Digital innovation and transformation in the finance organization

On 21-22 November 2016, members of the European Audit Committee Leadership Network (EACLN) met in Berlin for their 26th stand-alone meeting. In one session, a dialogue about the opportunities and risks of digital innovation and transformation for chief financial officers (CFOs) and their teams, members were joined by two guests: Luka Mucic, CFO and member of the executive board of SAP SE, and Roland Sackers, CFO and Managing Director of QIAGEN. For biographies of the guests, see Appendix 1, on page 10. For a full list of participants, see Appendix 2, on page 11.

Executive summary

In conversations before, during and after the meeting, guests and members considered the following topics:¹

- **As technology drives companies to reinvent themselves, CFOs must respond** *(page 2)*

  Digital capabilities are transforming the business models of established companies, and many are making money in new and different ways. Members reflected on the changes that have already occurred and the future implications of this trend for their companies. Digital advancements have opened new avenues for partnerships and acquisitions that allow companies to enter new business lines or offer new services. Legacy technologies serve as an as impediment to this progress, but there are scenarios for utilizing these systems to improve processes.

- **Finance organizations are undergoing a massive digital transformation** *(page 3)*

  As companies take advantage of new technologies to transform business models, so too must the finance organizations that support these businesses transform. New digital capabilities can also radically transform the roles and responsibilities of CFOs. The guests presented members with accounts of how new technological tools have enabled significant cost savings and efficiencies in the finance functions of their companies. Members and guests discussed how CFOs are taking advantage of these new efficiencies and using enhanced capabilities to better inform their decisions.

- **Audit committees must ensure that they and their finance organizations are keeping up** *(page 6)*

  Audit committee chairs are interested in the digital opportunities that are available to their finance teams and how they can ensure that their CFOs are taking the greatest advantage of new technologies. In particular, audit committees are focused on how to effectively monitor the most pressing opportunities and risks that are tied to transformation. As the finance organization utilizes new tools and techniques, boards must also ensure that the people who make up the finance organization have adequate skills to make the most of their capabilities.

  For a list of discussion questions for audit committees, see Appendix 3, on page 12.

¹ ViewPoints reflects the network’s use of a modified version of the Chatham House Rule whereby names of members and their company affiliations are a matter of public record, but comments are not attributed to individuals or corporations. Italicized quotations reflect comments made in connection with the meeting by network members and other meeting participants.
As technology drives companies to reinvent themselves, CFOs must respond

Digital technologies are shifting the core business models at many firms. Companies that once made money selling products or hardware are now focused on selling software or services. This combination of technological and market innovation is fundamentally different from previous industry transformations, as audit chairs discussed at the recent Audit Committee Leadership Summit in Zurich, where they highlighted the speed and scale of transformation, the interaction of technologies resulting in “combinatorial innovation,” and changing customer expectations and relationships.2 Companies are harnessing new technologies – mobile and cloud computing, the internet of things, automation and artificial intelligence – to replace legacy systems with digital platforms and interact with customers and suppliers in new ways, in some cases even changing the fundamental nature of their business.

Business models are adapting in a new environment

Digital business models present companies with new avenues of engaging with customers – for example, long-term relationships based on subscriptions to digital services like Uber or Spotify – and some models, such as the sharing economy, have already begun to disrupt many sectors. Before the meeting, Harry Gaskell, EY Chief Innovation Officer for the UK and Ireland, said that investing in innovation needs to be a top priority: “If I was a CFO at the moment, I would be thinking about how I need to spend money innovating and capturing innovation in my business model.”

EACLN members discussed recent trends in business model transformation with the two guests. Both Mr Mucic and Mr Sackers emphasized the need for companies to remain agile through their changes. By minimizing complexity, companies are able to more effectively predict and react strategically to consumer demands.

Mr Mucic described a multiyear strategic transition at SAP, the largest German company by market capitalization. “SAP went through a tremendous transformation in the last five to seven years,” he said. “Historically, we sold licenses to software. We went through a series of major acquisitions of cloud-based companies, which allows us now to run new products that are software as a service or provide private clouds. The result is a vast compendium of business models within the company.”

Mr Sackers explained that at QIAGEN, a life sciences company focused on diagnostics, the sheer amount of data generated from patient information has driven digital innovation at the company, changing it from a diagnostics test manufacturer to a bioinformatics firm. “In Germany alone, there are over 1.5 billion gigabytes of genetic-related patient data – a staggering amount of data. Bioinformatics has transformed healthcare into a brand-new world, with digital technologies increasing our understanding of our patients,” he said. Responding to this transformation, QIAGEN shifted its business model from traditional product manufacturing to patient data services. “We used to be paid for selling machines, now we get paid per report,” Mr Sackers said.

Companies are entering into new relationships

EACLN members observed that digital capabilities are enabling companies to work in new and creative ways with a range of business partners. Companies often have the option either to build in-house digital capabilities or to acquire new businesses to speed up the process of innovation. EACLN members and

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2 North American and European Audit Committee Leadership Networks, Digitalization, Disruptive Innovation and the Board, ViewPoints (Waltham, MA: Tapestry Networks, 2016).
subject matter experts said that companies are increasingly considering a third option: partnering with innovative companies or providers to take advantage of their resources. Using the strengths of each organization, resources are shared and services are developed to meet consumer needs. This might mean a large company acquiring a start-up or two companies partnering on a specific task, forming a strategic business alliance or sharing data about mutual customers. Many of these relationships are new in kind; while they have components of traditional relationships, the lines are fuzzier.

Legacy systems and practices create challenges

One member observed a challenge that many large, complex groups face as they consider a digitally driven transformation: “Companies are having problems migrating legacy systems to new systems … There are huge gaps in all of the companies that I work with. We have a long way to go on this.” Another member noted that legacy systems not only prevent aggregating data for analysis but also can cause regulatory issues: “[Data retrieval] is a problem now that regulatory reviews are based more and more on big data. The difficulty rests in legacy systems.” On the other hand, some new technologies, such as robotics process automation, present companies with the opportunity to leverage and extend the functionality of legacy systems.3

“I’m struck by the transformation mentioned, and I think of how hard it is for old companies to transform. Newer companies have an easier scenario,” one member posited, highlighting the more agile nature of digital-native companies. Mr Mucic said that while digital transformation is no easy feat, even a company as large and complex as SAP was able to complete a successful system-wide overhaul: “We engaged in 10 end-to-end processes to enable transformation, building bridges between various parts of the system, using a cloud platform and API hubs to integrate the legacy systems into a single software instance.”

Mr Mucic defined three major challenges for leadership teams faced with business model transformation: (1) weak and heterogeneous master data governance; (2) organizational silos with differing processes and no bridges between business units; and (3) a lack of understanding between a system of record and a system of innovation. To conquer these challenges, companies must have well-defined plans in place to address them. “In a system of innovation you need agile support for substantially changing business models or process requirements to address changing market requirements. Companies need a consciously laid out architecture with a stable system of record that is separate from a system for innovation,” Mr Mucic explained.

Finance organizations are undergoing a massive digital transformation

As companies face digital disruption and transformation and undergo resulting business model transformations, CFOs have to think about their role differently to ensure the company is getting the right financial advice. At the same time, new tools available to CFOs and their teams have the potential to revolutionize the day-to-day work of the finance organization. EACLN members, guests and subject matter experts considered how companies could take advantage of a digitally equipped finance team, discussing the connection between transformation in the finance organization and in the larger business model and identifying potential improvements in efficiency and effectiveness as a result of digitalization. For descriptions of the key innovative technologies impacting the finance function, see tint box on page 4.

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Transformation in the finance organization and in the business model are interconnected

As business models change, how do finance organizations track business processes and ensure the right infrastructure is in place to secure future success? Members were interested in how connected the finance organization’s transformation should be to broader digitalization efforts within a company.

As technology shifts the core of the healthcare sector, QIAGEN has adapted by refocusing business models and integrating digitalization into the fabric of the finance function. Mr Sackers related to audit committee chairs, saying, “I’m a CPA, not a digital native, but it’s imperative to use digital knowledge in the finance organization to develop better strategies and solutions. We’ve tried within QIAGEN to change finance to move toward value generation, where we have ownership of all data. Time is lost when data streams are segmented and there is competition between data ownership and quality.”

At SAP, Mr Mucic said his team’s efforts to transition the finance organization to a digital focus occurred alongside the company’s business model transition. Describing the project, he said, “In 2010, SAP started to engage in finance transformation to standardize activities and automate the function as much as possible – allowing for investment in digital capabilities.”

Mr Mucic underscored the critical nature of partnering with other executives on digital initiatives: “Data-driven analysis is an important way in which the CFO can provide support.” Mr Mucic said that it is a priority for him as the CFO to drive innovation: “Finance should deliver information and analysis as well as strategic guidance in order to execute on strategy.” One member agreed but asserted that for most companies this is still an aspiration: “The CFO is in a symbiotic relationship with the CEO – alter egos working together to drive transformation. Neither has been equipped to drive this change yet.”

Innovative technologies impacting the finance function and CFOs

Key technologies have been identified as game changers for the finance function and internal audit, each with major implications for advancing an organization’s business and operations capabilities:

- **Predictive analytics and data mining.** While data analytics has existed as a tool for businesses for some time, advanced analytics offer forward-looking capabilities, which can help the finance organization “improve ability to predict outcomes – and manage strategic risk – through scenario analysis and forecasting” and “better understand the financial impact of key strategic and operational decisions.”

- **Robotic process automation (RPA).** RPA technology “operates as a virtual workforce controlled by the business operations teams … It captures and interprets existing applications, manipulates data, triggers responses and communicates with other systems, [and] it can be applied to existing applications (without changing the current IT landscape).”

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5 Alexander Furnas, “Everything You Wanted to Know About Data Mining but Were Afraid to Ask,” *Atlantic*, 3 April 2016.
Digital tools and technologies help finance teams become more efficient

In addition to adapting to serve more digitally enabled businesses, CFOs and their teams are using new, digital tools to create more efficient processes, significantly reducing cost. EY’s Mr Gaskell said that technological advances have the potential to double companies’ capabilities within the finance function by using half as many people.

Mr Mucic described how his finance team at SAP became more efficient through automating transactional processes: “There were many initiatives to utilize automation, which radically changed the company’s transactional processing architecture, bringing down the time it took to execute the monthly and quarterly close by five days.” He said the finance organization invested heavily to “standardize, centralize and automate transactional processes,” which resulted in significant savings and a reinvestment in analytical capabilities. In 2011, two-thirds of the SAP finance organization’s cost was tied to transactional processes, with one-third going to transformational processes; now that ratio is reversed.

The savings generated by using software robots to do work that was once done by humans is substantial. It is estimated that, once automated, a process can be completed by a robot at one-third the cost of having it done by offshore labor or one-fifth of the cost of onshore labor. Mr Gaskell explained that, for example, RPA could allow companies to forgo offshoring basic tasks within the finance function because those tasks could be performed at headquarters—by software robots: “[CFOs should] be looking at everything offshored and ask, ‘Can I replace this cost with robotics and smart analytics?’”

Digitalization also makes finance organizations more effective

Automated processes provide greater consistency across tasks and reduce the number of errors, enhancing the finance organization’s overall value to the company. Access to large quantities of data and tools capable of performing predictive analytics allow CFOs to take a forward-looking perspective, using historic data to model, and ultimately predict, future scenarios for the business.

Mr Mucic stressed the importance of using new tools to stay competitive: “Digital tools that provide a complete, real-time view of a business are critical to success in today’s global markets. Bringing together predictive analytics and real-time reporting improves productivity and efficiency throughout the entire value chain of companies.” He recommended that companies “build analytical dashboards that sit on top of data in transactional systems.” By increasing the effectiveness of the organization, this process enables the

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“reinvestment of gains from automation into increased analytical capabilities, education and training in order to make team members into transformation agents.”

Automation also allows companies to reallocate their finance workforces to more high-priority matters. A recent study on the changing CFO role recommends that an organization “design a future operating model that focuses their best people on key priorities and delivers a smarter, more forward-looking and resilient finance function.” Citing an example from SAP, Mr Mucic said, “The overall size of the finance organization has stayed the same while the company has been growing, resulting in lower costs. Our cost used to be centered on transactions and has now moved to transformation processes. The clear area of investment is in data science, predictive analytics, as well as in human brain power. We have also invested in planning models and value-driver models.”

Mr Sackers noted that at QIAGEN there has also been significant investment in analytical capabilities: “We’ve also invested in data analytics, separating digitalization teams from IT efforts. We have to work more agilely. What analytics delivers in terms of customer data interpretation is a real value for the finance organization and makes a significant impact on the full company.”

Digital technologies present CFOs with an opportunity to minimize and ultimately eliminate risks associated with human error or malicious activity. Robotics can also enhance a company’s cybersecurity and data privacy protections. Hans Jessen, EY Partner and global innovation leader in robotics, explained, “If humans are performing these tasks, there are vulnerabilities – so robots, once they are properly programmed, are more secure.” He cautioned, however, that RPA is nevertheless subject to human manipulation: “A rogue programmer could still create problems. You have to be careful of what you automate; it can backfire if you’re not careful.”

Some of the most substantial improvements for the finance organization are still being developed and will take several years for leading companies to implement. Mr Jessen explained that the greatest benefits will come when different technologies become more integrated. He highlighted the prospects of incorporating AI into RPA as the most obvious example. While current software robots are capable of automating rote tasks, those equipped with enhanced AI will be able to navigate unfamiliar situations and solve problems without the need for human intervention.

Audit committees must ensure that they and their finance organizations are keeping up

New technologies allow companies to do innovative things in their finance organizations and beyond. EACLN members and guests said that boards and audit committees must ensure that their CFOs are taking full advantage of these new capabilities, and they discussed the importance of taking steps to increase oversight, respond to technology-driven changes in human resource needs and address roadblocks to digital transformation.

Increase oversight in critical areas

Members and guests identified several areas that merit particular board and audit committee attention:

- **Risk management.** CFOs, in consultation with their boards, must determine how to invest their companies’ resources to take advantage of digital opportunities and fend off digital risks. EACLN members focused on the risks associated with business model transformation. One member noted,
“Older companies that are transitioning to a new business model may be taking on a lot more business risk and volatility. Boards need to understand how much more risk the company is taking on and how that risk is being priced in the new business model.”

- **Acquisition and integration monitoring.** EACLN members were especially interested in the challenges for the finance organization when a company integrates or partners with a smaller technology firm. Along with valuable ideas and a culture of innovation and disruption, such companies also introduce new business models that the finance organization must understand and integrate. CFOs and their teams are also at the forefront of ensuring that as these new relationships evolve, companies have adequate internal controls in place. One member emphasized the importance of knowing “the strength of internal controls” and “understanding how they work” as well as ensuring that succession is part of a digital plan. Commenting on working with third parties, another member echoed this sentiment: “The scariest thing is monitoring the partners we have. That’s the hardest part about being a director.”

- **Cybersecurity and data protection review.** The proliferation of new technologies, including predictive analytics and data mining, will require companies to enhance their cybersecurity and data protection practices. Interconnection with multiple data streams and third-party vendor networks opens new points of vulnerability; forces including “increasingly sophisticated cyber attacks … will create ever-greater challenges for multinational organizations, particularly as global operations become increasingly connected.” The cybersecurity risk hits CFOs acutely; as they utilize new tools to become more efficient and effective in their roles, they must also ensure that adequate protections are in place. Members were aware of emerging cybersecurity risks manifesting as a result of digital transformation. Some members expressed concern about the pace of innovation and the board’s agility in planning for these new risks. They asked, what are the best ways for the board to keep up with both technological advancements and the emergence of associated risks?

**Respond to changes in human resource needs**

As finance organizations rely more heavily on technology, they must also think differently about the profile and skills of the team members. Boards, in turn, must ensure that the right people, with the right skills, are being hired and cultivated in the organization. Martin Weis, EMEIA robotics leader at EY, observed that CFOs “need a strong technology background or they can’t survive.” He added that CFOs must work closely with their chief information officers and IT teams on technology issues.

Members raised questions about whether the finance organization’s future reliance on technology could change the nature of the CFO role and the type of candidate best qualified for the job. The next generation of CFOs will need to work in a more analytical, digital environment, overseeing not just traditional finance professionals but also technologists like data scientists. One member said, “The profile of succession has to change. The CFO has to have a broader base than in the past – not only experience in the financial area, but also in the operational business.” The member said that increased efficiency will provide CFOs the opportunity for a new, more strategic focus: “The CFO will function more like a co-CEO. Based on knowledge of the processes, the CFO should be able to identify disruptive changes that might change business. That makes the CFO a co-pilot.”
Mr Sackers articulated his vision of the CFO as an advocate for transformation and a trusted partner to the business: “The CFO is the best chief digital officer you can have. Most people see the CFO as a controller, working on budgets and on compliance and governance responsibilities. Because of those traditional responsibilities, the CFO is trusted and best positioned to change things; there’s a view that he or she will not jeopardize the company. The ability to drive digital forward requires a willingness to change and a top manager as an ambassador.”

Mr Sackers described the evolution of finance roles by noting the predictive elements now needed in the professional’s toolbox: “It’s not about what happened but about what will happen. Of course, we care about the historical, but we need to be able to predict, looking much more toward forward-looking statements. Half of the people I’ve hired over the last three years do not have a business administration background.” At both QIAGEN and SAP, the finance organization has invested in hiring and educating teams equipped to interpret the data streaming from the many channels across the organization.

Address roadblocks to digital transformation
While some EACLN members said the finance organizations at their companies had experienced similar transformations to the ones described by the guests, especially within digitally native businesses, many members described the state of their finance organization’s transformation as embryonic. One member said, “My first reaction to hearing these stories is extreme insecurity. I see both companies [SAP and QIAGEN] going much farther, much faster than some other large companies. For me, it reinforces the opportunity to embrace and nurture digital advancements. My companies have a long way to go to get where these companies are.” Similarly, another member said, “Most companies are trying to get the basics right and then move forward. This is visionary.”

Many CFOs are not yet under pressure from boards and CEOs to take advantage of digital capabilities. As a result, not all finance leaders have made digital transformation a priority. One member said, “I don’t see finance taking a lead role in digital transformation at my companies.” Mr Gaskell noted that these advancements are “not causing sleepless nights at the moment. [CFOs are] not being challenged by the CEO to do things entirely differently; they aren’t coming under pressure. A smart CFO would use this time period to get ahead of the game.” In addition, for many organizations digital leadership has been a responsibility of the chief information officer and the information technology team. Members said that some CFOs are less likely to take early advantage of digital capabilities because they do not own digital.

CFOs may also be delaying adoption of new tools because they are waiting for the technology to improve and become more useful. Mr Jessen, the robotics expert, cautioned that finance organizations taking this approach do so at their own peril: “You have to walk before you run. Companies that invest in robotics and artificial intelligence now will be much better positioned in the next few years as these tools become more and more useful.”

Conclusion
EACLN members identified a series of opportunities, but also many challenges, for finance organizations as they adapt to a new, digital business world. Mr Mucic emphasized the importance of the CFO in the digitalization of the business: “Finance is a driver of transformation, and our function must embrace innovation, anticipate the impact of new technologies and introduce the necessary process changes and technological innovations to support the business.” Members recognized that as CFOs rely more heavily on
new tools like RPA and advanced data analytics, board members will also have to adapt to ensure they can evaluate the progress of their own CFOs and finance teams.
Appendix 1: Guest biographies

Luka Mucic
Mr Mucic is a member of the Executive Board and CFO of SAP SE, a market-leading enterprise application software company. As CFO, he oversees the finance, administration and IT organizations. Mr Mucic has held various roles at SAP, joining the firm in 1996 in the corporate legal department.

Mr Mucic holds a joint executive MBA from ESSEC, France, and Mannheim Business School, Germany, and a master’s degree in law from the University of Heidelberg, Germany.

Roland Sackers
Mr Sackers is CFO and Managing Director at QIAGEN, a provider of sample and assay technologies for molecular diagnostics, applied testing and research. He oversees long-term financial planning and growth strategy for the company and he leads IT, corporate communications and procurement.

Mr Sackers also serves as a Non-Executive Director and Audit Committee Chair of Immunodiagnostic Systems Holding, a UK-based producer of immunological tests for research and diagnostic applications.

Mr Sackers holds an MBA (Diploma Kaufmann) from the University of Münster.
Appendix 2: List of participants

EACLN members participating in all or parts of the meeting sit on the boards of about 40 public companies:

- Mr Mike Ashley, Audit Committee Chair, Barclays
- Mr Aldo Cardoso, Audit Committee Chair, ENGIE
- Mr Carlos Colomer, Audit Committee Chair, Abertis
- Ms Carolyn Dittmeier, Chairman, Statutory Audit Committee, Generali
- Dr Edgar Ernst, Audit Committee Chair, TUI AG
- Dr Byron Grote, Audit Committee Chair, Tesco, Akzo Nobel and Anglo American
- Mr Lou Hughes, Audit Committee Chair, ABB
- Mr Nasser Munjee, Audit Committee Chair, Tata Motors
- Ms Guylaine Saucier, Audit Committee Chair, Wendel
- Dr Erhard Schipporeit, Audit Committee Chair, SAP and RWE
- Mr Lars Westerberg, Audit Committee Chair, Volvo

The following ACLN members participated:

- Ms Mary Anne Citrino, Audit Committee Chair, HP Inc.
- Ms Pam Daley, Audit Committee Chair, BlackRock
- Mr Chuck Noski, Audit Committee Chair, Microsoft

EY was represented in all or part of the meeting by the following:

- Mr Andy Baldwin, EMEIA Area Managing Partner
- Mr Jean-Yves Jégourel, EY EMEIA Assurance Leader
- Ms Julie Linn Teigland, Regional Managing Partner – Germany, Switzerland, Austria
Appendix 3: Discussion questions for audit committees

- What digital tools are your CFO and finance organization implementing at your companies? Is the team focused more on using digital to improve efficiency or effectiveness?

- Does the development of new technologies for the finance organization change the relationship the CFO has with the chief information officer and information technology team? What can the board do to ensure these functions are collaborating effectively?

- How can the finance organization most benefit from enhanced capabilities? What obstacles prevent those capabilities from being available sooner?

- What challenges does business model transformation create for CFOs? What steps can CFOs take to meet these challenges?

- What obligations do changing relationships with third parties create for finance organizations? How can CFOs effectively monitor these relationships?

- How can the finance organization leverage legacy systems to create opportunities for the business?

- How does the board ensure that adequate resources are allocated to technological advances for the finance organization?

- How can directors assess a company’s ability to develop the right technological infrastructure to support the finance organization? When should the board push management to consider an acquisition or strategic partnership to enhance these capabilities?

- Are your CFOs adequately considering the staffing implications of digitalizing large portions of the finance organization?

- How might digitalization change communication in terms of frequency and content between the CFO and investors, as well as other stakeholders?