased to introduce ***Leading from the Front: Redesigning Finance for the Digital Age.*** *The business landscape is being transformed by a series of megatrends, of which digital technology is already proving to be the most pervasive and potentially disruptive. Finance teams will have to rethink their role and relevance within this new landscape, both in how they serve the business and in how they design their own operations.*

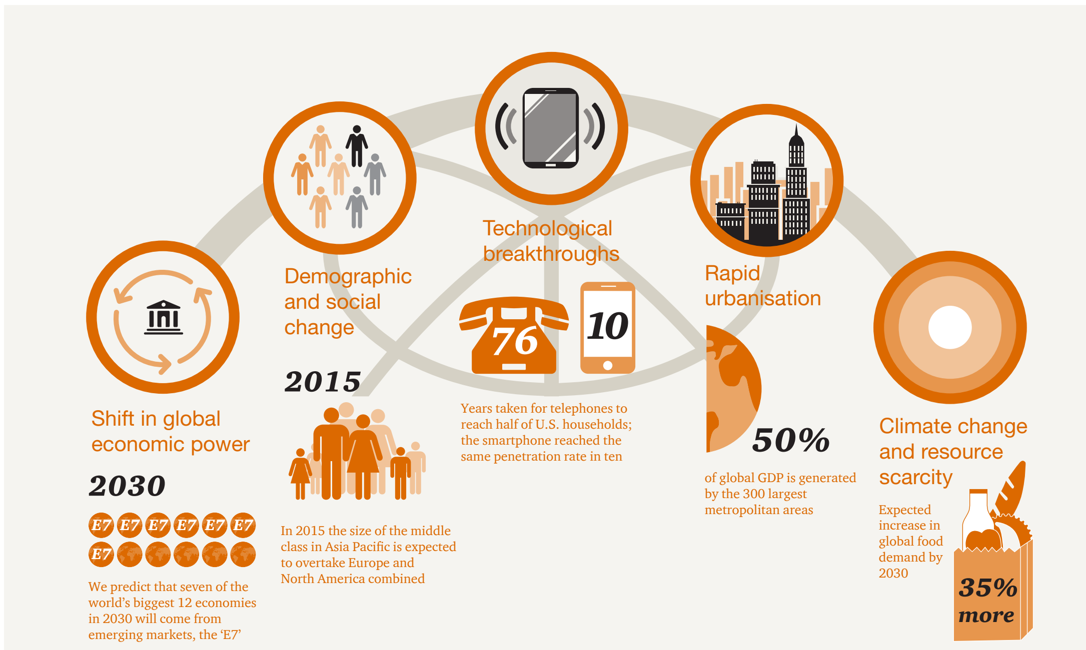
This point of view outlines a framework for analyzing and understanding the changing role of finance in the digital economy, with a special focus on how PwC's SAP experience brings leading practices and deploys SAP technologies to address business's biggest finance challenges. From strategy through execution, PwC collaborates with SAP in order to help clients align their technological resources and applications with their business objectives in order to address the financial, operational, technical and regulatory challenges inherent to SAP investments.

We've published this paper in an interactive, modular format, enabling you to explore the individual components of our framework that are of greatest interest to you. Each area of digital impact is accompanied by a relevant case study that illustrates a real-world solution to a finance-related challenge.

The forces transforming industry and commerce

From hyper-connectivity to more exacting customer expectations, from the influx into cities to the escalating pressures on natural resources, the commercial and economic landscape is being reshaped by five key megatrends (see Figure 1). There are clearly other drivers at play, but our research and work with clients shows that these five forces are already having the most decisive impact.

Figure 1. The five megatrends reshaping our world



Source: 1322 CEOs interviewed for PwC's 18th Annual Global CEO Survey (www.pwc.com/ceosurvey)

Each of these megatrends will have a significant impact in itself. These impacts range from the new markets opened up by increasing affluence in Asia, Africa and South America to the need for innovation in manufacturing and agricultural production created by the mounting pressures on natural resources. The trends could have even more impact when they coalesce and collide. Examples include the relocation of labor-intensive manufacturing facilities from countries with aging populations to ones with younger demographics.

Digital as driver and accelerator

Of the five megatrends, technological breakthroughs—the digital revolution in particular—are creating a world that is constantly connected, constantly innovating and constantly confounding conventional wisdom. Technology is also the megatrend with the most interaction with the other four. We can see the collision of demography and technology in the emergence of the Millennial generation, for example. The behavior and expectations of this connected generation is blurring the lines between the digital and physical worlds, reshaping the desired customer experience and how customers will want to consume in the future.

For businesses, there are the untold possibilities opened up by virtually unlimited computer power, 24/7 interaction with customers, and analytics that enable them to understand consumer behavior like never before. Yet businesses also have to compete in marketplaces in

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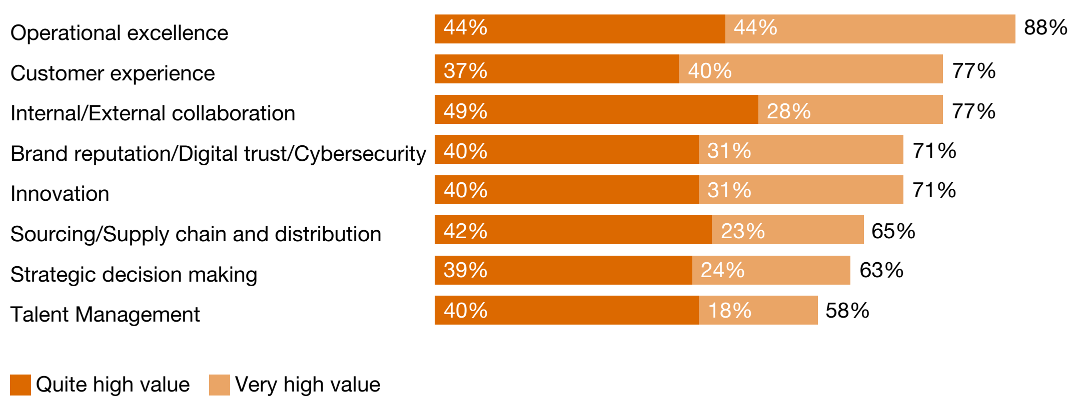
which innovations can become consumer expectations in a matter of months. They are also competing for customers who are highly informed and readier than ever to switch if their demands aren't met. It is clear that technological breakthroughs, accelerated by the other megatrends, have the most potential to disrupt businesses and provide opportunity in the future.

How are businesses responding to these developments? More than seventy percent of the business leaders taking part in PwC's latest global CEO survey see digital technologies as an opportunity to enhance operational efficiency, customer experience, innovation capacity and brand reputation (see Figure 2).

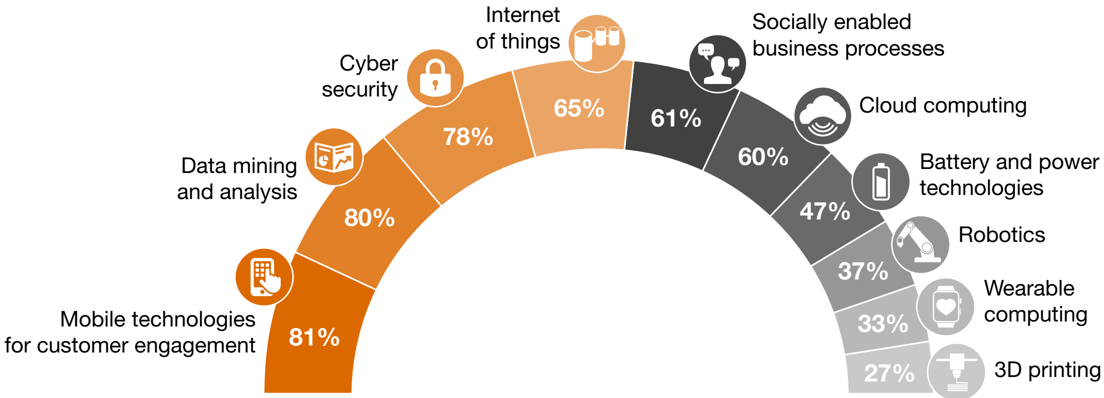
Figure 2: Digital opportunities



Source: 1322 CEOs interviewed for PwC's 18th Annual Global CEO Survey (www.pwc.com/ceosurvey)

When CEOs were asked to rate the strategic importance of particular digital technologies for their organizations, using mobile to strengthen customer engagement and data analytics to enhance insight topped the list (see Figure 3). Business leaders are also coming to recognize the potential of emerging developments including the Internet of Things, which could further strengthen the connectivity and insights possible between companies and consumers, as well as their partners and other stakeholders. However, early adopters should be prepared to experiment and be flexible as the technology and market evolve. For example, sensors will generate a great deal of data, which businesses will need to collect, store, protect, and analyze. They'll also need to ensure they have appropriate tools, infrastructure, and talent in place to process and then integrate sensor data with other enterprise data. As always, data security and privacy challenges are critical.[2]

Figure 3: The strategic importance of different digital technologies



Source: 1322 *CEOs interviewed for PwC's 18th Annual Global CEO Survey* (www.pwc.com/ceosurvey)

2 PwC "Three Surprising Digital Bets for 2015" http://www.pwc.com/us/en/advisory/business-digital-technology-trends-sensors.html

Businesses are also realizing the importance of mining and analyzing brand sentiment and product conversations within social data, which enables them to gauge consumer perspectives and target their marketing more effectively. Finally, CEOs recognize cloud computing as a way to increase data sharing and reduce costs. By offering software-as-a-service (SaaS), cloud technologies help enterprises simplify processes and free up resources to focus on more value-added activities.

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Positioning the CFO to lead change

Boards are increasingly focused on digital strategy and are looking to technology and finance leaders to help them understand what the digital developments and wider megatrends mean for their businesses and develop the strategies needed to respond. In some organizations, in fact, the CFO is ultimately responsible for all digital investments, joining the CEO, CIO and CDO (chief digital officer) in that role.[3]

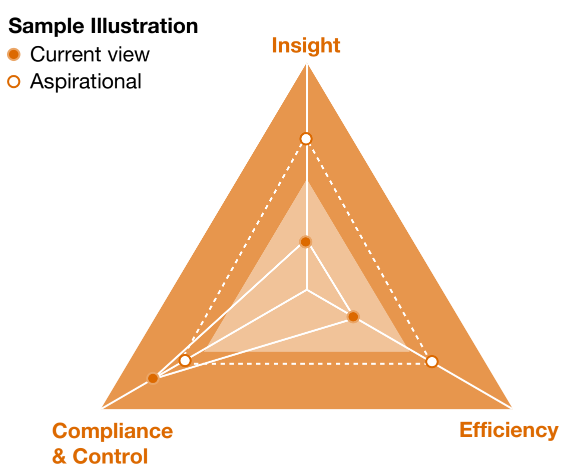
Key questions facing CFOs include: *Which impacts of the digital economy present the biggest challenge to our organization? Am I part of the solution? How can my finance team become the nerve center for managing our enterprise's response to change?*

Finance as the owner of much of the required data and analytical techniques on the one side and its bird's eye view of the business and its marketplace on the other should mean that it's ideally placed to navigate through change and orchestrate innovation. This includes identifying customers' emerging needs, the openings this creates for the organization and how resources can be most effectively deployed to capitalize. It also includes sorting out what is commercially viable from what's not and determining how the value potential from innovation can be most effectively monetized and optimized. With pressure on finance function costs and regulatory demands continuing to mount, digital also presents a valuable opportunity to improve efficiency, free up resources and sharpen insight.

As PwC's latest finance-effectiveness benchmark report highlights, however, some finance teams have proved more successful than others in leading change and harnessing the potential of the digital world. The benchmark report rates finance teams across the key areas of business insight, efficiency and control. The front-runners are using the latest business intelligence and visualization technology to analyze more data while ensuring that the outputs are more focused, accessible and actionable for users.[4] And they're operating at 40% lower cost than their mid-tier counterparts. The result is that these finance teams are playing a stronger role in winning business and providing innovative thinking about how to make new business ventures more profitable or more compelling to the customer.

So how can finance teams get up to speed with the changes within the marketplace and their own functions? The framework for analyzing and understanding the changing role of finance in the digital economy set out in this report covers eight drivers of value within finance and the wider enterprise (see Figure 4). The choice of drivers reflects the main digital opportunities identified by business leaders in our latest global CEO survey (see Figure 2 on page 4).

Figure 4: Drivers of value to shape the new role for finance



Insight
- Strategic decision support aligned with internal and external customers
- Simplified flows of data, information and analysis
- Predictive, forward looking insight
- Timely and actionable information

Efficiency
- Cost effective back office processes and structure
- Increased capacity for value added activities
- Scalable service delivery models to support business growth

Compliance and Control
- Greater transparency and accountability
- Embedded culture of controls awareness
- Improved risk management

Source: PwC

3 PwC, "2015 Global Digital IQ Survey," http://www.pwc.com/gx/en/services/advisory/2015-global-digital-iq-survey.html
4 PwC, "Breaking Away: How Finance Front-runners Are Redefining Excellence," www.pwc.co.uk/finance/finance-matters/insights/breaking-away-finance-effectiveness-benchmark-study-2015.jhtml.

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Each of the value drivers focuses primarily on the objectives of increasing revenue (advisor), enabling profitability (enabler) and enhancing operational efficiency (operator). Figure 5 outlines some of the key areas in which the finance function will be critical in realizing the digital potential and the core capabilities that will be demanded of it (these core capabilities are explored in more detail within each of the modules). An effective CFO should pivot between his or her role as advisor, enabler and operator. Each of these facets is critical in providing boards and business teams with quality, cost-efficient support, which evolves in line with changes to the broader business model.

Figure 5: The complementary roles of finance

Digital opportunities—Improving stakeholder value—Enterprise digital value drivers

	Revenue growth			Profitability enablement			Operational excellence	
	Customer experience	Innovation capacity	Brand reputation/ digital trust/ cybersecurity	Sourcing/ supply chain & distribution	Internal/ external collaboration	Strategic Decision Making	Finance operational excellence	Finance talent management
Link to Finance capabilities	• Evaluate impact of digital initiatives on customer expectations and return • Adjust pricing model to enhance experience • Provide stewardship of the finance operating model	• Determining how to allocate capital and promote innovative decision making • Evaluate and validate business case for innovation • Facilitate monetization • Track and optimize real return	• Evaluate impact of breaches on reputation • Define 'crown jewels' targeted for maximum protection • Protection and response planning	• Monitor vendor and supply chain performance • Target and track improvements • Align supply chain management with cost and tax management	• Create information and infrastructure for real-tine/ virtual collaboration • Create incentives for collaboration	• Ensuring quality and consistency of source data • Asking the right questions • Cutting through the 'noise' to turn data into actionable insight	• Re-defining operational model for digital age • Creating platform for growth • Capitalizing on analytical developments	• Re-defining talent needs for digital age • Creating environment that attracts top talent • Developing interface between human and artificial intelligence

	Advisor	Enabler	Operator
CFO role attributes	• Advisor and facilitator of feasibility and profitability analysis for new innovative business models. • Steward of finance back office operations relative to new products, channels etc.	• Enabler of the organization's real time reporting and analytics. Ensuring Financial information is accurate and available in a timely manner. • Supporter and provider of data to allow for strategic decision making.	• Owner of leveraging new technologies to provide better insight, increase control and transactional efficiency. • Owner of upgrading talent based on changing demographics as well as related digital trends.
Emerging technologies	• Social as a means of harvesting consumer desires. • New digital platforms to reach new customer groups.	• New tools and data sets to support decision making and risk taking • Big Data/Analytics	• Cloud ERP/EPM for improved collaboration and reduced TCO. • Continued automation of controls and transactional processing.
CFO agenda	• Revenue recognition. • Implications on Finance operating model (e.g., billing, invoicing, etc.) • Profitability analysis of new products, customer segments and channels.	• New ways of collaborating with internal/external stakeholders. • Enabling a more efficient supply chain process.	• Managing and upgrading the Finance Operating Model using digital tools. • Managing and developing a diverse and global workforce—Gen Y vs Gen X.

Source: PwC

Luckily, the CFO has an increasing number of powerfull new tools at his or her disposal to generate insightful views into data that can help drive smart decisions. For example, SAP offers SAP Digital Boardroom, a breakthrough digital approach that aims to contextualize and simplify performance reporting across all areas of the business, harmonizing the view of company operations across all lines of business in real time. Designed to work in concert with SAP S4/HANA, it also has the ability to use line-of-business data from virtually any enterprise system, allowing companies to analyze a single source of truth about their critical business metrics. As businesses continue to transform and evolve around the digital economy, tools like SAP Digital Boardroom are becoming crucial for instant, data-driven insights that can address ad hoc questions and improve decision-making. The ultimate goals: better transparency, deeper insights, simplified processes, and improved trust among all board participants, employees, and investors.

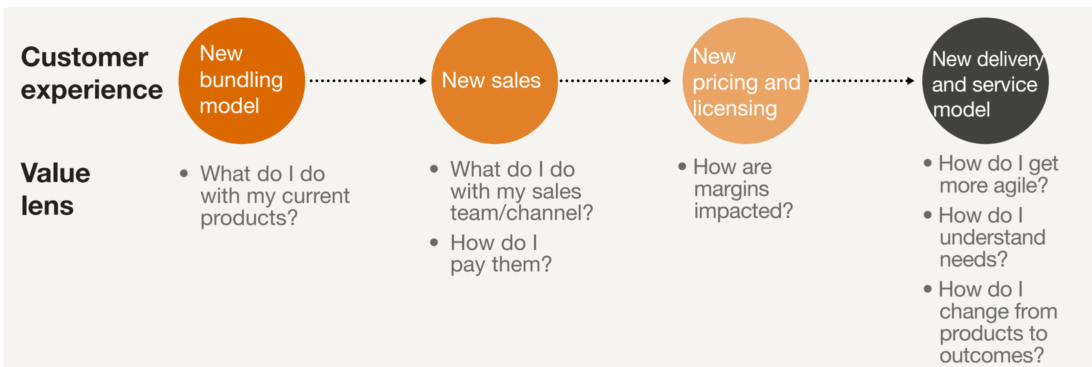
*SAP Digital Boardroom representation

1. Customer experience

Digital technology offers an entirely new way to explore, understand and deliver a differentiated customer experience. With digital, you can use new channels to reach customers and understand what they are thinking, responsive products can be developed and delivery and pricing models can be streamlined.

The challenge for finance is that digital interactions close the gap between the customer touchpoint and back-office systems, requiring finance teams to engage in product development, pricing and monetization processes much earlier and more prominently than previously required. Figure 6 outlines some of the key questions finance should consider in these early stages. Boards and business teams will be looking to finance to assess the impact of digital disruption on the business model and help lead the redesign of value, pricing and operational models to take account of changing customer expectations.

Figure 6: Finance moves to the forefront of customer strategy



Source: PwC

The role of the CFO in enhancing the customer experience pivots between advisor and enabler. The advisor focuses on financial impacts and controls. The enabler works with the organization to coordinate all the strands of insight, development and launch needed to bring new customer experiences to market quickly and successfully. We have identified four key capabilities required for successful CFO direction and cross-functional collaboration in the area of profitable customer-experience development:

Business case advisor: Objective assessment of the projected benefits put forward by business and creative teams and, if validated by finance, how these benefits can be realized.

Operational enabler: Cutting through the complexities and inefficiencies in the back-office that slow customer response and undermine the experience. Digitally enabled customer experience is driving rapid changes in business models. As a result, finance teams can see significant changes in transaction volumes, customer billing requirements and revenue recognition, imposing significant pressure on the finance operating model. Finance stewardship is necessary to ensure models are not only compliant but also profitable. Finance capabilities supporting profitable customer experiences require high-level strategic input and early engagement between finance and creative teams.

Revenue recognition enabler: Digital customer experience affects revenue recognition through new contract terms, types of service and delivery and payment methods. The new demands can put pressure on finance systems and divert resources from analysis and insight. In an environment of high transaction volumes and increasingly complex subscription and bundling models, finance leaders are implementing new revenue automation systems, which they can then integrate with their Enterprise Resource Planning platform to maintain an efficient revenue recognition process.

Digital tax advisor: Digital commerce can complicate and potentially increase sales and property tax liabilities. Solutions are available, but appropriate tax strategies must be developed up-front.

Case study: Developing deeper customer insights

The challenge

A leading professional services provider with a global delivery model used multiple tools to manage a sales pipeline it relied on to determine its financial forecasts, predict its staffing needs and help identify the potential of new clients. Unfortunately, different regions were using their own tools to manage their sales pipelines, which meant that global collaboration and forecasting were impossible. A lack of reporting capabilities in the existing tools resulted in little access to quality data for financial forecasting and the identification of resource needs. And weak account analysis made it hard to identify additional service offerings by account. The company knew it needed to transform its sales pipeline management processes, and the best way to do that would be to implement SAP CRM across multiple regions.

The solution

After harmonizing its account information and redesigning the process of maintaining data on sales opportunities, the quality of the company's financial forecasting improved significantly. Tracking sales opportunities and keeping them current was a key element of the newly designed processes, and it is now strictly enforced. High-quality sales opportunity data, especially across regions, is now easily available, and the company uses it for better revenue forecasting and sharper decision making.

While often operating in the dark before, the CFO, together with business unit leads, now have a tool to help them manage their financial forecasting more accurately, understand their revenue streams in much greater depth, and determine the service offerings and skill sets they need to maintain to stay ahead of competitors. Enabling a digital transformation around its most urgent questions and concerns has vastly improved the company's performance.

Questions for your organization

- *How does your organization generate creative new customer experiences? How does the CFO participate and at what stage of the cycle?*
- *How do you measure value generation from new customer experiences? What value measurement tools do you have in place? Can they handle iterative development and investment? Are new demands on the back-office operational model accounted for in the profitability analysis?*
- *Do you have a clear view of the digitally enabled elements of your operating model? Is it clear who owns those operating elements?*
- *How recently have you reviewed your revenue-recognition policies, tax structure and payment processing capabilities? Do you have a process to review revenue recognition, tax implications and payment capabilities during product and customer-experience innovation development?*

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2. Innovation capacity

Digital technology provides a stronger platform for innovation through iterative product testing (Cloud), cross-team collaboration (Social), faster feedback from customers (Mobile) and data mining across multiple disciplines (Analytics). The result is sharper market insight and speedier product development, launch and adaptation.

Many of the finance capabilities required to facilitate profitable customer experiences will also be required to enable profitable innovation. As Figure 7 highlights, boards and business teams will be looking to finance to judge whether existing decision-making, product-development, launch and sales processes are still relevant and how they might need to change. In many businesses, this strategy will include a shift from a product- to customer-outcome and solution focus. Finance should also ensure that capital and resources are directed toward competitive innovation in the most efficient way. Developing the necessary capacity will include both organic and acquisition strategies.

Figure 7: Finance's role in facilitating innovation

Source: PwC

Finance's other key role is as the sense check for innovation. In this capacity, finance provides an objective assessment and metrics to track projected benefits put forward by business teams. Its role also includes facilitating monetization within today's evolving pricing and delivery models and tracking and optimizing return of validated innovations.

Case study: Building the foundations for profitable innovation

The challenge

A leading toy manufacturer was following all the well-known mantras about how to foster creativity and develop an innovative culture across the organization. As the company developed groundbreaking new toys and games, it was able to carve out new markets for itself where there was little or no competition, while creating a disruptive stir in existing markets. Yet in trying to do too much at once, the company found that it was running out of cash.

The solution

Innovations should clearly be governed by practical commercial as well as creative considerations to ensure the competitiveness and growth of the enterprise in fast-changing markets. As such, the CFO recognized the importance of finance's role in evaluating and optimizing 'idea-to-value' to ensure that innovations are marketable and profitable, as well as original.

In seeking to optimize the return on innovation, finance played an active role in the creation of a new approach to crowdsourcing design, which has enabled the company to increase the commercial viability and cost-efficiency of product development. Social network users provide ideas and feedback, which contribute to the development of new products and enable the finance team to track performance against objectives. This more open, return-driven approach to innovation has put the business in a much stronger position to align creative and financial objectives.

Questions for your organization

- *How is innovation defined in your organization? Is it ingrained in your culture, or managed as a process? How does the CFO participate and at what stage of the innovation cycle?*
- *How do you measure value generation for innovative digital products and services? What value-measurement tools do you have in place? Can they handle iterative development and investment? Are new demands on the back-office operational model accounted for in the profitability analysis?*

3. Brand reputation and cyber security

Digital technology is creating new forms of customer engagement and becoming the most important arena for shaping brand awareness. But these new forms of interaction are also heightening the risk of cyber breaches, which can lead to a loss of trust that would be extremely difficult to restore.

With the speed and complexity of the threats changing on a daily basis, businesses need to keep pace with the fast-shifting risks and respond when attacks do occur. If (and when) a data breach occurs, it's important to limit its impact, including the potential damage to the organization's reputation.

New risks to data security and confidentiality are also sprouting as the use of connected devices, mobile, social and back-office technologies grows and traditional corporate technology boundaries are opened in favor of federated models. Further concerns center on the need to protect customer and employee data, as well as confidential information from business partners.

As one of the main custodians and users of sensitive information within the business, finance teams have a crucial role to play. It's their job to know where information is at all times, how it's secured, who might want to steal it, and how unauthorized access to it might occur. Perhaps most important, the CFO should take the lead in assessing and advising the board on the full financial impact of a cyber-attack on the organization. A key part of this role is determining the impact of potential breaches on reputational equity and evaluating the return on investment in improved security. It's impossible to protect everything, so finance should determine what are the 'crown jewels' most in need of protection and how resources can be most effectively targeted to support this objective.

Case study: Putting sensitive data off-limits

The challenge

A large and diversified financial services company operates more than 200 financial systems. Each standalone system contains sensitive employee and financial performance information. To avoid any real-time data leakage that would affect the company's market performance, the CFO wanted to develop a data-masking strategy to prevent developers, quality assurance and third-party service providers from having direct access to the confidential financial data.

The solution

Using our developed data-masking tool, the company was able to map its information risks and identify areas of particular vulnerability and financial data sensitivity. This analysis provided the basis for a review of data-masking options and how they could be applied within the business.

The implementation included IT safeguards as well as a new governance and communication framework to oversee security. It also included a program of changes designed to eliminate breach risks in business processes. As a result, IT could continue supporting financial systems in production mode and the CFO had assurance that critical financial data was masked from external users.

Questions for your organization

- *What is your reputation worth and how is the value sustained?*
- *If catastrophe strikes, how is your reputation protected? Or potentially enhanced?*
- *Does reputational equity form part of your enterprise risk and value strategy?*

4. Supply chain optimization

To fully realize digital technology's potential, it's important to understand the impact of digital technology on the sourcing and supply chain functions. Internet of Things, supply chain control towers, integrated omni-channels, sensors, and inventory controls are each having an effect on the transformation of many industries, but the real challenge is in integrating the right combinations of technologies to enable new knowledge-driven supply chain models that are faster and more tailored to the customer.

That knowledge can come from many places. For example, Social provides companies with the opportunity to monitor the customer experience from the processing of an order through to fulfilment. Social applications can provide real-time feedback on the launch of new products, allowing for the mapping of customer reaction and the identification of opportunities to reduce costs in the future.

Mobile and cloud technologies are improving sourcing and streamlining supply chain operations. For example, mobile applications provide the ability to place and approve orders from vendors via personal devices.

Analytics provide performance metrics on vendor performance. For example, data can be used to determine the top vendors for the enterprise based on spend versus returns.

Cloud technologies are making it easier for businesses to share information. For example, cloud solutions provide portals in which vendors and suppliers of services can monitor metrics of their own performance as a supplier.

The importance of ensuring that the supply chain strategy is aligned with the financial targets of the enterprise means that the role of the CFO in the supply chain process is broadening. The CFO's role has expanded to provide the systems and data needed to monitor performance, analyze and address supply chain issues, align supply chain management with other financial indicators including tax and cost to better manage overall financial performance, and mitigate and manage risk. By understanding the critical strategies of the company, the CFO can provide oversight to ensure that investments in systems integration strike the optimal balance between the cost of implementation and the value in terms of addressing customer needs. The better the data quality is up front, the better the financial reporting will be in the end.

How to create a more efficient supply chain

The challenge

FORTUNE 500 companies are losing roughly $32 billion a year by failing to manage knowledge effectively. As Pharmaceutical and Life Sciences executives become more data-driven and discover effective knowledge management, they realize they can unlock efficiencies and drive informed, timely decision making.

In a possible scenario, a company in the pharmaceutical industry may want to leverage a Quality Management System (QMS) to govern quality, regulatory, and clinical processes, enabling a competitive advantage across its value chain. They would want this QMS to support cross enterprise sharing to ensure access to knowledge throughout the organization and use technology to drive better, faster decision making. Providing easier access to communal knowledge may result in reduced time to market, a decrease in the number of defects and customer complaints as well as improved manufacturing process yields, product quality, and supply reliability with possible reductions seen in both delivery time and costs.

Possible outcome

By deploying a QMS Knowledge Management (KM) platform, a pharmaceutical company could:

- Share and analyze information from across the business, helping to research, develop, and launch products faster
- Show clinical site enrollment rates in real time
- Provide common access to safety information and labeling requirements
- Help regulatory teams prepare filings more efficiently
- As products launch, analytics capabilities within the QMS KM platform would be able to scan social media to monitor patient reactions, document complaints, and facilitate complaint investigations
- Enhanced Annual Product Review (APR) reports conducted within the QMS KM platform could provide insights and trends across a variety of areas including yield, non-conformities, cycle times, and complaints
- Generate real-time management review reports, using all available data to summarize product status

By investing in both the proper KM platform and instituting a knowledge culture, a company would be able to develop next-generation products more quickly while also reducing manufacturing and release cycle times, stabilizing its supply chain, and improving product quality.

Questions for your organization

- *How are you navigating the challenges of improving the return on your companies' investments in supply chain technologies?*
- *Is your supply chain and procurement information easily accessible? How much visibility do you have into it?*
- *Can you easily access information about vendors in order to make business decisions? Have you identified the business decisions you need to make?*
- *Are you making the most of social applications to enhance the relationship with customers?*
- *How connected is finance to the sourcing and supply chain processes? Are you involved in the decision making?*

Source: *PwC Knowledge Management:* Unlocking Value in Pharma Life Sciences
PwC's Global Data and Analytics Survey 2016

5. Internal/external collaboration

Digital technology helps organizations to forge connections, share ideas and collaborate as part of virtual teams. It also enables them to reach out to new partners and tap into new crowdsourcing models.

The success of these collaborative networks depends on the effective sourcing, analysis and dissemination of information. An enormous amount of internal data, market research, customer data and social media insight is adding to the profusion of external and internal information available to the business. But many companies are finding it difficult to pull this information together to produce meaningful insights and make it available to the right parties within their network.

We're also seeing significant advances in the use of technology to enhance collaboration in the day-to-day work environment. While web conferencing technologies like Oracle conferencing have been around for some time, tools now allow for real-time collaboration, helping to avoid version control issues with documents emailed across the enterprise and improving efficiency in an increasingly virtual working environment.

Finance teams should take the lead in fostering a collaborative environment in which actionable information is readily available. This includes clearing away obstacles to information sharing while ensuring data security. Relevant performance measures and incentives should be put in place to foster a culture of collaboration. Business process velocity is increasing in a digitally enabled enterprise, which will continue to demand that finance use efficient collaboration tools. CFOs can model this collaborative way of working, teaming with other members of the leadership team, especially the CIO. Our Digital IQ study found that CIOs and CFOs have strong working relationships, more robust than that between the CIO and any other direct reports to the CEO.[5]

Case study: Using an enhanced mobile solution to modernize a workforce

The challenge

A major utility company was staying competitive by executing an aggressive acquisition strategy across North America. It recognized that while the acquisitions led to substantial external growth, they also created an environment of fragmented data management and reporting systems. The company was also saddled with an archaic internal communication platform and obsolete workforce technology. It hoped that a proactive and comprehensive technology strategy could help achieve three key goals:

1) Enhancing the safety of its gas transmission system by improving the accessibility and reliability of pipeline information.

2) Improving data consistency and accuracy by consolidating all data to a single system of record.

3) Deploying a mobile platform in its day-to-day operations to improve data access, accuracy and increase collaboration.

The solution

The company knew it needed to foster a stronger relationship between its finance, operations, and IT teams and improve real-time communication between employees across functions. With that in mind, a comprehensive mobile strategy served as the catalyst in bringing all the functions together. In order to deliver a scalable mobile solution, the client customized the SAP Mobile Platform based Work Manager solution, adopted an iterative user-centric approach that

5 PwC, "2015 Global Digital IQ Survey," http://www.pwc.com/gx/en/services/advisory/2015-global-digital-iq-survey.html

would ease end-user acceptance. That work yielded a consistent platform across business units to enhance communication and real-time data absorption. The upgrade also simplified the daily activities of field technicians by automating and streamlining work review, assignment, execution including time submission and closure processes. The mobile solution not only improved data consistency and quality, it triggered a faster update of the relevant asset/work related data in the system of record and thus reduced the percentage of assets not getting maintained on time. It further enhanced the ability of the client to prepare for audits as relevant paper records got digitized.

At the conclusion of the project, employees had easy access to asset master data, addresses, associated reads, history, electronic completion confirmation of work order operations and attached documents in both offline and online mode. They gained better functionality for their inspection routes and asset management as well as an integrated GIS on a single app which displays relevant assets/work on a map.

Once a company understands business needs of its various user groups, its mobile strategy, enabled by an accumulated and agreed upon guiding principles, can power its customized designs. With that strategy in place, it's easy to drive adoption through training, an onsite support presence, and frequent surveys to elicit feedback.

Questions for your organization

- *Is financial information easy to obtain for the right internal and external customers? Is the technology platform in place to enable real-time collaboration across the enterprise?*
- *Do you have a change-management program in place to help workers transition to a virtual real-time collaboration environment?*
- *Are the right incentives and performance measures in place to encourage the workforce to adopt and explore new methods of collaboration in the digital age?*

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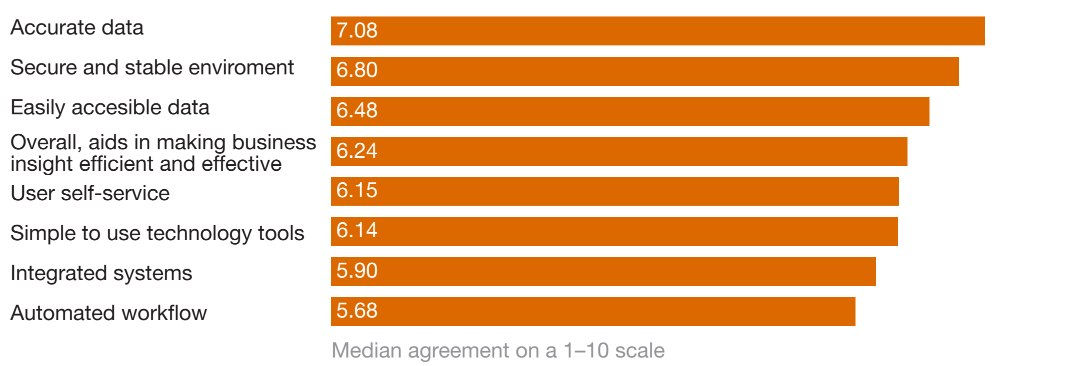
6. Strategic decision making

Digital technology and the use of big data analytics have forever changed the way CFOs participate in strategic decision making. Yet effective decision making is proving to be increasingly challenging as the complexity and variables that go into determining the right course of action continue to grow. Moreover, although there is more information than ever before to draw on, it's difficult to know how to make sense of it all. The more data that finance is presented with, the greater the risk of information overload.

Our latest finance benchmark study shows that many finance teams are still disappointed by the ability of technology to make business insight efficient and effective—Figure 8 shows that most give this and other potential benefits of technology middling ratings at best. Investment in new data warehouses is designed to improve a company's ability to source and assimilate data from multiple sources, but most finance teams still struggle to cleanse and aggregate the data they need to provide meaningful analysis for the business.

Figure 8: Technology's ability to support finance's business insight needs



Source: PwC Finance benchmark data, Performance surveys—finance feedback

Working with the business to improve the quality and consistency of source data is clearly critical. It's also important to think about finance's approach to analysis and advice. While most organizations are still looking at how to increase their capacity to mine and analyze data, a more effective approach would be to start with the key drivers of business success, such as customer loyalty, and then focus the analysis on how to provide fresh insights in these areas. Examples include focusing on the data that would provide better insight to sharpen customer segmentation (e.g., behavior, aspiration etc.) and improve the experience for that particular segment.

This is no longer a world of spreadsheet number crunching, but one in which big data has opened up new ways to identify and assess targets. The analysis includes trends, performance statistics, financial metrics and cash positions, all of which can be brought to life with interactive visualization. The keys to success aren't just the availability of data and the technology to analyze it, but the ability within the team to ask the right questions and identify the market openings, which in turn requires deep commercial understanding and an eye for innovation. The proliferation of connected devices and the resulting eruption in real-time information as the Internet of Things takes hold is a clear example of how the ability to cut through the noise to identify the commercial potential will be critical.

Case study: New tools for better decision making

The challenge

A North American gas and electric utility wanted to implement new business process and technology solutions to address its financial planning inaccuracies and inefficiencies and to replace antiquated technologies. It was organized into two distinct business units which utilized differing planning processes and requirements, creating an extremely complex environment. The finance team was spending too much of its time on data gathering and too little on performing impactful work and providing useful insights.

The solution

The CFO challenged the finance and IT teams to reinvent their 12-month annual budget cycle as a 24-month rolling budget cycle. The goal was to move from a semi-annual review process to a quarterly review process with enough process and system efficiency gains built in to avoid any additional work. Success in this area would certainly drive better strategic decision making.

The company also integrated its enterprise planning capabilities into three enterprise planning models using SAP's best-in-class planning and reporting technologies. This approach focused on big data principles and analytics using refined business processes and enabling digital technology. The CFO is now able to retrieve trusted data quickly and take advantage of an environment that delivers actionable forward-looking information to guide smart decision making.

Questions for your organization

- *What elements of strategic decision making aren't being supported by digital technologies?*
- *What is the best way to align internal and external data sources to strengthen analytics and insight?*
- *What functional areas would benefit from digital technologies and newer analytical capabilities to support strategic decision making?*

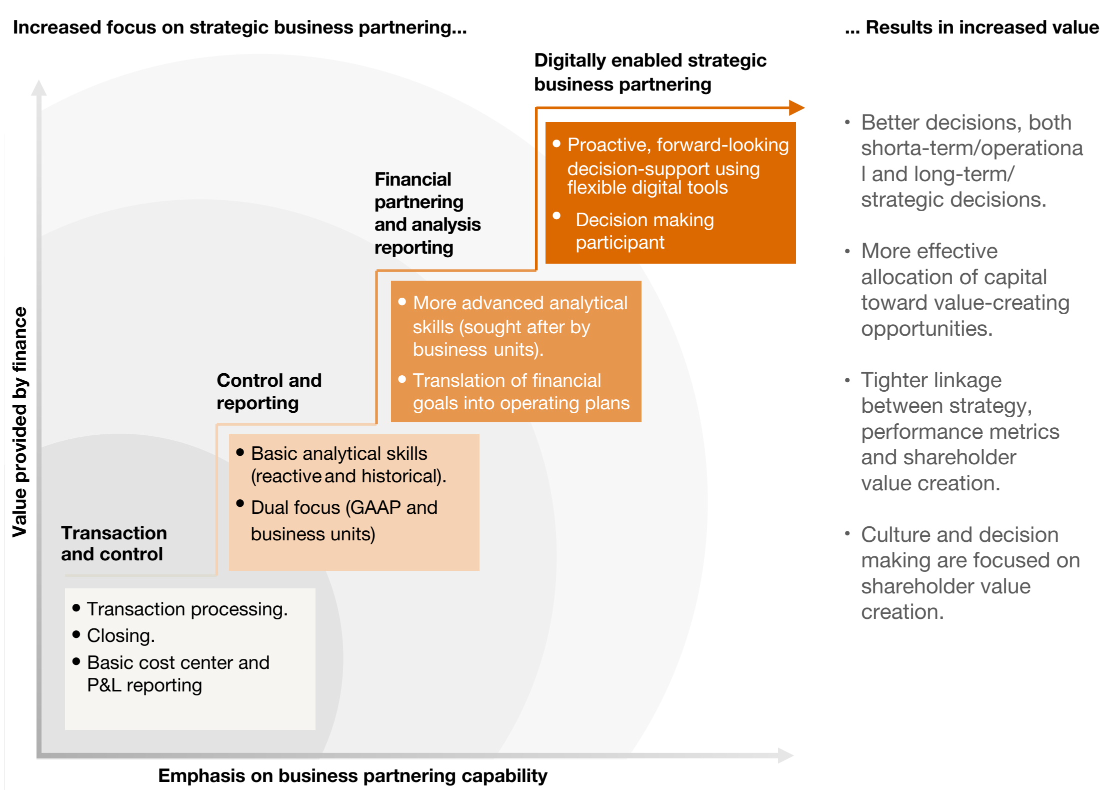
7. Operational efficiency

Digital technology provides an immediate opportunity to improve operational efficiency. Key areas of focus go beyond costs savings to include developing the capabilities needed to facilitate more efficient acquisition and wider growth strategies.

Cloud and application providers have developed digital toolsets for finance professionals that effectively provide an 'out of the box' business capability. With these products, finance professionals can find, compare, test, purchase and deploy new capabilities in a day. If they need a better way to correlate variables in their forecasting function, for example, they can purchase a subscription for data visualization and intelligence tools. If they need to remove manual steps from a particular process, they can deploy collaboration and workflow software. If the enterprise is looking to set up operations in a new country, finance can buy a Cloud Enterprise Resource Planning license and use pre-built connectors to connect it to their consolidation engine.

Using digital developments to sharpen efficiency frees up finance to provide more decision support and value for the enterprise, especially when deployed alongside new analytical capabilities. Figure 9 identifies how operational efficiency improvements enhance finance value delivery as it matures towards a more digitally enabled function. As growth enabler, the CFO must understand these levers in order to actively measure and acquire insight into changes and trends.

Figure 9: Operational efficiency enhancements in finance driving value for the business



Source: PwC Finance benchmark data, Performance surveys—finance feedback

Despite digital's potential to improve operational efficiency, it can also create difficult governance issues. The typical risks and issues that CFOs should assess and address are listed below. In all instances, ensuring procurement and IT governance, while balancing the time-to execute, is a key role that the CFO can own working with his or her CIO and COO peers:

- Multiple purchases of the same digital solutions to solve point-to-point operational issues, increasing the total cost of operations rather than decreasing it
- Data privacy and security risks where operational processes rely on cloud-enabled digital solutions
- Data-mastering issues resulting from solid digital solutions without appropriate connectors to central systems
- Change-management issues, which are typically heightened by the presence of legacy systems that are difficult to decommission and detach from core operations
- Perception issues by senior leadership that digital investments are a 'silver bullet' for issues that in reality stem from policy misalignment, process design, or personnel capabilities

In addition to core transaction operational efficiency, digital technologies provide new ways for CFOs to strengthen compliance and control. For example, advanced data analytics allow correlations not previously sought after or understood that can highlight fraud or risk indicators to finance teams. Social collaboration techniques can also allow teams to collaborate on compliance tracking in a more real-time, insightful way. In turn, mobile provides new ways to capture data at the point of transaction, which can enhance preventative controls and lessen the need for manual detection procedures.

Further, the CFO can play a pivotal leadership role in assessing and validating the value of digitally enabled efficiency investments and savings beyond finance operations. To perform this function, many companies are considering the creation of a technology business office, which would work for the CFO with accountability to the COO, CIO and CMO. Questions such as *Is this cloud service secure? Is this really cheaper? How do we know we're getting the right return?* are just the first layer of issues CFOs face as operational efficiency goals are aligned with digital investments.

Finally, for companies that are selling and providing digital tools to the market in addition to leveraging digital within their own infrastructure, the CFO has additional operational efficiency roles to play.

Case study: Making reporting faster and easier

The challenge

A large gas and electric utility sought a sweeping finance transformation with a significant technology upgrade to increase its operational efficiency. The goal was to simplify and automate its regulatory Federal Energy Regulatory Commission (FERC) accounting process, as well as to upgrade an aging transaction system to lay the foundation for additional transformation initiatives. The company was already heavily invested in an SAP platform, but as its business model continued to evolve and regulatory pressures increased, its approach of maintaining two separate reporting processes, one for financial reporting and another for FERC State Ratemaking reporting, had become unsustainable.

The solution

The company set out to streamline its FERC reporting by designing a "real-time" FERC reporting solution enabled by a FERC based Chart of Accounts (COA) and a technology solution that would allow it to optimize operational efficiencies with enabling technology.

Finance team members worked with the company to develop a new account structure that aligned FERC accounts and natural accounts, establishing the data foundation required for the technology solution. Further leveraging their SAP investment, the team customized the SAP standard derivation rules that allow users to switch views between FERC and GAAP account line items. They also modified their process by automating FERC-GAAP translation activity and scheduling the jobs to run nightly, rather than at month end. This created the ability to focus on creating value and providing decision support using flexible and modern SAP technology.

The returns on the initiative have been significant. The company experienced increased transparency, with better access to managerial and regulatory numbers, and improved reporting. It has become far more efficient, with better FERC drilldown, a standard set of derivation rules, and elimination of month-end FERC processing. It also now has access to information, such as overheads and settlements, on a daily basis, rather than monthly, enabling more timely reporting. And while the FERC closing process used to take an hour and a half or more, now the process takes mere minutes.

The transformation has also forced Finance and IT to come to the table and clearly define their roles and responsibilities within the organization relating to data. That exercise has opened up time and space for both teams to focus more on valuable analytics and less on time-consuming transactional data routines.

Questions for your organization

- *What are your goals for investing in digital technology? Cost savings? Flexibility for your staff? How can you enforce these guiding principles?*
- *How successful are your collaborations between IT and finance?*
- *How are you tracking the use of cloud-based services at your company? Do you have a procurement strategy? Is finance involved in the selection process?*
- *How is mobile integrated into the day-to-day work of your finance operations? Can you create a more mobile/flexible workforce through this technology?*
- *As a digital provider, what is your Enterprise Performance Management strategy for measuring the cost and margin profile of your new services as compared to existing products and services? Can you track uplift and cannibalization of your channels and/or products?*

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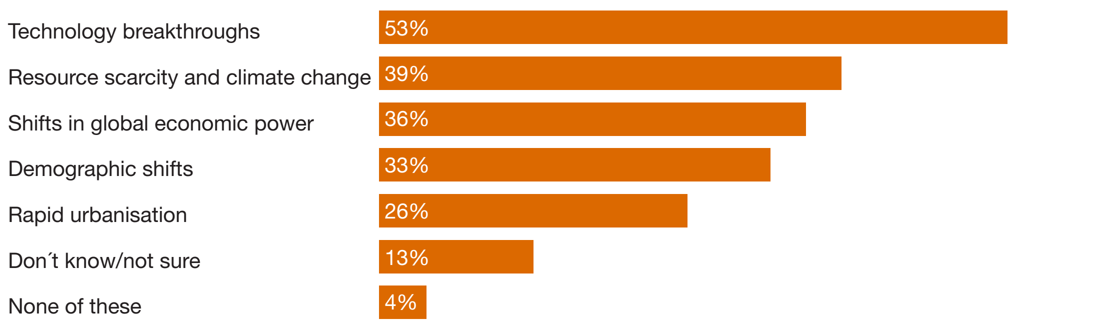
8. Talent management

When PwC asked 10,000 people from a selection of countries around the world what will transform the world of work over the next 5 to 10 years, technology was the clear number one (see Figure 10).

Figure 10: Transforming the world of work



PwC survey of 10,000 members of the general population based in China, Germany, India, the UK and the US

Technological breakthroughs are causing companies to better align talent strategy to their changing business models. As such, finance teams need to ensure they have the right skills in place to meet the demands of the digital economy. One key priority is finding ways to foster innovation and creativity among employees rather than focusing solely on technical capabilities. It's also important to look at how to attract and retain millennials, who will eventually make up the bulk of the workforce, while recognizing the differing perspectives of other generations. Digital natives, for example, will not want to work for companies that are still using primarily paper-based processes. As part of a wider enterprise-wide workforce plan, CFOs must look at what skill sets will be required and how the relevant talent can be attracted. The ability to execute the business strategy with the right talent is a make or break issue. PwC's 2015 CEO Survey shows that 80% of CEOs are concerned that the lack of key skills threatens their organization's growth prospects.

CFOs also need to understand how the megatrends are changing the sources of talent and how they are managed. Companies are beginning to modernize how they find, develop, and retain talent. According to PwC's 2015 CEO Survey, sixty-six percent of US CEOs say that digital technologies (like mobile and data analytics) yield high value in sourcing, developing and retaining talent. As more and more of finance's routine functions are automated and artificial intelligence plays an increasing role in business analysis and service delivery, CFOs must look at how people and machines work together within this hybrid workforce.

As much of the focus of investment and demand shifts toward Asia, Africa and other fast growing regions, the challenge is determining how to attract and train finance professionals from markets where appropriate skills may be in short supply. One strategy is to work with local universities to develop the talent pool. Giving local students the opportunity to gain experience in mature market operations is a highly effective way to attract talent and demonstrate the business's commitment to career development. When staff returns, they can harness their new skills and pass them on in their home business, thus reducing the need for incoming assignments.

Further shifts are going to come from the emergence of new financial centers and super metropolises, where the bulk of the global population and production will be situated. As connectivity creates more flexibility in the places and ways in which people work, people will want to be in the city as much for its lifestyle as its economic opportunities. Finance teams and businesses as a whole will need to adapt to new ways of working and attracting talent.

The underlying priority is to promote greater diversity within the recruitment and leadership of finance teams. Marketplaces in transformation and a more business-facing finance function demand the fresh perspectives and new capabilities that come from a more diverse workforce.

Leaders know they need to increase their organizations' ability to learn and innovate. They're looking for a broader range of skills and finding talent in more places: eighty-one percent are looking for a much broader range of skills when hiring than they did in the past; 92% say they always use multiple channels to find talent, including online platforms and social networks; and 85% are actively searching for talent in different geographies, industries, or demographic segments, according to PwC's 2015 CEO Survey.

Case study: Excited by coming into work

The challenge

A distribution company has been operating with a 25-year-old mainframe system. When a new CFO was hired, he was struck by the low morale and high rate of employee turnover within the finance team, especially among younger staff. Further research into the causes of dissatisfaction showed that having worked in more modern environments, staff quickly became frustrated by the antiquated systems being used within the company. Today's employees expect systems to take care of the routine and repetitive tasks so they can concentrate on high-value work. They want better reporting and transactional systems that can improve their working life and ability to contribute to company success.

The solution

The company has embarked on a business transformation initiative to replace their financial systems with modern, digitally enabled processes and e-commerce platforms.

While systems modernization was a key part of the initiative, the CFO recognized that bridging the generational gap and creating a sense of excitement across the finance team would require more than an IT upgrade. From working on this and similar change projects, PwC identified a number of key priorities:

Creating confidence in the new systems: Helping everyone to embrace change by encouraging digital natives to serve as mentors and coaches for their colleagues.

Embedding social media into finance: Enterprise social networks are typically geared to sales teams, but can easily be extended to finance communities to help strengthen collaboration in areas ranging from close processes to new initiatives. At a leading technology client, we used an enterprise social network as a way to develop communities, understand leading practices and gain feedback on training and process improvement opportunities. The initiative was led by the more digitally savvy members of team and supported by training for the broader finance community.

Questions for your organization

- *Have you considered the training needs of your workforce to ensure that they can use digital technologies productively?*
- *Are you providing the right incentives for your employees to embrace digital technologies that will make finance processes more efficient?*
- *Are you equipped to attract and retain the broader sources of talent that will be increasingly critical to success?*

The way forward

Finance has reached a pivotal juncture as it looks at how to meet the business demands being placed on it within the digital economy and digital begins to transform its own operational capabilities.

Finance has an opportunity to carve out a more strategically influential role within the business, pivoting between their roles as advisor, enabler and operator across the digital value drivers in this fast moving environment. But it also could be marginalized if it fails to provide the analysis, insight and guidance that boards and business teams demand in the digital age.

This will no longer be a world of long lead times and marginal adjustments to forecasts and budgets. Finance needs to become a creative visionary, capable of judging how whole business models rather than just budgets might need to change and mobilizing the organization to respond quickly. The outlook and approach of the finance professionals that emerge will have more in common with venture capitalists than today's analysts and business partners.

The first step toward transformation is ensuring that your finance team and wider business are equipped to deal with disruption and change. Key priorities include stripping out all the baggage that slows down your ability to respond, be this unwieldy legacy systems or the tendency to simply do what's always been done. It's then vital to judge what creates value in this new world. The information you hold and your ability to use it may be more valuable than your physical assets. Similarly, the real value of your finance team may not be its ability to gauge current performance, but rather its ability to determine what your business needs to do to survive.

The key attributes of this new finance function are speed, agility and foresight. What's needed is a clear vision and leadership from the CFO—a strategy for the digital age rather than a digital strategy. There also needs to be a willingness within the wider finance team to embrace change as an opportunity rather than as a threat. The front-runners are already reaping the dividends. Their priorities for relevance and success aren't just following trends, but ensuring their thinking is original and farsighted enough to lead them.

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