Partnering for performance
Part 3: the CFO and the CIO
The CFO’s role

The CFO’s role has undergone a transformation. We believe that the six segments on the right represent the breadth of the CFO’s remit today. The leading CFOs we work with typically have some involvement in each of these segments – either directly or through their team. While the weighting of that involvement will depend on the maturity and ambition of the individual, on the sector and scale of the finance function, and on economic stability, each segment is critical to effective leadership.

We are grateful to all the participants in this study. In particular, we would like to thank the following CFOs and CIOs who readily shared their insights in a series of interviews:

Nikolay Andreev
CFO, Head of Administration and Technical, Nova Broadcasting Group

Helen Arnold
CIO, SAP

Christine Ashton
Senior Vice President for Technology, Thomson Reuters

Mark Boxer
CIO, Cigna

Christian Gosch
CIO, Erste Group Bank

Gary Lennon
Executive General Manager, Finance, National Australia Bank

Venkat Padmanabhan
President and Global Head of Finance – Products, Olam International

Stephen Pearce
CFO, Fortescue Metals Group

Matthias Waehren
CFO, Givaudan

David Whiteing
CIO, Commonwealth Bank of Australia
Partnering for performance

The Partnering for performance series explores ways in which CFOs can grow, protect and transform their organization by partnering with the leaders of different functions.

In this — the third part of the series — we explore the relationship between the CFO and the CIO. In particular, we focus on the contribution that CFOs are making to four vital IT-related activities:

- Managing cybersecurity
- Creating an analytics-driven organization
- Establishing information strategy, architecture and processes
- Transitioning to a digital IT function

Our findings are based on a global survey of 652 CFOs, conducted by Longitude Research on behalf of EY, and a series of in-depth interviews with CFOs, CIOs and EY professionals.

For more insights for CFOs and future finance leaders, visit ey.com/cfo.

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The CFO and CIO: a vital partnership for success

The CFO-CIO relationship is becoming closer and more collaborative. But there are two threats to this critical union. Cost discipline, rather than strategic value, still defines the IT investment mindset, and lack of mutual understanding between CFOs and CIOs is an all-too-common problem.

Key findings about the CIO-CFO relationship:

- Sixty-one percent of CFOs report increased collaboration in the last three years.
- Seventy-one percent have increased involvement in the IT agenda in the last three years.
- CFOs say they add most value by managing costs and profitability.
- CFOs’ insufficient understanding of IT issues is the number one barrier in their relationship with CIOs.

Five CFO-CIO relationship success factors:

1. Take joint responsibility for driving innovation through digital IT
2. Shift the IT operating model emphasis from Capex to Opex
3. Manage risk exposures of new digital technologies
4. Work as peers
5. Build finance executives’ understanding of IT issues
In today’s digital economy, the financial well-being of the enterprise is dependent on the health of the CFO-CIO relationship. Technology innovations, from the cloud to mobility, offer the potential to transform organizations’ operations, customer experience and business model.

Organizations are driving performance improvement and creating new competitive advantage through a range of digital initiatives, from harnessing the power of big data and analytics to transform decision-making, to meeting the demands of the ultra-connected customer.

To succeed, organizations must make bold technology investment decisions that are driven by corporate strategy, while managing a range of severe risks, such as cybersecurity and data privacy concerns.

This mission-critical convergence of technology, investment strategy and risk has elevated the CFO-CIO relationship to new levels of importance. Any disconnect between the CFO and CIO will have profound consequences for the organization.

**A growing relationship**

CFOs say they are getting closer to the CIO and IT agenda.

In the last three years:

- 71% say they have increased their involvement in the IT agenda.
- 61% report greater collaboration with the CIO.
- 35% report a significant increase in their involvement with the IT agenda.

**Key findings about the CFO-CIO relationship**

According to our survey, CFOs and CIOs are becoming increasingly connected. Sixty-one percent of CFOs say that their collaboration with the CIO has increased over the past three years (see Chart 1).

**Chart 1: Over the past three years, what change has there been to the extent that you collaborate with the CIO?**

- To a much greater extent: 23%
- To a slightly greater extent: 38%
- No change: 32%
- To a slightly lesser extent: 7%
- To a much lesser extent: 1%

Similarly, 71% of CFOs say that there has been an increase in their involvement in IT over the past three years (see Chart 2).

**Chart 2: Over the past three years, how has your involvement in the IT function changed?**

- Significant increase: 35%
- Slight increase: 36%
- No change: 20%
- Slight decrease: 4%
- Significant decrease: 1%
Two main barriers to an effective CFO-CIO collaboration

Although the relationship has grown closer, there are two threats to this critical union.

First, CFOs continue to struggle with balancing their responsibility to maintain cost discipline with more strategic ambitions, such as setting the agenda for change (see Chart 3).

Chart 3: In which of the following areas do you consider your contribution to IT to be most valuable? (Please select up to three)

- Managing costs/profitability: 35%
- Setting budgets/costs: 33%
- Building the business case for new initiatives: 28%
- Financing: 26%
- Measuring performance: 26%
- Ensuring value realization: 24%
- Determining the level of ambition and risk appetite for new initiatives: 22%
- Resourcing and human capital: 20%
- Change management: 19%
- Setting the agenda for change: 19%

Second, effective communication and understanding between these two barrier (see Chart 4).

Chart 4: What do you consider to be the main barriers preventing a closer relationship with the CIO? (Please select up to three)

- Insufficient understanding of IT issues among finance executives: 44%
- The absence of a clear set of key performance indicators (KPIs) that link financial performance and the IT agenda: 42%
- Processes and tools are incompatible across the two functions: 36%
- Lack of finance resources to dedicate to the IT agenda: 34%
- Our organizational structure prevents this kind of collaboration: 31%
- I do not perceive any barriers: 11%
From cost management to strategic IT investment

The relationship between the CFO and the CIO has always had a strong cost dynamic. Investments have typically involved large-scale purchases of data storage, enterprise applications and PCs.

IT spending as a percentage of revenue, as high as 6% in some industries, played a critical role in managing IT project overruns and keeping a watchful eye on hidden costs. This is why many CIOs reported to the CFO.

Today, however, technologies are crucial to both operational excellence and profitable growth. Tony Klimas, Global Finance Performance Improvement Advisory Leader, EY, believes that CFOs are recognizing the growing strategic importance of IT.

“CFOs are becoming much more aware of the strategic value of IT and what it has to offer,” he says. “There is a growing focus not only on what IT costs, but also on the value it brings to the organization.”

Helen Arnold, CIO of SAP, agrees that IT should not be seen primarily as a cost, but rather as a tool for broader efficiency goals.

“To achieve greater efficiency and bring down cost, a validation and redesign of business processes is often paramount,” she says. “Typically, it’s a new technology that will enable these benefits to materialize so that the organization achieves higher business value.”

Venkat Padmanabhan, President and Global Head of Finance – Products, Olam International, believes greater CFO involvement is a key to driving value.

“IT is very powerful, and finance should have more ownership,” Padmanabhan says. “What I often see in the outside world is that IT operates in isolation and has its own priorities. When finance is the core owner of IT, it makes a huge difference when it comes to extracting the full value of IT investments.”

As organizations look to drive innovation through technology, this critical CFO-CIO relationship requires a different mindset and better mutual understanding.

Five CFO-CIO relationship success factors

For those looking to ensure a healthy future for this finance-IT union, there are five key success factors:

1. Take joint responsibility for driving innovation through digital IT

Many sectors are undergoing digital disruption. Innovators and new entrants are devising new and better processes, products and business models that force their competitors to keep up or fail.

Entire business models are at risk. To avoid being overtaken by nimble technology companies, businesses must carefully consider two questions:

- How can IT add value to the organization?
- Where should IT resources be allocated?

“Digitalization brings finance and IT together,” says Arnold. “IT is now much more of an innovation driver, enabling new business models. Partnering with the CFO in this context is essential. There should be joint accountability for driving projects to the desired result.”

Christian Gosch, CIO at Erste Group Bank, believes that organizations need to have a separate, venture-style investment approach to nurture tomorrow’s technology innovations. “Some investments don’t bring immediate yield in terms of global revenue. We reserve a portion of global IT spend that is focused on the innovation topic. The investment approach is of an investor who is ready to take risks. It’s a small group of people who decide what initiatives should be given a chance to be developed to a level where we can see the results. We use this ‘green-housing’ approach to ensure that small but innovative ideas are developed to a level where they have a chance. We work with the CFO to provide some shelter for these small plants,” says Gosch.
2. Shift the IT operating model emphasis from Capex to Opex

Until recently, IT expenditure involved large capital outlays for data storage, infrastructure and enterprise applications. This has changed with the transition to the cloud, software as a service (SaaS), and more flexible IT architecture.

The result is a shift in the IT operating model from Capex to Opex. CFOs must work with CIOs to evaluate the economics of each model and determine the blend of “rent versus buy” that is appropriate.

Adopting these new technologies fundamentally alters the role of IT. This development, explored in EY’s Born to be digital, changes the CIO-CFO relationship.

“The way it used to work was that firms would agree upon the high-level goals of the organization, lay out an operating model, and throw it over the fence for IT to implement,” says Dave Ryerkerk, Global IT Advisory Leader, EY.

“With digital technology, the big difference is that CIOs get much more involved with CFOs in designing the firm’s operating model.”

3. Manage risk exposures of new digital technologies

The rise of digital technologies has been a key driver of closer collaboration between CFOs and CIOs. There are two main aspects to this:

- First, the need to transform business models and customer-facing aspects of the company through digital tools and channels. This includes leveraging new data created by digital technology.
- Second, the need to reinvent the IT function and business operations through the adoption of new technologies, such as big data and cloud, taking into account concerns about cybersecurity and data privacy.

Across both these dimensions, there is an urgent need to manage emerging risk, while continuing to maximize the return on IT investment and keep costs within budget.

4. Work as peers

“Good CIOs are starting to move out from underneath the CFO,” says Ryerkerk. “It becomes a more collaborative peer relationship, as opposed to a reporting one. That’s because firms are starting to see IT as a driver of growth as opposed to a cost center.”

More often than not, however, CIOs still report to the CFO. Among our global sample, 72% say that the CIO reports through finance. According to our survey, this model is most dominant in China, India and Australia.

“The CIO has to be capable and willing to take over business-related initiatives,” says Matthias Waehren, CFO of Givaudan. “Being an equal colleague on the executive committee is therefore important.”

For some executives, this reporting line is no longer fit for purpose.

“It’s inherently flawed,” says David Whiteing, CIO of Commonwealth Bank of Australia. “If you look at the pace of change in technology, and the problems that businesses will face in the future, they require a cost-effective, quality resolution. And that invariably involves technology. If a key person is one layer away from the C-suite then, in my view, you’re missing something.”
5. Build finance leaders’ understanding of IT issues

As Chart 4 on page 6 shows, CFOs point to insufficient understanding of IT issues as the number one obstacle in the CIO relationship.

“As the owners of the key information systems, it is very important that CFOs have general IT knowledge,” says Nikolay Andreev, CFO, Head of Administration and Technical, Nova Broadcasting Group.

“This ensures that they get the best result from how systems are designed, what systems are used in the organization and how they’re supported and developed.”

Aligning finance and IT around the right metrics is another key challenge. Often, the benefits of technology enhancements are not readily apparent or easily quantified.

“The benefits can be difficult to identify because they are part of broader organizational objectives. And they tend to show up in broader productivity improvements, rather than within the IT function itself,” says Stephen Pearce, CFO, Fortescue Metals Group.

“There are not enough people at a very senior level in finance who really understand the implications of digital technology for the company. Many CFOs are scratching their heads trying to figure out how they can build the skills within the finance function and the organization as a whole.”

Tony Klimas, Global Finance Performance Improvement Advisory Leader, EY

Key activities for CFO-CIO collaboration

The strategic value of IT is now being recognized, and a closer CFO-CIO relationship is developing as a result. In the rest of this series, we explore how CFOs and CIOs are collaborating across four key activities:

1. Managing cybersecurity
2. Creating an analytics-driven organization
3. Establishing information strategy, architecture and processes
4. Transitioning to a digital IT function
Managing cybersecurity

As cyber risks mount, CFOs must look to protect shareholder value

Key findings about the CFO’s role in managing cybersecurity:

- Threats are increasing in sophistication, and breaches can have multimillion dollar implications and cause severe reputational damage.
- Cyber attacks are highly strategic, and increasingly target manipulating shareholder value.
- Sixty-six percent of CFOs make cybersecurity a high or very high priority.
- Thirty-five percent of CFOs who say that cybersecurity is a very high priority report much greater collaboration with the CIO (18% for the rest).

Four cybersecurity priorities for the CFO and CIO:

1. Treat cyber risk as part of enterprise risk management
2. Prioritize the assets that need protection
3. Match your cybersecurity to your strategy
4. Discuss cyber risks in the language of business, not IT
Cybersecurity has leapt up the C-suite agenda. Cyber criminals today are no longer lone hackers – they are syndicated criminal networks, in some case sponsored by nation states, with clear objectives and long-term strategies.

Major breaches are increasing in frequency in all sectors. When they occur, the financial, reputational and operational costs often become headline news.

Most CFOs now recognize that robust cybersecurity is fundamental to protecting shareholder value. But our survey shows that a lack of understanding of IT issues can prevent CFOs from recognizing what a mature cybersecurity capability looks like and where they need to invest.

“The more sophisticated attackers are looking at economic manipulation as an objective. This might involve trying to manipulate the share price. Their aim may include attempts to change the value of an organization through sustained attacks over a long period and then capitalize on that change in value. The threats are becoming incredibly sophisticated.”

Ken Allan, Global Cybersecurity Leader, EY

Key findings about the CFO’s role in managing cybersecurity

CFOs whose collaboration with the CIO and other C-suite executives is increasing recognize more fully the scale of cyber risk.

The majority (66%) of the 652 organizations we surveyed make cybersecurity a priority. Those who make it a very high priority are also those who tend to collaborate more with their CIO and other C-suite peers (see Chart 5).

Chart 5: Increased collaboration with CIO and C-suite peers in the last three years

- Much greater collaboration with CIO: 35% (18% of CFOs who make cybersecurity very high priority)
- Much greater collaboration with CEO: 35% (14% of CFOs who make cybersecurity very high priority)
- Much greater collaboration with CMO: 23% (11% of CFOs who make cybersecurity very high priority)

CFOs who make cybersecurity a very high priority in the last three years

- Others
Greater cross-functional involvement may be increasing CFOs’ understanding of cyber risk. Alternatively, closer collaboration may be part of how they are addressing it.

But our experience with organizations at different levels of cybersecurity maturity indicates that a cross-functional approach with board-level support is critical.

“Cybersecurity breaches used to be ‘somebody has hacked us or defaced our website,’” says Siobhan MacDermott, Principal, Cybersecurity at Ernst & Young LLP. “Today, it’s risk management in the broader sense. It needs to be the C-suite, along with the board, that is responsible for cybersecurity.”

“We’re increasingly seeing boards getting involved in this topic.”

Ruby Sharma, Principal, Center for Board Matters at Ernst & Young LLP, agrees. “Even the best-run companies will face a crisis. And in today’s technology-driven environment, that crisis will likely be a cyber-attack,” she says.

“Whether the situation has a severe impact on a company often depends on the board’s preparedness. Smart boards know that the best offense is a strong defense. An organization’s value and reputation can hinge on how well it responds to an unforeseen event.”

The CFO and the board should request a report from the CIO that covers the following:

- **Identification.** Which are the top three to five threats that are most relevant to the organization?
- **Protection.** Which actions have been taken to mitigate these threats?
- **Detection.** What mechanisms are being used to detect incidents? What activity has been seen since the last report?
- **Response and recovery.** How did the company respond to each incident?1

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Four cybersecurity priorities for the CFO and CIO

1. Treat cyber risk as part of enterprise risk management

The first step to effective collaboration on cybersecurity between the CFO and the CIO is to treat cyber risk as an enterprise risk management issue, rather than as an IT problem.

Cyber criminals are becoming increasingly organized and sophisticated. Organizations need to accept that they have already been breached and will be again. An effective cybersecurity capability focuses not only on preventing attacks, but on detecting, containing and responding to them. All organizations should have a fully tested response plan in place, that articulates specific responsibilities. In the event of a breach, such a plan can prevent further damage resulting from unnecessary delays, and can also help reduce reputational damage in the media and the markets.

Questions CFOs and CIOs should be able to answer about cybersecurity:

1. What is our overall risk tolerance? What level of damage are we willing to incur?
2. What is our organization’s current exposure to cyber risk?
3. Is our cyber risk exposure consistent with our risk tolerance?
4. How does our preparedness compare with that of our competitors?
5. What assets should be prioritized for protection? Do you have agreement across the businesses?
6. Are there adequate processes in place to prevent, detect, contain and respond to a cyber attack?
7. Do we have a fully tested cyber attack response plan that can be implemented without delay?

“Cybersecurity has to be put in its position as part of the broader risk management framework of an organization.”

Stephen Pearce, CFO, Fortescue Metals Group

Cyber risk management needs to form part of the broader culture of the business. It should be integrated into the broad set of enterprise-governance functions, such as HR, vendor management, and regulatory compliance.

For multinational companies that empower local decision-making, this integration is particularly important.

“We want data and information to be available to managers locally so they can make decisions, but we also need to make sure that data is protected,” says Padmanabhan. “We are very mindful of ensuring that no information gets out without approval.”

For Pearce, CFO at Fortescue Metals Group, leadership accountability is crucial to this approach.

“Cybersecurity has to be put in its position as part of the broader risk management framework of an organization,” he says. “Ultimately, that sits not just with the CFO, but with the CEO and the executive team. They have to own those corporate-wide risks, of which cybersecurity is one.”
2. Prioritize the assets that need protection
CFOs’ access to all financial data means they are often best-placed to identify signs of a cyber breach. Their oversight can also sometimes help them identify the assets the attackers are likely to try to obtain, such as intellectual property (IP), financial data or other information about the company that could be used to damage it.

The CFO should lead the board-level conversations to identify which of the organization’s assets need protection. Often, there will be disagreement among different members of the C-suite, so the CFO’s perspective across the whole organization and its data is crucial.

The board should help prioritize these assets. And it needs to understand the impact of them being breached, compromised or made unavailable.

Ken Allan, Global Cybersecurity Leader, EY, argues that while the CFO and CIO need to collaborate closely on cybersecurity, they need to approach it from different angles. He says: “CFOs should care about different questions. What are they trying to protect? What are the impacts of a breach?”

“Cybersecurity preparation is all about understanding what the business is trying to protect. Some CFOs are trying to understand the technical detail when they shouldn’t be. That’s for the IT people to deal with.”

Ken Allan, Global Cybersecurity Leader, EY

3. Match your cybersecurity to your strategy
CFOs and CIOs should view cybersecurity as a series of rolling processes to be reviewed and revised as the organization changes. Every new product or service, geographical expansion or M&A transaction creates new cyber risk exposures that must be managed.

To avoid pockets of vulnerability emerging over time requires a tight partnership between the CFO, who knows the strategy intimately, and the CIO, who is best placed to identify vulnerabilities.

“What the business is trying to protect varies over time,” says Allan. “Creating a mature cybersecurity capability is about moving to a state where these threats can be anticipated.”

Similarly, as we move further into an ecosystem of digitally connected entities, people and data, cyber risk increases and cybersecurity must adapt. Innovative digital business models and customer-facing channels create new opportunities that also bring new risks.

“Historically, IT and cybersecurity were structured around protecting the data center from outside intrusions,” says Ryerkerk. “If you move forward to today, solutions are very likely to be provided by the cloud.”

“The traditional solutions don’t work anymore. The whole landscape is changing very dramatically.”

Dave Ryerkerk, Global IT Advisory Leader, EY
As less data is held on company servers that can be protected by the company’s firewalls and cybersecurity infrastructure, a whole new set of challenges is emerging.

“The traditional solutions for addressing this don’t work anymore. The whole landscape is changing very dramatically,” says Ryerkerk.

4. Discuss cyber risks in the language of business, not IT

One of the common obstacles to effective cybersecurity is simply a language issue. CIOs that outline cybersecurity issues to their CFO in technical language can create a block on quick and effective action.

Many CFOs that are aware of the scale of cyber risk are slowed down in working out how much to invest and what initiatives to prioritize because of this communication breakdown.

“Many CFOs know that they need to spend more on cyber risk management. But they don’t know where to focus their efforts, because the technologists trying to tell them are blinding them with science.”

Ken Allan, Global Cybersecurity Leader, EY

“On the one hand, we need to focus on how we educate CFOs about cyber risk. But at least a proportion of our attention should be focused on educating our technologists in how to speak to board members in a way that makes it a conversation in which they can participate.”

Similarly, the CIO needs help from the CFO and the board to prioritize the assets that must be protected. And they need early involvement in board-level discussions about changes in business strategy that could have security implications.

Effective collaboration between the CIO and the CFO on cybersecurity hinges on clear and open communication in business terms.
Creating an analytics-driven organization

The need to improve analytics capabilities and data management is the top driver of collaboration between CFOs and CIOs. But only 53% of CFOs say that they make a significant contribution to determining where analytics can add most value to the organization.

Key findings about the use of analytics:

1. The need to improve analytics capabilities and data management is the top driver of collaboration between CFOs and CIOs.
2. But only 53% of CFOs say that they make a significant contribution to determining where analytics can add most value to the organization.

Five success factors for CFO-CIO collaboration on analytics:

1. Take a business-led approach, not a technology-led one
2. Make data a fourth pillar of the business, and leverage it as an asset
3. Do not forget the human element of analytics
4. Build the right organizational structure and governance framework
5. Consider legal, regulatory and trust issues throughout the journey
Creating an analytics-driven organization

CFOs need to work with CIOs to convert analytics into an enterprise-wide capability

The seeds of data analytics were sown in the IT function. But to realize its potential as a tool for delivering better decision-making, analytics needs to be seen as a business issue, not a technology one.

“Companies don’t have analytics challenges or opportunities. They have business challenges and opportunities, which analytics can play a role in tackling.”

Chris Mazzei, Global Chief Analytics Officer, EY

Our survey of 652 CFOs from across the world globe finds an association between CFOs making analytics a top priority and organizational value: 48% who say that analytics is a very high priority had EBITDA growth of greater than 10% over the past three years. Among the rest of the sample, just 35% grew at this rate.

Key findings about the use of analytics

Chart 7: How has your company’s EBITDA changed over the past three years?

<table>
<thead>
<tr>
<th>Change in EBITDA</th>
<th>Those who gave analytics a very high priority</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 10% increase</td>
<td>35%</td>
<td>48%</td>
</tr>
<tr>
<td>1% to 10% increase</td>
<td>44%</td>
<td>44%</td>
</tr>
<tr>
<td>1% to 10% decrease</td>
<td>9%</td>
<td>4%</td>
</tr>
<tr>
<td>No change</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>Over 10% decrease</td>
<td>1%</td>
<td>2%</td>
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</table>

Analytics an increasing driver of CFO and CIO collaboration

CFOs point to the need to improve analytics capabilities and the need for better data as the top two drivers of greater collaboration between CFOs and CIOs (see Chart 8, page 18).

“Analytics is the foundation for the CFO to get greater transparency and insight, and to steer the business.”

Helen Arnold, CIO, SAP
Chart 8: What are the main reasons why you are collaborating more closely with the CIO? (Please select up to three)

- Need for more accurate, available, and accessible data: 32%
- Need to improve business intelligence/analytics capabilities: 31%
- Need for consolidation of IT systems/infrastructure: 28%
- Need for better understanding of the business value of IT: 25%
- Shift to digital within the business: 24%
- Need for better management of IT risks (e.g., cyber risks): 24%
- Shift to new IT model (e.g., cloud, software as a service): 24%
- Changes in operating model (e.g., shift to shared service center): 23%
- Change in reporting lines (i.e., CIO reporting to CFO): 18%
- Need to address IT issues associated with acquisition/carve-out: 17%
- Change in CIO: 15%

Finance leaders are clear beneficiaries of the growth in analytics. Analytics tools can give them greater insight into, to name just a few, customers, competitors, profitability and processes. Analytics can strengthen CFOs’ ability to drive strategic decision-making and investment planning.

The potential of analytics is so great, however, that knowing where to start can be very difficult to identify. For now, the role that CFOs play is relatively limited. Only 53% of CFOs say that they make a significant contribution to determining where analytics can add most value to the organization (see Chart 9).

Adding “value” to “volume”: how analytics can transform financial forecasting

Big data is often defined by the “V” of volume, but the V of value is equally important. For the CFO, data analytics can offer significant value across a variety of financial and non-financial activities. Take just one key finance activity: forecasting. Organizations can now use data from a range of sources, from embedded sensors to social media feeds, to inform forecasting. The finance function can use unstructured data from social media feeds to understand market signals, such as emerging customer sentiment about a newly launched product or campaign. Incorporating real-time market signals, and analyzing their impact on revenue, creates a new level of forecasting accuracy with real-time availability.

However, organizations should not try to do too much too quickly. The key to effective use of analytics is defining the business issue you want to address.

“CFOs have a tremendous opportunity to champion the analytics agenda not only within finance, but also to advance the embedding of analytics across the enterprise, given their influence throughout the organization,” says Mazzei.

Chart 9: How much of a contribution do you make to determining where analytics can add most value?

- Very significant contribution: 19%
- Significant contribution: 34%
- Average contribution: 31%
- Small contribution: 12%
- No contribution at all: 4%
Creating an analytics-driven organization

Five success factors for CFO-CIO collaboration on analytics

1. Take a business-led approach, not a technology-led one
Organizations need to have a strategy and vision for how data will deliver competitive advantage and create value. World-class, data-driven organizations need to embed analytics in most, if not all, decisions and processes.

A technology-led approach will not deliver this transformation. For example, success will rest, in part, on individual business units sharing information and data, bringing their perspectives to the bigger picture. Broad alignment of the organization behind a strategic vision will therefore be crucial.

“Too often, businesses have a discussion around technology, when actually the conversation should be about the outcome they’re trying to achieve.”

David Whiteing, CIO, Commonwealth Bank of Australia

“It works well when teams are formed to focus on a particular business issue,” says Mazzei. “Not just broad, vague questions about, ‘How do we leverage analytics across the enterprise?’ It’s about, ‘How do we improve working capital?’ and ‘What are the financial implications of different choices across channels and marketing platforms?’”

To reinforce this business-driven approach, Mazzei argues that analytics efforts should be focused on solving specific issues with a tangible return.

2. Make data a fourth pillar of the business, and leverage it as an asset
Standing alongside people, process and technology, data is now becoming a fourth pillar of the business. Businesses see data insights as potentially transformative and as a crucial source of competitive edge over their industry rivals. In a recent EY study of data’s impact on the financial services industry, 83% of firms surveyed agreed that data is their most valuable strategic asset.2

For example, analytics provides CFOs with powerful information to drive investment decision-making. Gary Lennon, Executive General Manager, Finance at National Australia Bank, has used analytics to assess the profitability of customer transactions across different channels, which has enabled the bank to adjust their pricing strategy.

“We can now assess and make decisions based on the richness of information we have,” says Lennon. “Because we know exactly the cost of selling through a digital channel versus the cost of selling through a broker or retail network, we can make different pricing decisions. That sort of insight has incredible possibilities.”

According to Felice Persico, EY Global Assurance Leader, the use of analytics is transforming the audit in a way never seen before. New capabilities in technology and data analytic techniques can help contribute to higher-quality audits, providing greater confidence in the capital markets, as well as enabling businesses to respond more quickly to market trends, opportunities and risks.

“By embedding analytics into the audit approach we are able to look across much larger sets of financial data in order to identify key risk areas and analyze trends and patterns more quickly. This provides businesses and the capital markets with increased confidence in financial reporting, greater transparency in the audit approach as well as the provision of relevant insights for a more forward looking perspective of a business. Ultimately, analytics will help to deliver higher-quality audits.”

2. “The science of winning in financial services – Competing on analytics: Opportunities to unlock the power of data,” EY, 2014.
3. Do not forget the human element of analytics

Analytics involves much more than the right technology or insights from the smartest data scientists. Although these are important factors, analytics will ultimately fail unless it impacts the decisions of end-users.

At heart, most analytics programs still involve human beings making decisions. For large organizations, this raises the need for sophisticated change management for its people, including training. At a broader organizational level, it is a question of how the company can embed analytics into its day-to-day business processes at scale. Incentives and metrics will need to be adjusted so that they encourage the right behaviors and mindset.

When discussing how the human dimension played a key role in embedding analytics across its organization, Arnold said: “Technology played a major role but the second element was gaining trust and confidence. When you are an executive and you have your reporting team sitting right next to you, then you tend to get whatever you need. So, we sat down with our executives to understand what is essential in an analytics partnership. We now have a model in place where we have an analytics business partner for board members and key executives. That business partner leverages the enterprise analytics team to meet those reporting requirements.”

4. Build the right organizational structure and governance framework

Building a coherent and integrated organizational structure and governance framework is essential to support value-driven decision-making. A fragmented approach can cause a range of problems, from high costs to a lack of standardization on KPIs. It is an ongoing issue across industries, and more and more are trying to address this problem.

“Organizations are starting to think about how they can embed analytics as a broader enterprise capability,” says Mazzei. “As the strategic partner for the CEO on business decisions being made, the CFO is a key stakeholder in that.”

Historically, governance of data was spread across a range of functions, from HR to IT, each with its own policies and standards. Data fragmentation was often the result. This is why some organizations are introducing chief data officers or chief analytics officers, who are charged with driving a coherent approach to enterprise-wide data governance and management.

Companies must balance the need for centralized governance with local requirements, ensuring that the insight generated centrally is made available and gets used by decision-makers across the business. SAP manages this by using centers of excellence in its enterprise analytics organization. As Arnold explains:

“We use very business-driven people who work in partnership with the respective business units, and have a deep understanding of business risks they face.”

29% of respondents from the insurance industry say that analytics is a very high priority for them – the highest share for any sector in the survey.

CFOs from this sector are also the most likely to say that they make a very significant contribution to data analytics.
5. Consider legal, regulatory and trust issues throughout the journey

The legal and regulatory questions that surround the use of data represent a significant barrier. Concerns such as privacy, data protection, competition law and intellectual property rights remain hugely sensitive. The potential penalties for the misuse or loss of data are rising. For example, the European Parliament Committee on Civil Liberties recently voted up to 5% of annual worldwide turnover, or €100m for data privacy breaches.

In recent EY research, 70% of consumers said that they are “never happy” for companies to share personal information. And 49% say that they will be less willing to share personal information over the next five years.³

Questions CFOs and CIOs should be able to answer about the organization’s legal approach to data:

1. Do we regularly review our practices for the management of legal issues around data processing?
2. What binding corporate rules or global operating procedures do we have in place for data privacy?
3. Are the databases we have developed as a company protected as a strategic asset, with the use of copyright and other relevant IP?
4. Do we have an in-house contact or privacy officer who is designated to deal with data privacy-related questions?
5. Do we regularly audit our IT security to check compliance with data protection rules?
6. Do we have an established committee that is close to the board and which defines and manages data strategy?

CFO priorities for managing the legal and regulatory issues relating to data:

- Confront the legal issues on an enterprise-wide basis, rather than through silos
- Put in place information management processes that minimize the likelihood of the business unwittingly holding legally questionable data
- Build a new structure for handling the legal issues, and consider establishing roles such as chief privacy officer
- In legal decisions, consider the customer and not just the needs of the business

How much is an organization worth?

To identify new sources of value that exist in an organization, and to cultivate future opportunities for value creation and protection, many CFOs are turning to big data and analytics. Analytics is becoming a crucial pillar, enabling organizations to protect existing value and drive further growth.

³ The Big Data Backlash, EY, 2013.
Establishing information strategy, architecture and processes

Key findings about information management strategy:

- Yes The need for more accurate, available and accessible data is the number one driver of closer collaboration between CFOs and CIOs.
- Yes Less than half (49%) of CFOs say that they make a significant contribution to information strategy, architecture and processes.
- Yes But this is the IT-related activity in which they say they most need to make a bigger contribution.
- Yes Only 55% of CFOs say that there is significant or complete alignment between the finance and IT agendas on data.

Four success factors for CFO-CIO collaboration on information management strategy:

1. Swap seats
2. Commit to creating a single version of the truth
3. Be clear about accountability for data
4. Adopt a business-led approach
Establishing information strategy, architecture and processes

Obtaining and managing accurate, available and accessible data is a challenge for CFOs and CIOs

The three V’s of data – velocity, variety and volume – have never been greater. For finance leaders, this is both a blessing and a curse. The possibilities to derive insight from data that can enhance decision-making and strengthen performance management are unprecedented. Yet, at the same time, managing this vital asset is increasingly complex.

Key findings about information management strategy

The need for more accurate, available and accessible data to drive financial and strategic decision-making is now a top priority. It is also the number one reason driving closer collaboration between the CFO and the CIO (see Chart 8, page 18).

No individual functional leader can solve this challenge alone. “Information management should follow a multidisciplinary approach,” says Pearce. “It cuts across a lot of areas, including finance, operations and marketing. It’s got to be both broad enough and specific enough to cut across each of those areas in a way that fits the strategy and allows people to get on with delivery.”

“The need for more accurate, available and accessible data is an especially strong driver of closer CFO-CIO collaboration for respondents in Asia-Pacific

41% compared to only 25% in the Americas

“Information management should follow a multidisciplinary approach.”

Stephen Pearce, CFO, Fortescue Metals Group

‘Business intelligence’: the critical role of information strategy, architecture and processes

Most organizations are awash with data and information. Equally, though, many organizations struggle to put meaningful data into the hands of decision-makers. Often, the data that a decision-maker wants is spread across different legacy platforms. Alternatively, because there are no defined standards for collecting data, various departments may be collecting the same data but in different ways, creating multiple versions of the “truth.” This is why organizations need:

- A strategy, which outlines the organization’s data priorities and where to focus effort and investment
- A coherent architecture to reorganize the tangled web of legacy systems to enable data to flow more freely across the organization
- Defined processes, covering activities from ensuring data accuracy to establishing its ownership

These three elements are critical to turning information into business intelligence that decision-makers can then use.

Partnering for performance Part 3: the CFO and the CIO 23
Establishing information strategy, architecture and processes

Greater CFO contribution can improve organizational decision-making

For CFOs and their teams, information is not only vital to internal and external reporting, but also to their role as business partner and strategic advisor. CFOs now play a key role in providing insight through analytics to drive decision-making. It is critical that the insights they provide are based on accurate, timely data.

Despite being among the most important consumers of data and information, only a minority of CFOs say that they make a significant or very significant contribution to information strategy, architecture and processes (see Chart 10).

**Chart 10:** How much of a contribution do you make to putting in place a more robust information strategy, architecture and processes?

- Very significant contribution: 16%
- Significant contribution: 33%
- Average contribution: 31%
- Small contribution: 16%
- No contribution at all: 4%

CFOs recognize that they need to do more. Asked about where they think they most need to make a bigger contribution, respondents point to information strategy as their number one priority (see Chart 11).

**Chart 11:** In which of the following areas do you think you need to make a bigger contribution? (Chart shows average ranking – a lower number means it was ranked more highly.)

- Putting in place a more robust information management strategy, architecture and processes: 2.4
- Determining where analytics can add most value to the organization: 2.5
- Cybersecurity management: 2.5
- Transitioning the IT function into a digital world: 2.6

Closer alignment between the finance and IT strategies is sorely needed. Among the 652 CFOs we surveyed, 55% say that the finance and IT agendas are either significantly or completely aligned when it comes to data. But this leaves a sizable proportion for whom alignment is more limited (see Chart 12).

**Chart 12:** How would you rate the degree of alignment between the finance agenda and the business's broader IT agenda on data?

- Completely aligned: 17%
- Significantly aligned: 38%
- Slightly aligned: 32%
- Not very aligned: 11%
- Not at all aligned: 2%
Four success factors for CFO-CIO collaboration on information strategy, architecture and processes

1. Swap seats

Christine Ashton, Senior Vice President for Technology at Thomson Reuters, argues that CFOs and CIOs have very different perspectives on information strategy. She believes that they need to understand each other’s view as the first step toward alignment.

“There’s a dichotomy between what CFOs want and the on-the-ground complexity,” says Ashton. “In any large business, there are many, many thousands of transactions. From all of that data, the CFO wants to see the numbers at the top of the pyramid, the ones they need to worry about over, say, the next three years and to know that everything is in compliance. If you’re a CIO, that’s not what you’re dealing with: the situation isn’t that black and white. We have to build a better bridge from one world to the other.”

However, the value of the relationship also stems from this diversity. Ashton argues that the CFO should use their position and objective view across the business to help the organization determine its IT priorities.

“…”

Christine Ashton, Senior Vice President for Technology, Thomson Reuters

2. Commit to creating a single version of the truth

What does good alignment look like? In most cases, organizations should be moving toward a common source of data for both reporting and analytics. Doing this provides organizations with the opportunity to move from a reporting-centric approach to an analytics-centric one.

“When you move towards in-memory processing like SAP HANA, in theory you could build a single database for your entire enterprise where all data only exists at one time in one place,” says Ryerkerk. “While this level of consolidation is unlikely, the ability to simplify, take advantage of new tools, and move towards real time analytics is still very significant.”

Christian Mertin, EY’s Finance Performance Improvement Advisory Leader for EMEIA, also believes that such innovative new technologies can play a key role in transforming the finance function.

“In the future, new technologies, such as in-memory computing, will dramatically change the processes and role of the finance function,” says Mertin. “A single, central data architecture will enable better end-to-end decision-making, will drastically lower cost of ownership and will increase data accuracy. It’s vital that CFOs gain an understanding of these technologies and work closely with CIOs to assess their implications.”
Establishing information strategy, architecture and processes

Despite the benefits of a single-version-of-truth approach to data, CFOs and CIOs need to think carefully about the rules governing that data. There needs to be clarity around which datasets are reconciled and suitable for reporting purposes, and which might be more unstructured and directional.

“What finance, risk and treasury need is a single source of truth and platinum standards around data,” explains Lennon. “But if the marketing director wants customer information or insights on behavioral analysis, that data just has to be directionally right. There aren’t the same challenges around integrity or accuracy.”

3. Be clear about data accountability

Many organizations suffer from siloed data structures – structures in which there are multiple pockets of data across the organization and no single version of the truth. This has the result that the critical information and data required to drive more effective decision-making reside in multiple spreadsheets, databases and other sources.

Different definitions for data are often applied and insufficient governance is established around how data is entered and stored. When data resides across multiple regions and business units, it also makes it difficult to form a “customer-centric” view.

Questions CFOs and CIOs should be able to answer about data governance policies:

1. What is our policy for the use of social media within the organization?
2. What are our data access policies, and are there any safeguards limiting what data can be accessed by whom?
3. What is our policy for the use of devices by employees?
4. What is our approach to data inventory?
5. What is our policy for limiting the risks of cyber threats when employees travel abroad?
6. Do we have a policy for the collection, maintenance, use and archiving of data?

Over the years, this situation has been made worse because when there is a new reporting or regulatory requirement, the company puts in place a point solution to deal with the problem. Gaining visibility across these datasets and extracting meaningful information that is consistently defined has become a major problem, and requires the CFO and CIO to work together to formulate a resolution.

“I see plenty of organizations were different functions think they own different parts of the data,” says Mazzei. “Analytics is transformational in forcing organizations to share and govern data differently to collect it from across the business and convert it into valuable business insight. The CFO can add a holistic business perspective to overcome the functional barriers.”
Establishing information strategy, architecture and processes

4. Adopt a business-led approach
Because implementing a robust, scalable information strategy is such a huge task, many companies that try to tackle it as a whole do not know where to start. Others adopt a technology-led approach and focus on fixing problems within the legacy framework. Mazzei argues that both of these approaches are misguided.

“IT’s amazing how many organizations have poured tens of millions of dollars into technology information management and data management capabilities, without nearly enough clarity on the business issue they’re trying to solve or how it will create value.”

Chris Mazzei, Global Chief Analytics Officer, EY

Instead, he argues that companies should seek to address small, manageable problems first. Over time, these projects will start to converge into an enterprise-wide initiative.

“There will come a point where you can go from doing a small number of discrete projects to a much larger portfolio of initiatives across the organization,” says Mazzei. “That’s when you can take the leap to put in place enterprise-level teaming, infrastructure and technology.”

From mismanagement to management
Information is available today in such quantities and in so many dimensions that it presents a major opportunity to drive improvements in organization performance.

However, many companies do not manage their information – they mismanage it. Data can be trapped in legacy IT, or there can be multiple versions of the truth. To realize the potential of information management, CFOs and CIOs need to collaborate to develop a strategic approach to solving business challenges through data.
Transitioning to a digital IT function

Key findings about transitioning to a digital IT function:

- New digital technologies, such as cloud, increase the bottom line and offer top-line growth opportunities.
- Transitioning the IT function to a digital world is a key focus for CFOs worldwide.
- Fifty percent of those who make it a very high priority report EBITDA growth of 10% or greater. Among the rest of the sample, just 34% grew at this rate.
- Fifty-eight percent of CFOs make it a high or very high priority.

Five CFO priorities for leading the transition to a digital IT function with their CIO:

1. Ensure strategy drives IT and not the other way around
2. Plot a way out of the legacy trap
3. Shift the digital IT investment mindset from Capex to Opex
4. Manage digital IT risk exposures as part of the enterprise risk management framework
5. Unite against digital IT fragmentation
New digital technologies are transforming companies in all sectors. “By taking a holistic approach to digital and developing an agile business strategy that enables organizations to flex and adapt to a constantly changing digital environment, organizations can seize opportunities and manage risks at every stage of their value chain,” says David Jensen, Global Digital Leader at EY.

This transformation demands changes to how the IT function operates. For example, as companies embrace cloud, SaaS and other flexible IT models, they are shifting to a more agile infrastructure. For the CFO, this transition from Capex to Opex reduces total cost of ownership and increases the bottom line.

For the CFO, this transition from Capex to Opex reduces total cost of ownership and increases the bottom line.

Secondly, these technologies also provide greater flexibility and scalability, allowing companies to expand and contract more easily with changing demand. This provides a platform for growth.

“With IT, we’ve got to shorten the cycle times around development and get things to the market more quickly, because consumers are not going to wait for us,” says Mark Boxer, CIO of Cigna. “We operate by the same rules of the market as everybody else. That means we’ve got to be faster, smarter and more agile than our competition.”

“I think what most firms are still lacking is a good digital strategy. The firms that are struggling with this most are the ones where it’s still seen predominantly as an IT issue, as opposed to a business one.”

**Dave Ryerkerk**, Global IT Advisory Leader, EY

Key findings about transitioning to a digital IT function

Among the 652 CFOs surveyed, 50% of those who have made transitioning the IT function to a digital world a very high priority report EBITDA growth of 10% or greater over the past three years. Among the rest of the sample, the proportion achieving the same growth rate is just 34%.

**Chart 13: How has your company’s EBITDA changed over the past three years?**

<table>
<thead>
<tr>
<th>EBITDA Change</th>
<th>Organizations that make transitioning to a digital IT function a very high priority</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% or greater EBITDA</td>
<td>29%</td>
<td>11%</td>
</tr>
<tr>
<td>Over 20% EBITDA growth</td>
<td>21%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Five CFO priorities for leading the transition to a digital IT function with their CIO

1. **Ensure strategy drives IT and not the other way round**

New technologies, from machine-to-machine communication to mobility, are changing the way businesses compete. It is important, however, that the IT function does not drive the enterprise’s strategic response. That would result in too narrow a focus, when what is needed is a big-picture approach.

The transition to digital must begin with an overarching strategy that articulates:

- How the organization will use digital IT across its value chain
- Whether to improve processes or fundamentally disrupt the whole way the organization operates
- What changes are needed to the business model and value chain
A strong relationship between finance and IT is critical. CFOs must ensure digital IT is focused on profitable growth and shareholder value. And CIOs must bring the understanding of what new technologies can do. “At Cigna, the IT function has been a catalyst and instigator for change, as opposed to just reacting to needs and being an order-taker,” says Boxer. “However we also recognize that not every good idea is going to come organically from inside our own IT shop. Delivering digital capabilities in a repeatable fashion requires creative partnerships and new delivery models.”

Whiteing emphasizes the essential role the CIO can play: “If you look at the problems that businesses will face in the future, requiring a cost-effective, high-quality resolution, the majority of solutions will invariably involve technology,” he says.

“When you look at executives on boards, their apprenticeships were in anything but technology. But an ability to understand the technology, implement it, and extract value out of it is crucial.”

2. Plot a way out of the legacy trap

Most major organizations are not embarking on digital with a blank sheet of paper. They have legacy systems that are embedded in the business. Legacy IT and the “technical debt” of unproductive and inefficient technology can be a significant barrier.

For example, it can prevent the organization from gaining a single view of the customer, because data is locked into various systems spread across organization silos.

Companies will still need to work with some legacy systems over the coming years, so they will need to balance the hybrid environment of old and new, while gradually retiring legacy systems.

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Digital America

In the US, 39% of CFOs make digital IT a very high priority, significantly exceeding other countries. This reflects the US’s role in driving digital innovation, particularly from Silicon Valley. The success of US tech giants, such as Amazon and Facebook, has created a strong digital ecosystem.

Since the beginning of 2009, venture capital firms have deployed more than US$31b in more than 3,300 deals in tech startups based in the Silicon Valley (CrunchBase research).4

Chart 14: Regions where CFOs cite “Transitioning the IT function into a digital world” as a very high priority.

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>28%</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>21%</td>
</tr>
<tr>
<td>Europe, Middle East, India and Africa</td>
<td>18%</td>
</tr>
</tbody>
</table>

Chart 15: Countries where CFOs cite “Transitioning the IT function into a digital world” as a very high priority.

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>39%</td>
</tr>
<tr>
<td>Brazil</td>
<td>29%</td>
</tr>
<tr>
<td>India</td>
<td>27%</td>
</tr>
<tr>
<td>Mexico</td>
<td>26%</td>
</tr>
<tr>
<td>China</td>
<td>26%</td>
</tr>
<tr>
<td>UK</td>
<td>18%</td>
</tr>
<tr>
<td>Australia</td>
<td>17%</td>
</tr>
</tbody>
</table>

4. “America leads the way in technological innovation,” Raconteur website, raconteur.net, 9 October 2014.
Any decisions about what to retire need to be based on business value and must consider these questions:

- What are the operational inefficiencies and costs of continuing with a cumbersome legacy system?
- Can we deliver a better customer experience by retiring the platform and moving to a new solution?

The CFO and the CIO need to work closely together to establish the business case and the value that will result from a refresh or replacement. This is particularly important given the emergence of agile new digital disruptors.

“Digital is fundamentally changing business models,” explains Laurence Buchanan, EMEIA Digital Advisory Leader at EY. “You have young, disruptive startups that have zero legacy. They don’t have the headache of 20 years of IT investment. They can jump straight to the cloud and mobile, creating new business models and distribution models and rewriting the value chain.”

3. Shift the digital IT investment mindset from Capex to Opex

An organization’s options for how IT is delivered have fundamentally changed. Traditional IT is cost intensive, in terms of up-front investment, people and even dedicated premises. Now, organizations can access the best new technologies via the cloud as a service. However, all cloud is not equal.

“With the cloud, we are a conservative adopter of public cloud, we’re an aggressive adopter of private cloud and we’re a smart adopter of hybrid cloud. So, it’s difficult to talk about cloud in just one context,” says Boxer. “We want to be very focused and intelligent about what cloud we do use and how we use it, and we are probably in fact one of the earliest adopters of virtualization and private cloud that’s out there.”

In this environment, the traditional argument for preferring Capex (which enables companies to take advantage of amortization and depreciation of IT investments) is less compelling.

Instead, Opex has advantages. Organizations only need to pay for immediate capacity needs and can scale up or down. And, as new technologies rapidly evolve, organizations do not get stuck with outdated technology.

![Image of Rise of the Cloud](https://www.idc.com) US$127b

*The projected business spending on public cloud environments in 2018*

Software as a service: the most popular service, accounting for 70% of 2014 cloud spend

Infrastructure as a service: the second most popular service


The CFO and the CIO will still need to reach an agreement on the technology that is required and how it will be funded and allocated. For the CFO, though, this will be a different world, in part because the organization’s balance sheet will fundamentally change.

There are two main implications of the shift to Opex:

- **It will require a portfolio approach.** Instead of large, up-front capital expenditures, the organization will be making multiple investments across the business.
- **It will require procurement agility.** The cloud presents an opportunity to drive top-line growth by adopting new technologies quickly. With Capex investments, there was time for the business case to be researched and debated. In an Opex world, business unit leaders need to respond quickly to market opportunities. This requires accelerated technology procurement.
4. Manage digital IT risk exposures as part of the enterprise risk management framework

If the associated risks are not managed, the value that digital technology brings can be undermined.

**Questions CFOs and CIOs should be able to answer about cloud risk:**

1. Does our cloud environment have the appropriate controls to protect the confidentiality, availability and integrity of systems and data in the cloud?
2. Are there appropriate procedures in place to protect data at rest, in transit and in use?
3. Can we trust our cloud environment to be resilient to adverse events?
4. Have we stress-tested our cloud environment?
5. Is our environment audit-ready and certified to meet specific legislation and regulation in our industry?
6. Do we have documented evidence about the protections in place that we can use for compliance purposes?

The CFO has an essential role to play in ensuring that exposures from digital IT are addressed as part of the wider enterprise risk approach. The risk tolerance needs to be agreed upon, vulnerabilities assessed against it and a transformational road map developed to bring security to the appropriate level.

Senior teams need to review digital IT risks on a regular basis, as changes in business strategy, or to the regulatory and competitive environments, create new vulnerabilities.

5. Unite against digital IT fragmentation

In a digital environment, strategic spend control has been loosened as different parts of the business respond to fast-moving threats and opportunities.

For example, as marketing responds to ever-changing customer needs, research has shown that CMOs now spend approximately 15% to 20% of their budget on technology. The result may be greater speed to market, but the danger is that systems and infrastructure become increasingly fragmented.

And because this spending happens in silos, many CFOs do not know exactly what has been spent, whether it is aligned with strategy or whether there are any potential associated threats. This creates potential for wasted investment and unmanaged risks.

“Spend on technology is moving outside of the control of the CIO. The CFO and the CIO have a mutual interest in bringing this technology under closer control.”

Laurence Buchanan, EMEIA Digital Advisory Leader, EY

Rebooting the IT function is crucial to value creation

Digitalization offers organizations opportunities to rethink the customer experience, and reassess their ways of working and their business model.

This puts the IT function under growing pressure to deliver the required new enabling technologies and to do so at speed. CFOs are becoming increasingly engaged in the IT function. They will need to go further in helping to reinvent this function, as its key role as a driver of organizational value becomes increasingly recognized.

Five success factors for a successful collaboration

Making the relationship stronger
To perform effectively and drive profitable growth in the age of the smart machine, close collaboration between finance and IT is mission-critical. We believe this collaboration hinges on the following five success factors.

1. Innovation: Drive innovation through new digital technologies
2. Resourcing: Shift the IT operating model emphasis from Capex to Opex
3. Risk management: Manage risk exposures of new digital IT
4. Collaboration: Work as peers regardless of reporting line
5. Knowledge: Build the tech-savvy finance function
### Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>Consumer products</td>
<td>67</td>
</tr>
<tr>
<td>Banking and capital markets</td>
<td>58</td>
</tr>
<tr>
<td>Technology</td>
<td>57</td>
</tr>
<tr>
<td>Life sciences</td>
<td>56</td>
</tr>
<tr>
<td>Insurance</td>
<td>56</td>
</tr>
<tr>
<td>Oil and gas</td>
<td>55</td>
</tr>
<tr>
<td>Power and utilities</td>
<td>53</td>
</tr>
<tr>
<td>Diversified industrial products (including aerospace and defense and chemicals)</td>
<td>32</td>
</tr>
<tr>
<td>Mining and metals</td>
<td>31</td>
</tr>
<tr>
<td>Automotive and transportation</td>
<td>28</td>
</tr>
<tr>
<td>Cleantech (including energy, water, transportation, agriculture and manufacturing)</td>
<td>27</td>
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<tr>
<td>Asset management</td>
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<td>Real estate</td>
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<tr>
<td>Telecommunications</td>
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<td>Media and entertainment</td>
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<td>Private equity</td>
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<td>Construction</td>
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<td>Import/export/wholesaling</td>
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<tr>
<td>Professional services</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
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</tr>
<tr>
<td>Transportation</td>
<td>4</td>
</tr>
<tr>
<td>Health care</td>
<td>2</td>
</tr>
</tbody>
</table>
Survey respondent demographics

**Country**
- US: 80
- China: 80
- Brazil: 42
- United Kingdom: 40
- Mexico: 31
- India: 30
- Canada: 30
- Australia: 30
- Germany: 29
- Singapore: 28
- Russia: 25
- France: 24
- Hong Kong, China: 21
- Argentina: 20
- South Africa: 20
- Indonesia: 20
- Philippines: 15
- Colombia: 11
- United Arab Emirates: 10
- Turkey: 10
- Spain: 10
- South Korea: 10
- Saudi Arabia: 10
- Italy: 10
- Nigeria: 5
- Sweden: 3
- Netherlands: 3
- Norway: 2
- Belgium: 2
- Portugal: 1

**Finance roles**
- Group CFO or finance director: 329
- Divisional CFO or finance director: 159
- Regional CFO or finance director: 164

**Annual revenue in US$**
- Greater than $20b: 28
- Between $10b and $20b: 45
- Between $5b and $10b: 91
- Between $1b and $5b: 158
- Between $500m and $1b: 120
- Between $250m and $500m: 89
- Between $100m and $250m: 121
EY’s CFO agenda offers insights to help CFOs grow, protect and transform their organization. Previous studies in the *Partnering for performance* series are:

**Partnering for performance**  
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