

# Leadership Study

## Digitization on Boards Report | 2<sup>nd</sup> Edition

Are Boards Ready  
for Digital Disruption?

By  
the Amrop  
TECHNOLOGY &  
MEDIA  
Practice Group

**FULL REPORT**



**Amrop**

Leaders For What's Next

# Digitization on Boards Report | 2017

## Executive Summary

The pressures surrounding digital disruption and security are intensifying and the digitization debate is gathering pace. Yet when it comes to exactly how organizations are addressing digitization, the picture remains fragmented and multiple questions surround its role.

To what extent is digital an agent of change for your organization? Should you continue with business as usual? Or deliberately engineer digital into specific parts of your supply chain? Should digitization have a higher purpose, to drive innovation or even transform your business model? If so, in what time frame, and with what resources?

Crucially, to what extent is your Board equipped to ask the right questions, find the answers, and implement solutions in the right place, at the right time?

In the second half of 2016, Amrop mapped the digital competencies of 300 boards (top 20 stock-listed companies in 15 countries in Europe, plus the US). In all we have looked at the profiles of 3,342 board members. Since our last edition, we have added Belgium, Poland, Switzerland and Turkey.

We supplement our analysis with in-depth interviews conducted during 2016 and 2017 with board members of listed organizations.



### 1 Digital representation in non-tech companies is low and slow-moving

5% of board members in non-tech companies have digital competencies.

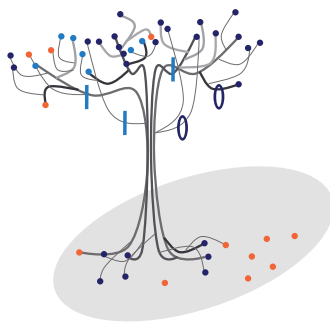
Currently only 5% of board profiles have digital competencies. And almost nowhere do we see any significant movement. Looking only at the digital representation of the countries analyzed over our past two editions, the overall average rose from 5% in 2015 to 6% in 2016.

One exception is Finland. With representation at 12%, Finland not only leads the way but is in growth mode, having tripled its representation between 2015 and 2016. The UK is in a similar dynamic, having upped its representation from 3% to 8%. In the Netherlands, however, representation has slightly dropped - from its already-low showing of 7% in 2015, to 5%.

### 2 Digital representation is rising in the tech sector

43% of Board Members in technology companies have digital competencies.

Unsurprisingly, the digital representation on the boards of tech players far outstrips that of non-tech equivalents. And with 79% representation, Poland is the clear leader. Looking at the averages



for only the countries analyzed in our past two reports, the picture for tech companies is also more dynamic than for non-tech peers, with representation rising from 36% to 44%. Sweden's has more than doubled, (rising from 30% to 63%), as has that of the UK (23% to 50%) and the US (13% to 26%). Our last survey found no digital profiles on the boards of listed French tech companies. Yet France now has a 28% representation, around the same level as Spain, Switzerland and the US. This year, despite doubling its digital representation, the US still ranks low – we hypothesize that US tech companies tend to seek financial and consumer competencies at board level. In 3 countries, digital representation has even dropped: in the Netherlands, by 8 percentage points, Denmark, by 3 points, Italy, by 2 points.

### **3** The gap between tech and other sectors is widening

Digital on tech sector boards is now nearly 9x that of other sectors, vs 7x last year

In our last analysis the penetration of digital competences at board level was 7 times higher in the tech industry than in others. Now the gap is widening. With representation in the digital/technology sector at 43% and at 5% for other sectors, it remains to be seen whether the trend will continue. One explanation for the sluggish movement is the length of time needed to nominate and integrate board members. The wheels of board governance turn slowly and in some sectors, such as financial services, regulation clogs them even further.

### **4** Only 3% of Boards have a Technology Committee

Traditional committees still dominate

Examining 300 Boards of listed companies we found only 9 official technology committees, (in

6 countries). Hence only 3% of the boards analyzed have a technology committee. Their rarity contrasts strongly with other committees: Over 75% of the listed organizations analyzed have a nominations, compensation, or audit committee. Between a third and a quarter have a corporate governance, (33%) or a risk committee (23%). Other bodies, devoted to issues such as sustainability, HR, ethics, or social committees, are found in 45% of cases.

### **5** Digital is a catalyst for gender diversity

Women now hold 35% of all board positions with a digital/technology profile

We found a significant correlation between boards with tech profiles and a higher degree of female representation. Women now hold 35% of all digital/technology positions in the boards surveyed; a significant uptake since last year.

France, Italy, Sweden, Norway and Netherlands lead the field, with around 50% of digital/tech profiles represented by women. In Sweden and Belgium, all new tech profiles entering boards in 2016 are women. Turkey, USA, UK, Spain and Poland are at the bottom of the list, having named no new female digital/tech board members among the 133 new non-executive directors appointed in 2016.

Of all the 111 digital women appointed non-executive board members, 76% entered within the last 5 years. On average, they have 2 less years' tenure than male counterparts on the same boards.

In terms of age, and across genders, digital profiles form a very homogenous group, (average age 53), versus 55 years in general.

Many new digital directors are younger - and often the first females on a board, bringing experiences from completely different company cultures. New entrants likely need stronger onboarding to ensure a robust tenure, one in which their impact is captured and maximized.

## Views From the C-suite

To get the story behind the current status of digitization on boards, Amrop conducted confidential interviews with 19 board members from listed organizations during 2016 and 2017. Few saw digital as having a primary role in the business. Therefore the findings in this section principally give insights into companies for whom digitization plays a secondary role.

### 1 Low Satisfaction indicates work in progress

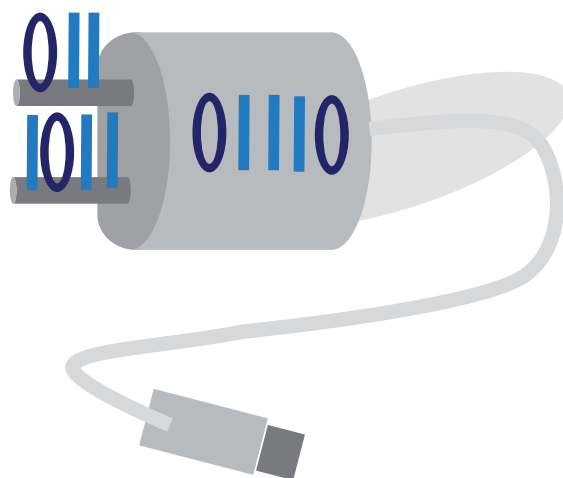
Of 19 board members who invited Amrop into the digital kitchen, half are engaged on the journey, with much work done, and a long road ahead. A third are dissatisfied, and hardly any are fully satisfied. Issues include complex and fragmented organizational structures, the low or questionable ROI of digital, and other pressing priorities on the board agenda. Digital initiatives also have a frustratingly short shelf-life - the evolution is relentless and 'good enough never is'. Questions also surround boards' understanding of digitization, the often-cited 'Kodak example' may mask some underlying digital illiteracy. For digital evangelists, realism and patience are the name of the game.

### 2 Cyber security is one of several threats – but digitization is a double edged sword

Nonetheless, board members are facing digitization with eyes wide open. Cyber security is a burning red thread - the most often-cited threat. Regulation is impeding progress in, for example, financial services, slowing the introduction of new board members or the digitization of critical processes. Several fear drowning in excess data, with customers dissatisfied with their levels of data access. However, digitization is a double-edged sword. With threats come opportunities for agile organizations who adopt a clear strategy, and get the timing right, several say.

### 3 Process is first in line for digital investment

Despite cyber security threats, investments dedicated to streamlining processes (often in multiple zones of an organization) are most common. Areas range from sales support to supply chain management, procurement, and general IT infrastructure. Overall, the pattern has not changed much since our last visit. Organizations are still taking a step-by-step approach and digital remains primarily an operational enabler, with the customer interface a high priority. The emphasis is more on exploitation than exploration, and business model transformation is rarely in the picture.



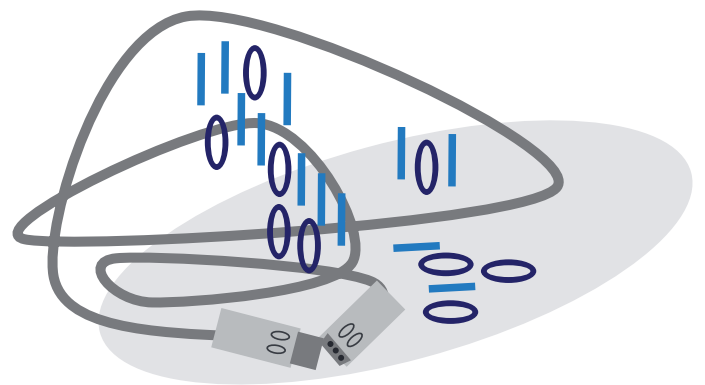


## 4 Boards face hiring dilemmas – agile thinking can solve them

How does the current state of affairs translate into the way boards are digitally populated? As in 2015, the T-shaped profile is most coveted; a blend of gravitas, broad business shoulders and digital incisiveness. Cyber attacks aside, the stakes are high, for example, using Industry 4.0 data to anticipate and prevent serious production blockages. So safe and experienced hands are wanted. How and where to find these is not so easy. Boards must reconcile the dilemma of youth (up-to-the-minute digital knowledge, often in the heads of young digital natives working in successful start-ups) and maturity (seasoned hands, large-scale transformation experience in a corporate setting). One solution, if the Board can accommodate it, is to compose the T-shape from more than one profile. Another is to expose existing senior talent to the latest developments in Silicon Valley, and engage in aggressive training and development.

## 5 Questions surround the relevance of Technical Committees

As we have seen, the scarcity of technical committees contrasts vividly with the far wider presence of other committees. For several board members, yet another committee would be superfluous to requirements at this stage and given that the digital strategy, which would provide the platform for a committee, is often undercooked. Other committees are already doing the job, say board members, whether in risk management, strategy or innovation. Digital is also an over-arching concern; bigger than a single committee. Or it is a management task, wherein management feed into, and/or are steered by, the board.



## Management Messages

### Chicken or egg? Digitization creates vicious circles

Our interviews with board members reveal that digitization can often end up chasing its own tail. Here are some potential traps (paraphrased). These may partially explain the persistently low representation of digital board profiles in non-tech organizations.

"If we don't know our digital strategy, how can we decide what if any digital profile/s to bring to the board? Yet, how can we define a strategy without them?"

"Our infrastructure and processes are heavy and fragmented. How can we integrate digitization into outmoded structures? Yet without digitization, how can they be updated and streamlined?"

"Technology evolves fast and dynamically. So systems quickly go obsolete, absorbing massive resources and providing insufficient ROI to justify further investment."

### Board education can pre-empt them

Costly mis-hires, strategic paralysis, risky re-designs. It doesn't have to be this way. Boards can avoid vicious digitization circles by designing time-limited development and coaching programs for members, also working with their CHROs. With this knowledge in hand, the thinking can start. But with what components? Here are some suggestions, shared with us by board members.

#### Tap into internal knowledge

As outlined in our last report, it's vital to create space for digital/technical dialogue. One way is to assign a dedicated Strategy Day - connecting the Board and Executive Management team on the digital/technical theme outside the boardroom

#### Learn from tech companies

With 43% digital representation on the boards of technology companies, listed companies in the sector provide a wealth of insights into digitization. (The sector also accounts for the largest board talent pool).

#### Look beyond Silicon Valley

Many digital lessons are being learnt in unlikely places. With 12% digital representation on their boards, (double the 5% average), Finland leads in digital board representation for non-tech listed companies. In the tech sector, Poland is soaring at 79%. Norway, Sweden and Denmark are also in the upper echelons.

#### And also go to Silicon Valley

In this and a previous study ('Welcome to the Flight Deck'), Amrop finds examples of boards who take management teams to Silicon Valley to learn from the latest innovations. Where will you hold your next board meeting?

#### Combine digital and diversity

Diversity drives innovation. Digital is catalyzing gender diversity; women now hold 35% of digital/technology board positions. To ensure new voices are properly heard, boards may need to ask tough questions about how they interact as a group. A structured and anonymous board assessment and rigorous onboarding for new members, are strongly advised.

#### Engage in reverse mentoring

N Fellowship is a unique 'reverse-mentoring' internship program, matching top-level computer engineering students with CEOs. Over a summer placement at the workplace of the CEO, a next-gen innovator takes a fresh view specific parts of the business. N Fellowship is operated by Amrop and Nav Talent, a young US-based organization helping engineers and startups navigate the technical recruiting ecosystem. To date, all CEO's confirmed that they would gladly repeat the experience.

# Full Report

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In our company, digitization has become a value-creation mechanism, but it isn't a business in itself. The most important takeaway in a business such as ours (consumer products) is that digitization enables a direct connection between the customer and us. In a way, it cuts out the middleman. But we've always been very technologically-oriented, and a significant share of revenue is spent on R&D.

During the last six years we've taken steps in the name of digitization. The constantly evolving nature of the business environment makes us move in smaller steps, as there is no point in trying to plan too far ahead.

For six years, we've been systematically developing our approach on how digitization will impact the company's different functions, starting with logistics and going all the way to digitally enabled service products or digital extensions to existing physical products."

*Board Chairman, Leisure sector*



# Foreword

This study examines the current status of digitization on boards. It is the second in an annual series from Amrop's Global Technology and Media Practice Group. For our first edition, during 2015 we systematically mapped the digital competencies of the Boards of the 110 largest European and US stock-listed companies, to gain an overview of digital Board penetration.

This year, we go further. In the first half of 2016, we analyzed the boards (supervisory or equivalent) of the top 20 stock listed companies by revenue in 15 countries (14 European, plus the US). We dive into the profiles of board chairs, vice chairs, regular board members and employee representatives. In all, 300 Boards have been examined, and the profiles of 3,342 board members mapped. We support our investigation with in-depth interviews conducted in 2016 and 2017 with 19 board members from listed companies, mainly from organizations for whom digital is secondary to the business.

## What has changed since we last looked?

Particularly in non-technology sectors, there has been little progress, even in industries where data (and particularly its security) can determine a company's future. The technology sector is more dynamic. And overall, some countries are making clear progress. Evidence also suggests that digitization is acting as a catalyst for gender diversity.

## How can the slow progress be explained?

One answer lies in responsibility: a lack of clarity regarding the main axis for change within organizations. Some board members firmly dispute the top-down direction; change can only be driven by the management team/C-suite, with the board as custodians. Others believe the opposite.



**Mikael Norr**  
Global Practice Group Leader,  
Technology & Media  
Amrop

Ideally, digitization should be a symbiosis of board and management, working in collaboration and playing to their strengths and expertise; strategic, technical or operational.

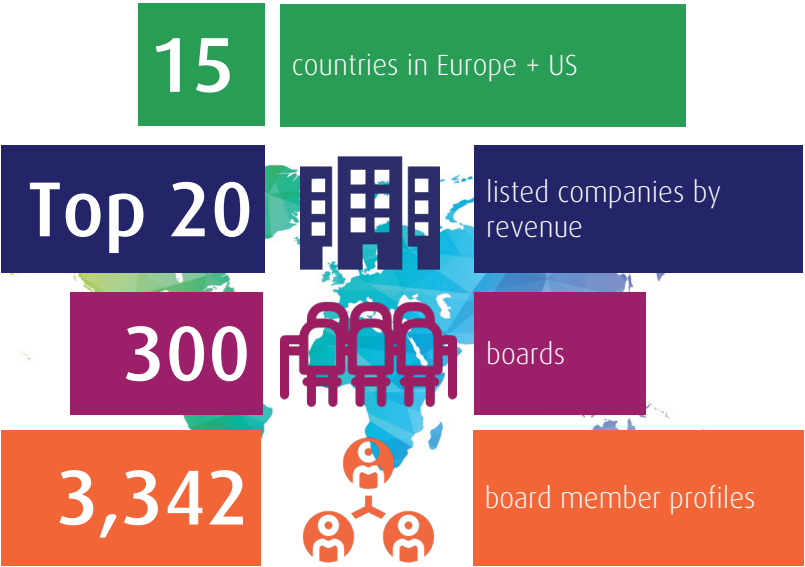
Another answer lies in the ambiguity of the business case for digitization. Many view it as a way to exploit what already exists: the customer interface or operational processes. For them, digitization is more an engine for streamlining infrastructure than for innovation. Still less, for the transformation of business models.

Yet the core answer must lie in the sheer difficulty of positioning the right talent in the top layer of organizations: people who can help fellow board members develop a clear strategy based on a compelling business case and a helicopter view of organizational purpose, market forces, culture and architecture. This done, change must be ignited in the right place, at the right pace, with a firm grip on resources and risk. Unsurprisingly, this is a thorny problem. Solving it brings dilemmas (especially in the frequent absence of a coherent digital strategy): youth versus maturity, technical specialism versus strategic bandwidth. Candidates must be identified, attracted (often from the technology sector), and retained. Break the vicious circle, and the slow-moving wheels of Board Governance still take time to do their work. There is a long and winding road ahead, full of vicious circles. Engaging in the structured education of boards, before setting out, can help prepare the way.

# Methodology

In the second half of 2016, Amrop’s Global Technology and Media Practice Group analyzed the profiles of members of boards (supervisory or equivalent) of the top 20 stock listed companies in terms of revenue in 15 countries (14 in Europe, plus the US). We looked at chairmen, vice chairmen, regular board members and employee representatives. In all, 300 boards were analyzed, and the profiles of 3,342 board members mapped.

A board is considered as having technology/digital competencies when it has a digital/technology committee, or if one or more board members are categorized as technology/digital profiles.



DEFINITIONS	
Technology/Digital Profile	Technology/Digital/Innovation Committee
A board member with professional operating experience from a company within software, hardware, infrastructure, internet, digital, online, telecommunications, social media, etc. S/he has worked in such a company within minimum the past 5-10 years. Alternatively a CIO or CTO from other companies.	Guiding and advising the Board on issues related to software, hardware, infrastructure, internet, digital, online, etc.

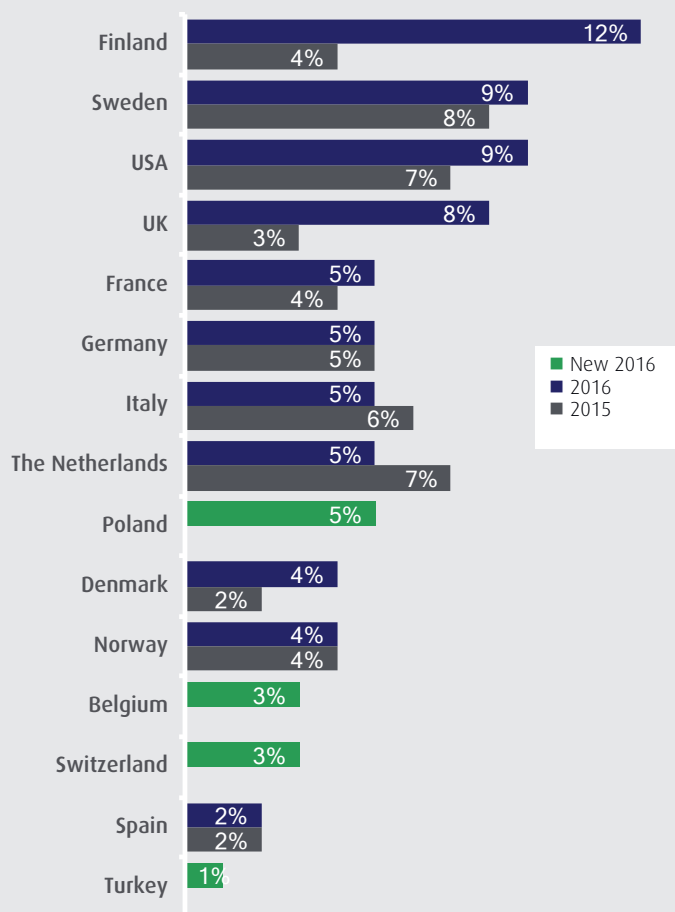
# 1 What the Numbers Say



# Board Members | Non-Tech Companies



**Digital/Technology Profiles in Boardrooms**  
Non-Technology Companies



## The digital board representation of non-tech companies is low and static

Overall, 5% of board members in non-tech companies have digital competencies.

For this second edition, we extended our analysis to 4 more countries: Belgium, Poland, Switzerland and Turkey.

When we just compare the overall average representation across the countries analyzed over the past two editions, the picture has remained almost static, rising from 5% to 6%. Almost nowhere do we see any significant rise.

One exception is Finland. With representation at 12%, Finland not only leads the way, but is in marked growth mode, having tripled its representation in a year.

The UK is showing a similar dynamic, having upped its representation from 3% to 8%.

In the Netherlands, however, representation has even slightly dropped from its already low showing of 7% in 2015, to 5% currently.

Whilst 3 of the newly-analyzed countries, Belgium, Poland, and Switzerland, are all hovering around the average mark of 5%, Turkey's board representation is notable by its quasi-absence. Only 1% of Turkey's boardroom profiles are digital.



## Regional Snapshots



**Finland**  
**12%**

Despite Finland's leading position (also over the US), the Board Member of a Finnish manufacturing company sees the country as a digital recipient rather than leader.

"What is a bit unfortunate is that most of these disrupting innovations seem to be coming from Silicon Valley, which means that they become business in the USA and are scaled there, and then satellite countries such as Finland are mainly on the receiving ends of the new business. Which means that the service is brought here, but the revenue and business is taken elsewhere. If you take fashion e-commerce for example... money made in these web stores doesn't stay in Finland but ends up in some marketplace somewhere else."

**Poland**  
**5%**

The Chairman of a Polish energy company relates the low level of representation to state ownership. For him, it is putting innovation at risk.

"After the 80s, Poland had to chase Europe and the rest of the world and many IT companies appeared, working on the automation of certain industry processes (not yet digitization). Many young people started their careers in such companies and this is where they come from today (on the boards). When we talk about the top 20 companies in Poland, which are mostly state-owned, they are the largest buyers of the latest technologies, but for these companies the era of digitization is yet to come."

**Turkey**  
**1%**

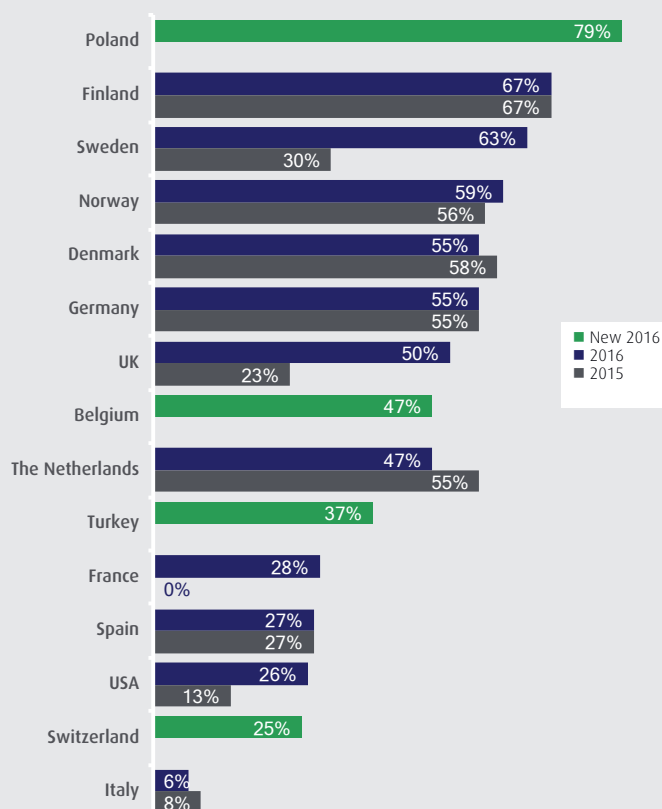
the Chairman of a Turkish manufacturer suggests that the business case still has to filter through the sector.

"Most competitors are working with very low cost off-the-shelf systems. We are investing hugely in systems as we can afford it, but the competition can do the same business with minimal investment. It affects the competition a little bit but not much."

# Board Members | Tech Companies



Digital/Technology Profiles in Boardrooms  
Technology Companies



## Representation is rising in the tech sector

43% of board members in technology companies have digital competencies.

Unsurprisingly, the digital representation on the boards of technology players far outstrips that of non-tech. It follows that the sector is claiming the biggest senior talent pool. And with 79% representation, Poland is the clear leader.

When we just compare the overall average representation across the countries analyzed over the past two editions, the picture for tech companies is also far more dynamic than for non-tech peers, with representation rising from 36% to 44%.

For example, Sweden's representation has more than doubled over the period, from 30% to 63%, as has that of the UK (from 23% to 50%) and the US (from 13% to 26%).

Our last survey found no digital profiles on the boards of listed French tech companies. Yet France now has a 28% representation, bringing it to around the same level as Spain, Switzerland and the US.

Despite doubling its digital representation since our first analysis in 2015, the US still ranks low – we hypothesize that US tech companies tend to seek financial and consumer competencies at board level.

In three countries, digital representation has even dropped: in the Netherlands, by 8 percentage points, Denmark, by 3 points, Italy, already with a very low representation, by 2 points.



### Zoom in on the Netherlands

“High tech industries in the Netherlands are among the most innovative in the world, thanks to state-of-the-art facilities and cutting-edge research and development. Dutch technological know-how and products are much sought-after and are exported worldwide”

This, according to [hollandtradeandinvest.com](https://hollandtradeandinvest.com), a Government of the Netherlands portal. Given this enviable vibrancy, how can the drop in digital board profiles in the country’s tech and non-tech sectors be explained?

Job Voorhoeve is a Partner with Amrop in the Netherlands. His experience suggests that the picture in the country is not set to change any time soon. He recently told Boardroom Insider Magazine: “For every ten requests for functions we receive, around 10% and 20% emphasize a digital profile. I am currently handling a CMO function where digital competences are very much stressed. This can be explained by the fact that it is an IT company. We are also filling a CFO function in the pharmaceutical industry. And there is no talk of a digital profile. This is because there is little digital knowledge on the board.”

Voorhoeve is struck by the scarcity of digital profiles on the boards of listed Dutch companies:

“I think that digital profiles at the top of companies are not the highest priority for supervisory board members or presidents. It is probably the case in technology companies such as ASML, but not in other sectors. And that is the craziest thing.”

Stranger still, given that the latest version of the Netherlands Corporate Governance Code expects supervisory board leaders to “sustainably address the practice of their tasks and address the creation of long term value.” Digitization is an important component of this: “Long term value creation demands an awareness of, and the anticipation of, developments in new technologies and changes to business models.”

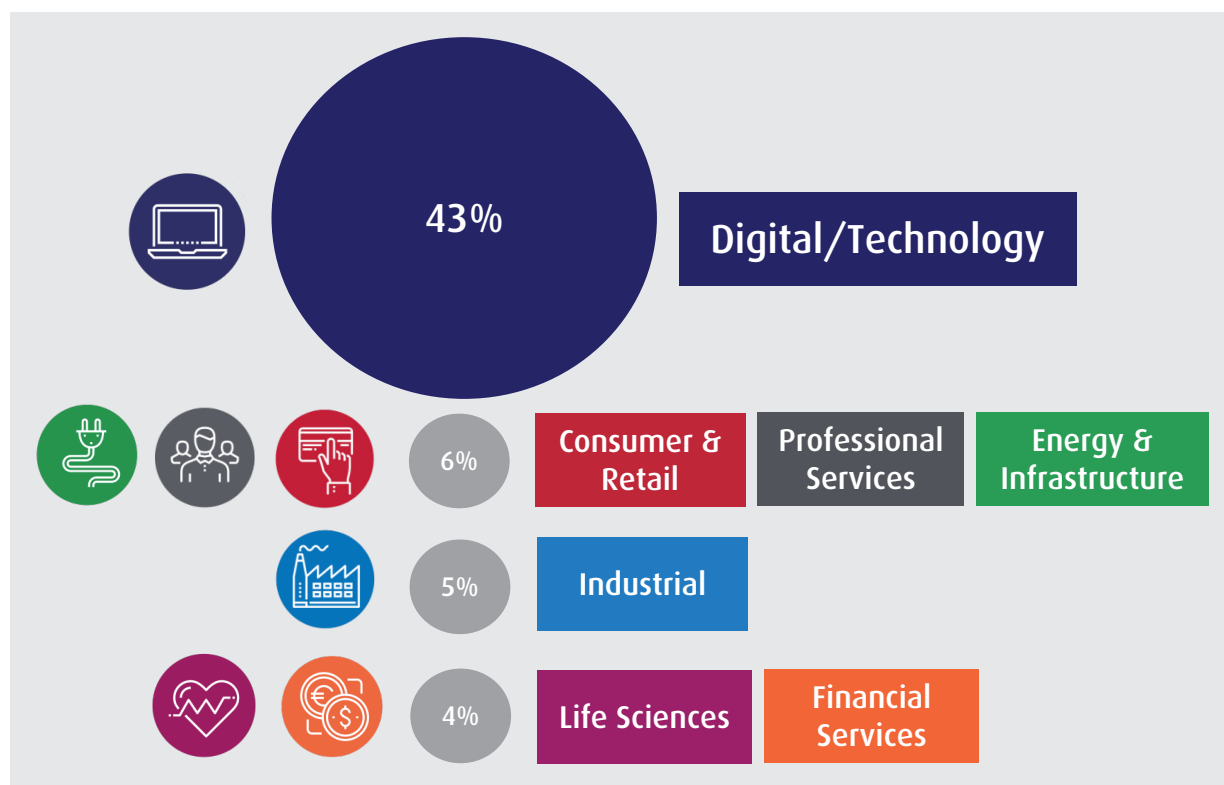
“For every ten requests for functions we receive, around 10% and 20% emphasize a digital profile.... This is because there is little digital knowledge on the Board.”

# Board Members | By Industry



## The gap is widening between tech and other sectors

Digital representation in the tech sector is now nearly 9 times that of other sectors.



In 2015, the penetration of digital competences at board level was 7 times higher in the tech sector than in others. In 2016, the gap widened. One explanation for the sluggish movement is the length of time needed to nominate and integrate board members. The wheels of board governance turn slowly and in some sectors, regulation clogs them even further.

Some senior executives suggested a tendency to buy in digital strategies, by hiring management consultants. This could partially explain the positive change in the professional sector. In 2015 we found no digital presence on the sector's boards, whereas our latest analysis (2016) reveals 6% representation. Whilst the 'buy vs. make' approach certainly gives organizations an expert, objective viewpoint on digitization, it is unlikely to lead to an embedded shift in mindset, potentially putting innovation at risk, or in the worst case, data security and reputation.



# Committees



## Only 3% of Boards feature a technology committee

Traditional committees still dominate the scene

Our analysis spanned 300 Boards of listed companies. Overall we found only 9 official technology committees, in 6 countries. Hence only 3% of the boards analyzed have an official technology committee.

France	Orange
Germany	Deutsche Telekom, SAP
Spain	Santander, BBVA
The Netherlands	ASML Holding
UK	BT Group
US	Wal-Mart Stores, General Electric

■ Newcomers 2017

The rarity of technology committees contrasts strongly with other committees, as shown in the following table.



For C-suite views on the purpose and relevance of technology committees, see 'Committees' in this report.

# 2 Focus on Gender Diversity



# Gender Diversity | Digital is catalyzing progress

## Findings

1

Digitization may support gender balance - and female NEDs

2

Governmental and regulatory intervention are underpinning a general push for diversity

3

Diverse and gender-balanced boards are more inclined to seek digital opportunities

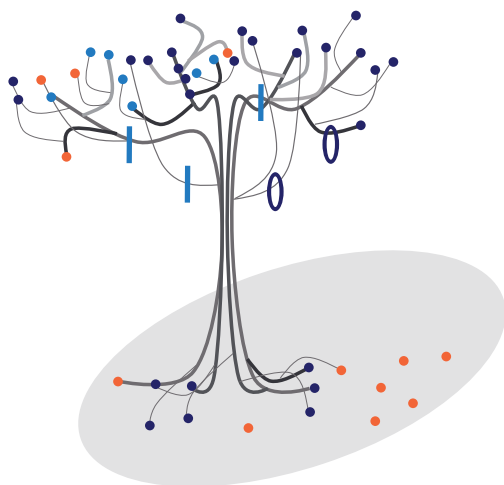
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Diversity is only one of several hiring challenges

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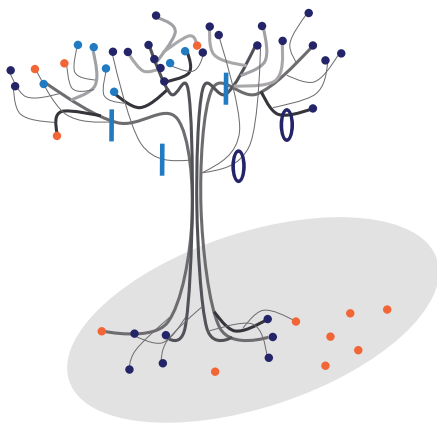
Putting diversity into play can be a winning factor

The hopes of digitization, and its opportunities, often spring from successful young entrepreneurs and startups, more diverse and gender-equal than many of the traditional listed companies surveyed here. Not only is diversity a feature of successful startups, founders often cite the ability to attract a diverse set of key contributors as a key competitive advantage.

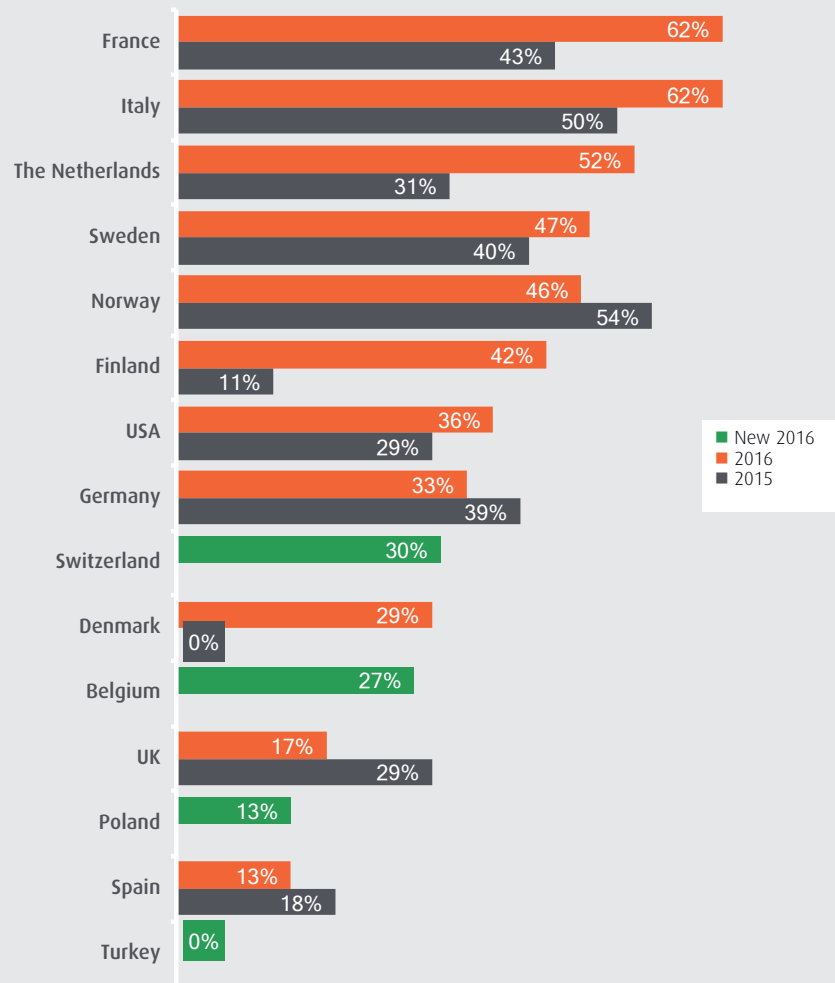


# 1

Digitization may support gender balance - and female NEDs



**Digital/Technology Profiles in Boardrooms**  
Women



Every day, working with clients worldwide, we see successful enterprises adopting the powerful trends of diversity and gender balance that feature in education and the life of modern society. Yet we also know that only 20% of all the people working in the IT sector, (a digital driver) are women. Those who are in place are severely under-represented in decision making positions.



We expect a strong demographic push for diversity and gender equality as new generations take the helm at large corporates, often endorsed by governmental and societal interventions. Some of our more progressive interviewees indicate that they cannot afford to disregard large parts of the talent pool when seeking the best talents - a competitive asset in the tech industry.

This is also why we were extra-pointed in this year's survey and interviews. Can digitization become an accelerator for gender balance and create a career path for female non-executive directors?

We found a significant correlation between boards with tech profiles and a higher degree of female representation. Women now hold 35% of all board positions with a digital/technology profile in the boards surveyed. When we look just at the countries analyzed in 2015 and 2016, we see a significant uptake since last year – from 31% to 40%.

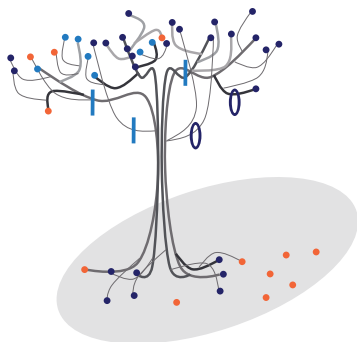
Boards with more digital/technology profiles also have a better gender balance.

France, Italy, Sweden, Norway and Netherlands are in the lead, with around 50% of digital/tech profiles represented by women.

France, Italy, Sweden, Norway and Netherlands are in the lead, with around 50% of digital/tech profiles represented by women. Sweden and Belgium also stand out: all new tech profiles entering boards in 2016 are women. In contrast, Turkey, USA, UK, Spain and Poland are at the bottom of the list, having named no new female digital/tech board members among the 133 new non-executive directors appointed in 2016.

As for the composition of the boards surveyed, of all the 111 digital women appointed non-executive board members, 76% were appointed within the last five years. On average, these women have two less years' tenure on the boards they serve than do their male counterparts on the same boards. In terms of age, this is a very homogenous group, averaging 53 years of both men and women with a digital background, versus 55 years on the entire survey.

Of all the 111 digital women appointed non-executive board members, 76% were appointed within the last 5 years.



## 2

Governmental and regulatory intervention are underpinning a general push for diversity

A July 2016 fact sheet from the European Commission: 'Gender balance on corporate boards: Europe is cracking the glass ceiling' reveals that from 2010 to 2016 the share of women on boards increased in 23 of the 28 Member States. The largest percentage point increases were in Italy (+25.5), France (+24.8), Belgium (+16.1), Germany (+14.6), Slovenia (+14.1), the UK (+13.7) and the Netherlands (+13.2). The EC found that most significant improvements took place in countries that have taken legislative action and/or had an intensive public debate on the issue.

At the time of our survey, only four of the countries we surveyed had quotas for women on the boards of listed and/or large companies: Belgium, France, Germany and Italy.

It is against this background that digital talent scarcity is looming ever larger. Yet an important talent pool is being unexploited and the EU is accordingly pushing ahead hard on digitization governance, gender balance and diversity. In October 2013, in a landmark study: 'Women Active in the ICT Sector', the European Commission found that woman accounted for only 9% of app developers in Europe, only 19% of managerial positions in the ICT and telecommunications sector (versus 45% in other service sectors), and only represent 19% of all the entrepreneurs in this space.

The entry of more women into the ICT sector would boost a market facing a general labor shortage. The EU study signaled that an equal participation of women would boost annual GDP by around €9 billion. As a result, EU recommendations made in 2016 entail increasing the visibility of women in the digital arena, unblocking the directive on equal representation of women on executive boards, and introducing ICT education in early years to inspire girls to develop an interest and talent in the digital field. It is specifically noted that women are severely under-represented in admissions to ICT-oriented higher education, and are over-represented among those not completing their ICT University studies.

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This is the pool from which to draw future leaders and board members: Leaders For What's Next.

It is ever more important for boards of directors to become stronger, more creative company stewards in times of digitization, with diversity and gender balance as a key lever.

In a series of studies, (Women in the boardroom: A global perspective, 3rd, 4th Ed, 2013, 2016) Deloitte has found that much of the impetus for change in boardroom diversity is coming not from shareholders, but from government. This is surprising, since it is generally accepted that diverse viewpoints and experiences are more likely to build stronger, more resilient solutions. Several management consulting firms independently report that board diversity has a positive impact on creating a sense of urgency and effective management iteration, leading to better results.

Reviewing several more sources outside our own, it is clear that it's ever more important for boards of directors to become stronger and more creative company stewards in times of digitization, with diversity and gender balance as a key lever.

### 3

Diverse and gender-balanced boards are more inclined to seek digital opportunities

Our interviewees testify that gender balance and diversity are a key asset to ensure the board brings strong strategic perspectives into play. Recalling that the principal role of a board is to establish a sound and challenging strategy, diversity gives a wider range of experiences and perspectives to draw from.

Diversity and gender balance are increasingly understood to be fundamental for any board. However, despite some progress, many boards are struggling to deliver. Examples where the boards surveyed notice a lack of diversity include digitization innovation work, challenging existing business

models and building new ones. The lack of results in those areas alone sends a signal about the importance of diversity and gender balance. It is also clear from our interviews, and almost without exception, that diversity has a positive impact, that diverse boards work well and are expected to work better, and are more inclined to seek digital opportunities and strategies.

One of the most paraphrased captions from the dotcom years was the emerging internet paradigm: "the best ideas are outside the house". This remains relevant. As digital becomes the new normal, many boards are challenged to tap into unused human capital "outside the house": the capacity and expertise that opening up to diversity provides. Who can afford to turn a blind eye to the large part of talent pools and creative powers today that, almost by design, are to be found outside the boardroom?

It is clear from our interviews that diversity has a positive impact, that diverse boards work well and are expected to work better, and are more inclined to seek digital opportunities and strategies.

# 4

Diversity is only one of several hiring challenges

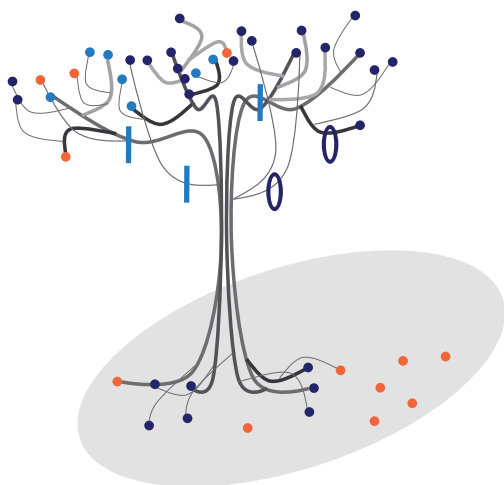
While the succession of board members is highly dependent on the frequency of replacements, a central take-away from our study is the lack of new digital/technology competencies installed in companies in recent years, further fueled by concerns associated with gender balance.

In many of our interviews (see 'Profiles') the core practical and transformational experience of board members is highlighted as a key - and scarce - resource: experience from the trenches, transforming large corporations and building startups, having worked in ICT or telecommunications when they grew up in the nineties.

Several seek young digital managers, and this creates a paradox: the critical experience needed on a board often comes from hands-on stewardship of transformation and challenges. This scarce resource is key to successful board work, specifically as hands-on experience often brings the confidence and ability to share the advantages of digitization, and thus create a vision for the future.

Listening to female digital board members, experience is particularly critical: one of the central challenges associated with being a female digital/technology profile on a board is getting the message through, being understood and earning respect. This, especially in light of the limited number of meetings and interactions. We often get back to the notion that it's ultimately your collective capability and how you work as a board, that make the difference.

One of the central challenges associated with being a female digital/technology profile on a board is getting the message through, being understood and earning respect.



# 5

Putting diversity into play can be a winning factor

The board needs to act as a digital sparring partner to the executive management team and the teams that serve them. To progress, the board must be diverse and balanced in terms of gender, age and experiences.


Our study reveals that many new digital directors are younger and often represent the first females on a board, bringing experiences from completely different company cultures. Given this, new entrants likely need stronger onboarding to ensuring a robust tenure, one in which their impact is captured and maximized.

We believe that digitization is an accelerator for modern leadership and board work. Modern in the sense that boards should consist of the very best resources at hand. Many of the boards surveyed are not there yet, but almost all are taking steps.

Two things stand out during our discussions. Firstly, it's key to construct onboarding that boosts and accelerates the diversity factor. Secondly, to ensure that you provide all board members with a specific coaching role for key executives. Get both of these right, and you put your diversity into play.



# 3 Views from the C-suite



To get the story behind the current status of digitization on Boards, Amrop conducted confidential interviews with 19 board members. Only the minority saw digital as having a primary role in the business. Therefore the findings in this section principally give insights into the playing field for companies where digitization plays a secondary role.

## Satisfaction | Low satisfaction indicates a 'work in progress'

### Findings

1

Organizational structures are fragmented and complex

2

Digital ROI is low, or questionable

3

Boards are struggling with other priorities

4

Digital initiatives have a short shelf-life

5

Digital lip service masks digital illiteracy

6

Realism and patience are the name of the digitization game

Asked how satisfied they were with the state of digital in their business, reactions from our interviewees are – unsurprisingly – mixed. Of the 19 board members who invited Amrop into the digital kitchen, half shared a sense of being engaged on the journey, with much work done, but a long road ahead. A third were clearly dissatisfied with the state of affairs, and hardly any were fully satisfied.





# 1

Organizational structures are fragmented and complex

The experiences of an Chairman in the energy sector show just how difficult it can be to surf digitization when organizations are entangled in complex legacy systems and structures.

With 2.5 million customers to satisfy, the group's companies have until recently operated separate CRM and billing systems. This fragmentation has blocked innovation – there has been no possibility to create products which can be offered to all customers. Customer care also needs to be stepped up. Now the organization faces a major shift to a single system - a huge challenge given the sensitivities surrounding customer service.



We invested in setting up the internal organization. It was fractioned and not aligned. We needed systems linked with systems."

He is, however, resolute: there is a digital plan for 2014-2018, it will be implemented and operationalized, focusing on solutions that bring competitive advantage. Agility is key - the plan is constantly being updated to keep up with rapid technological progress, he tells Amrop.

The media sector has been profoundly affected by digital disruption. For one NED, resolving structural disparities is the essential first step in setting the scene for the next digital chapter - advanced data analytics. "We invested in setting up the internal organization. It was fractioned and not aligned. We needed systems linked with systems..."

# 2

Digital ROI is low, or questionable

The Deputy Chairman of a bank is resisting the urge to rush into digitization, having witnessed the pitfalls in other companies.

The most eager pioneers have incurred huge costs which have yet to create any return, he observes.

Another board member in the financial services sector notes that the organization's mobile banking channel has so far failed to break even. Asked about the challenges related to his board role, another still is having trouble convincing more traditional companies of the advantages of a digital policy in terms of its contribution to results. Skepticism prevails.

Over-eager pioneers have incurred huge costs which have yet to create any return.

# 3

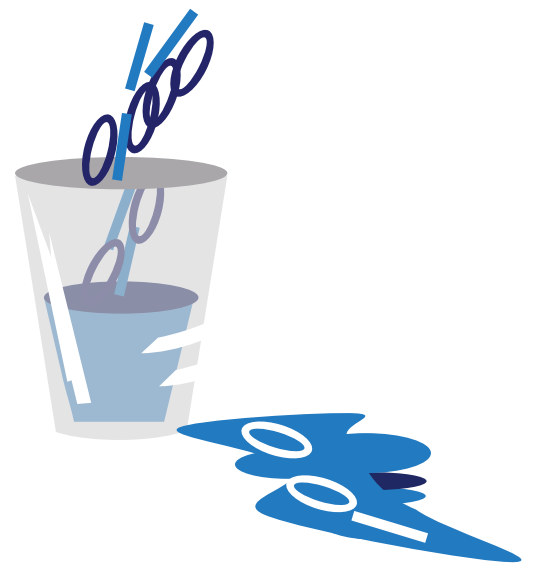
Boards are struggling with other priorities

For one interviewee, who sits on the Boards of three top ten listed organizations, digitization is getting lost in the fog wherever he looks, even if he does see occasional flashes of light.

“Management and board teams are battling with other, more mundane issues. And it’s very difficult to get traction and results with regard to digital. Where I see progress is often in this corner, that solution, this service offering, but nowhere do we have a very clear view on our digital business models and where we want to be in 3 years.”

The Board Chairman of a global packaging company reported that the focus on simply staying alive has pushed digitization off the table.

“We had a knife at our throat and we’ve had to clean out our portfolio, sell parts of the business - the priority has been to survive. Our CEO has been able to significantly improve basic process capability. It’s based on Six Sigma and Lean, implemented in a way that makes us among the top three in the country in quality process capability. It enabled us to get the business side back into shape, the balance sheet back in order and the cash register running again. For the last four years we have been able to actively develop ourselves further, but we have still had to keep the wallet strings tight.”



Where I see progress is often in this corner, that solution, this service offering, but nowhere do we have a very clear view on our digital business models and where we want to be in 3 years.”

# 4

## Digital initiatives have a short shelf-life

Several interviewees confirm a never-ending evolution. When it comes to digital, “good enough never is”.

As the Board Chairman of a multinational sporting goods company puts it: “when it comes to the state of digitization in our company, I’m never satisfied. You can’t afford to feel satisfied because you can always do better. Our company has taken steps in the right direction and it has been evident in our results, but we can always do better.”



When it comes to the state of digitization in our company, I’m never satisfied. You can’t afford to feel satisfied because you can always do better.”

The Deputy Chairman of a bank is dealing with a trio of issues. Firstly, M&A processes are making it difficult to implement changes. Secondly, there have been multiple initiatives over the past eight years. Thirdly, digital has a notoriously short shelf life. Some systems are already obsolete and not worth upgrading - they already need replacing with brand new solutions.

# 5

## Digital lip service masks digital illiteracy

Questions surround the real understanding of digitization at board level, lip service and 21st century clichés may be masking digital illiteracy.

The member of several boards of listed companies tells Amrop: “I’ve heard statements for years now in some of the companies I’m involved in, saying “we don’t want to be the Kodak in our industry.” But on the other hand they’ve been saying that for years and not a lot has changed.” Another board member testifies: “It has become a huge buzzword. Every CEO will say: “we do big data.” Then you ask them: “what does it actually do for you, and how do you think it will have impact in creating products or more revenue?” Every meeting for the last two and a half years, I have asked: “what is our advanced analytics strategy?” ” Presumably, the answer has yet to be found.



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The board member of a leisure goods multinational is also trying to help his organization break free of a suffocating legacy. Even if the sky is visible through the bars of the prison cell, sawing through them is another matter: “If you look at our current position regarding digitization on a continuum, where 5 is the highest level, we are somewhere between 3.5 and 4. What we aren’t yet looking at are our business models... we are still in the traditional business of selling physical products. But this position relates to where we are on a thought level. On a thought level we can stretch ourselves really far, but on an implementation level we are at the very beginning, since we don’t have a digital consumer product out yet. In a way, our company is still a prisoner of its own past.”

Another board member has the opposite view: his organization is over-digitized. Employee phones are now serving as key badges to office rooms, employees using a version of BlaBla carpooling to travel between locations. Supervisory Board meetings, he notes rather unhappily, are now paperless, with board members accessing board documents via a secure page. Such developments are having an impact on organizational culture, and the sheer number of digital applications used by employees is currently too high.

“

In a way, our company is still a prisoner of its own past.”

6

Realism and patience are the name of the digitization game

“

If the digitization picture is often unfocused and leaders cautious in pronouncing themselves satisfied (which indicates that digital is ‘a work in progress’), the journey of some organizations is more purposeful - and systematic.

“In our company, digitization has become a value-creation mechanism but it isn’t a business in itself,” this Board Chairman tells Amrop.

“The most important takeaway in a business such as ours (consumer products) is that digitization enables a direct connection between the customer and us. In a way, it cuts out the middleman. But we’ve always been very technologically-oriented, and a significant share of revenue is spent on R&D. During the last six years we’ve taken steps in the name of digitization. The constantly evolving nature of the business environment makes us move in smaller steps, as there is no point in trying to plan too far ahead. For six years, we’ve been systematically developing our approach on how digitization will impact different functions, starting with logistics and going all the way to digitally-enabled service products or digital extensions to existing physical products, and so forth.”

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## Threats | Organizations are vulnerable - but alert

### Findings

1

Cyber security is a burning red thread

2

Digitization is a double-edged sword and timing is everything

3

Organizations risk drowning in data – with customers going thirsty

4

Regulation is impeding digital progress

We asked board members in 15 countries: “what if any digital disruptions or threats to your business do they foresee?” Cyber security was most signalled as an issue in both the short and long term. But it is not the only problem.

# 1

## Cyber security is a burning red thread

The Board Member of a leading bank told Amrop that his organization had suffered multiple infrastructure attacks. Nor is the situation uncommon for other industries, especially when so many key processes and operations are digitized and provided to end-users through front-end systems such as self-care portals.

Indeed, our interviewees are wondering if any highly digitized organization is invulnerable – making cyber-risk a dangerous side effect of digitization. In most cases, people only notice a breach when it directly affects them. Crucially, breaches are not always clearly visible and may be more widespread than users realize (beyond IT system administrators).



According to a recent report on online security (Menlo Security State of the Web 2016) as many as 46% of the top one million websites are running vulnerable software. Suspected cyber attackers are on average 17 years old. Sadly, young digital natives make for a readily-exploitable 'talent' pool for the unscrupulous.

# 2

## Digitization is a double-edged sword and timing is everything

Some interviewees see potential threats as business opportunities - internally and externally.

Internally, potential vulnerabilities may spur the organization to further optimize and digitize key processes, and innovate. For example, by launching structured innovation projects, setting up Chief Innovation/Digital Officer roles and dedicated Innovation Labs.

On the other hand, offering security-related services may breed further external threats. As the Chairmen of a major bank asked: "how far ahead do you plan to be? Some of our competitors who implemented some digital solutions are currently flooded with claims."



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“

Timing is a very fundamental thing in all of this: it isn't enough to just know what needs to happen next. That's how the opportunity doesn't become a threat and you end up the winner.”

“Disruptions or threats exist for every company out there,” one Board Chairman concludes. “Change is always a threat or an opportunity - every untapped opportunity becomes a threat and vice versa. A key capability is to remain sensitive to emerging opportunities and choose appropriately. In my opinion, digitization doesn't really differ from other changes happening in the world that spread in a trend-like manner. You always have to be able to adapt. Of course, in consumer products, digitization enables a more direct relationship between manufacturer and consumer and that can be seen as either a threat or an opportunity.



Timing is a very fundamental thing in all of this: it isn't enough to just know what needs to happen next. That's how the opportunity doesn't become a threat and you end up the winner.”

3

Organizations risk drowning in data – with customers going thirsty

“

I think our biggest threat may well be the annoyance of the customer, the fact that they can't get quickly enough at their data.

Big data collection and analysis are another important aspect of digitization (and data is vulnerable to attacks). Some board members point out that the sheer volumes of bits and bytes are becoming difficult to process.

A significant disruption for companies internally lies in getting lost in excess data. On the external side, customers may lose patience with a lack of access, as a Board Member from the Financial Services sector explains: “I think our biggest threat may well be the annoyance of the customer, the fact that they can't get quickly enough at their data. We have about five labels and there may be customers that make use of all five for different parts of their insurance portfolio. With our portal at the moment we are not able to show all of that to them.

The other challenge is to make sure that whatever we make available to the customer is understandable and digestible. Because we are also an industry that is still great in writing letters on paper, where frankly, 80% of customers don't even begin to understand what you are writing. But digitization might actually help simplify those things; you can take customers through menus and explain, and maybe there is an opportunity as well. So the threat, certainly in a regulated industry, is that you are moving too slowly towards making it all available. The opportunity might be that by doing so it might become hopefully more accessible and comprehensible for your customers.”

# 4

## Regulation is impeding digital progress

When discussing potential disruptions and threats with board members, some refer to the regulatory environment. According to one, digitization should simplify core processes, but red tape is slowing it down.

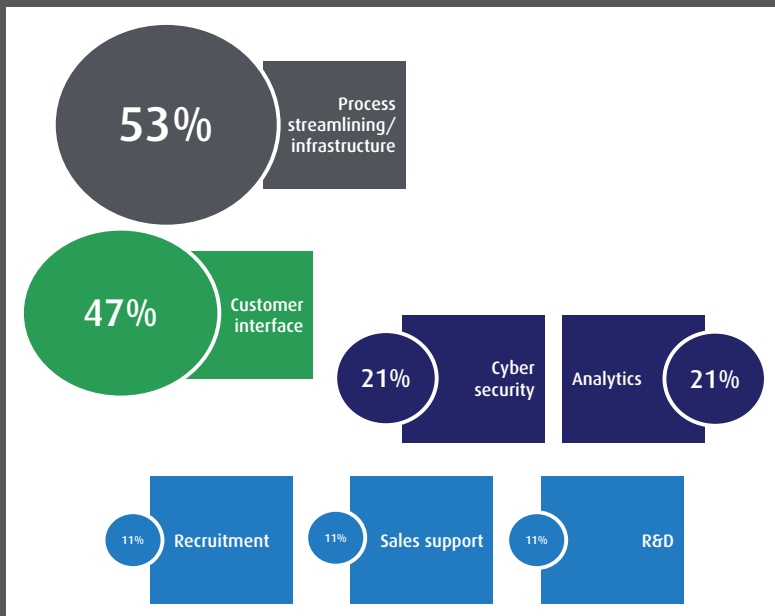
This is especially relevant for banking distribution networks, although the march to installing as many online tools as possible is ultimately unstoppable.

Regulation can complicate the already-difficult search for digital board profiles, as this Board Member explains: "Sometimes it can be a bit challenging to get someone like that... One of my board memberships is for a financial services company - a regulated industry - they need to pass tests. In 2015 I talked to the regulator to see whether they would allow somebody like that to come to the board. Because, clearly if you go for that profile a person may have very limited experience in the insurance business. In other words, do you qualify or not? And would the central bank, very much a promotor of these new technologies, allow somebody to come on to the board then?"

Regulation can complicate the already-difficult search for digital board profiles.



## Investment | Process comes first



Investments dedicated to streamlining processes (often in multiple zones of the organization) are the most-commonly-cited by our interviewees. Areas range from sales support systems to supply chain management, procurement, and general IT infrastructure.

Overall, the pattern has not changed much since last year, and it is clear that organizations are still taking a step-by-step approach to digital.

### Findings

1

Digitization is primarily an operational enabler

2

The customer Interface is a high priority

3

The emphasis is more on exploitation than exploration

4

Business models are rarely in the picture



# 1

Digitization is primarily an operational enabler

The Board Member of a premium oil refiner and petrol retailer cites investment in a range of domains, typifying the multi-targeting approach to processes.

“CRM and communication platforms, Connect – the procurement platform, which solved the transparency problems in all tender processes... PIMS – used for budgeting, strategy, and big data processing - a mighty tool for supply chain management.” However, he sees some evidence of protectionism: “The IT department is trying to block new initiatives, and does not want to transfer the ownership to any other departments, especially in subsidiary companies.” The interviewee even suggests a risk of fraud arising from the IT department ...

For another Board Member, investing in processes is an essential pre-cursor to digitization. “Because all the hard work and heavy lifting are done, and we now have a plan to re-engineer the organizational structure, we are now more ready than we have ever been to start using data science... advanced analytics.”

Surfing the digital waves has transformed this organization into a national pioneer: “Digital infrastructure is one of the main reasons why [our company] has a significant role in the country’s digital transformation, developing and providing digital, innovative services that simplify and improve client services. The investments, following group strategy, are in digital banking for financial services; a new integrated tracking system for postal products; an improvement in operations; integration of processes and innovation of customer experience in physical and digital sales channels; renewing technology at counters and redesigning client interaction with the group with digital platforms (for example mobile Apps, new websites, and so on).”

In a move towards digital centralization, one organization has tackled structural fragmentation by creating a subsidiary company providing IT services to the entire group. First, building the fundamentals and stabilizing measures – defining strategy, process optimization and digitization, optimizing the company’s value chain elements.



## 2

The customer Interface is a high investment priority



Investments are being made to make sure that all of those systems actually are able to generate all of the information to the portal, so that when a customer logs on, they get to see all of the business they do with the group as opposed to only one particular brand."



Digital is the new normal, based on personal needs, customers decide whether to access services via physical, telephone or digital, and it also influences their choice."

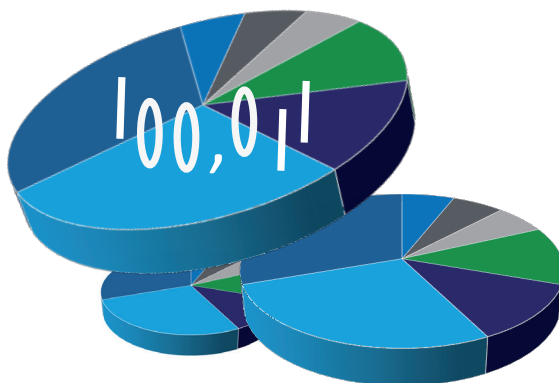
Many reasons underlie the link between digital investment and customer focus: increased connectivity, improving customer care and experience and easing transactions. A high-performing, responsive customer interface yields data, and data analytics are cited by a fifth of our interviewees.

Is improving the customer interface an unavoidable response to market and customer pressure, and is it even a differentiator these days? Customers now expect an agile and responsive digital interface to be a given, as this interviewee admits: "Digital is the new normal: based on personal needs, people decide whether to access services via physical, telephone or digital, and it also influences their choice. To deal with this new demand the organization invests yearly in updating its digital infrastructure, setting up new services and improving existing ones, to be in a position to provide for users who are more and more demanding."

The Board Member of an insurance provider tells Amrop that customer demand for direct contact kicked off a long journey towards a seamless interface. "Once the contact has been established and there is a portfolio of products, [customers] want direct contact with us, as opposed to through the intermediary. So investments make sure that all of those systems are able to generate all of the information to the portal. So that when a customer logs on, they get to see all of the business they do with the group, as opposed to only one brand. We embarked, already a few years ago, on a major clean-up of our whole IT infrastructure. We ran from over 1,500 applications to now around 500, that should come down to another, 100, 150 or so to get much more commonality, so that you can also start to create back office synergies."

### **Cyber-security may be a threat, but investment is not (yet) following**

Cyber-security, as we have seen, is by far the most frequently cited threat associated with digitization. Yet when it comes to putting money behind the problem, only a fifth of interviewees mention specific investment in this critical area. All the more surprising given the focus on the customer interface, which often involves amassing significant amounts of sensitive data.



# 3

The emphasis is more on exploitation than exploration

Given multiple structural issues, it's perhaps unsurprising that innovation is currently taking a back seat in many cases, as this one:

"Most of our investments have been in data center, disaster recovery and customer care (we just redefined the IT strategy/Telecom: platform, treatment of data etc.). More investments have been made in traditional technological aspects, (internal services) as opposed to innovative issues (for example smart grid and distribution of energy). The percentage of investment in innovation is still very low. The digital transformation of energy distribution does not get the attention it deserves - neither from board members nor end-users. We have to heighten awareness."



More investments have been made in traditional technological aspects, (internal services) as opposed to innovative issues."

# 4

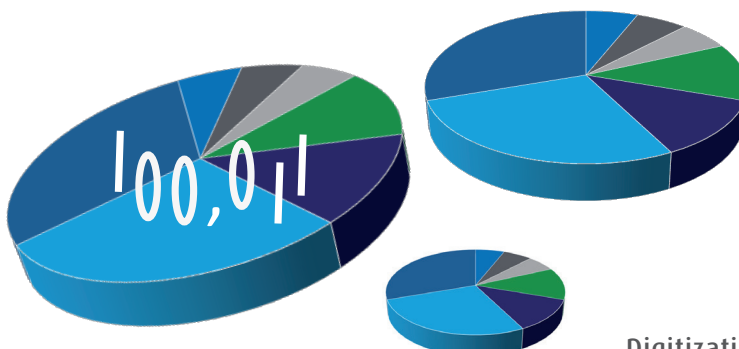
Business models are rarely in the picture

This executive, serving on the boards of several listed organizations, is one of very few who view digitization in the highest terms - re-shaping business models. Again, it all begins with processes.

"What does digital disruption mean for our business models? It's by far the most important question. What does that mean for our infrastructure? To make changes to the business model to adapt to digital aspects you need streamlined processes, an IT environment that supports processes front-to-end. And that is a very big challenge for a lot of businesses, especially in groups or companies who have grown over time through acquisitions, who have not streamlined their processes and IT infrastructure. The sins of the past are now coming to haunt you in light of digital business models."



The sins of the past are now coming to haunt you in light of digital business models. I don't see how you can implement a digital business model without looking at your whole IT infrastructure and streamlining things."





## Board Profiles | Boards face hiring dilemmas – agile thinking can solve them

### Findings

1

Cyber-attacks aside, the stakes are high

2


Safe and experienced hands are needed

3

Boards must resolve the dilemma of youth and maturity

4

T-shaped solutions can be grown from existing, or several, profiles



We have seen cyber security threats and a focus of digitization on operations rather than on innovation or new business models. A step-by-step approach remains the norm. How does this translate into the way boards are digitally populated? As last year, the T-shaped profile is most sought-after, a blend of gravitas, broad business shoulders and digital incisiveness. How and where to find these profiles is another question, and not so easy to resolve. One solution, if the Board can accommodate it, is to bring in more than one profile.

# 1

Cyber-attacks  
aside, the stakes  
are high

If cyber-attacks are one of the biggest threats cited by the board members interviewed, and customer data a core issue, digital profiles also have to grapple with the data flow generated by Industry 4.0.

For the Chairman of a large industrial player, it has been critical to hire a C-suite custodian to leverage data as an advance production warning system.

“There are two big plants and each has its own traditional IT departments and IT managers. I hired a Group CTO responsible for Industry 4.0, interconnecting all the plants and systems, because our major problem is big data. We collect trillions of terabytes from all of the plants, every day, but there are no means or systems to analyze and then take actions. Occasional breaks in production (sometimes lasting a couple of days) cost millions of dollars and could have been diagnosed in advance from this data. Because of the lack of systems, we are facing some breakdowns. This is all what we are working for; to analyze the big data, put it into a management system. We are investing in SAP. We are one of the first in our country to implement it.”

“

Because of the lack of systems, we are facing some breakdowns.”

He doesn't believe, however, that board members need technical studies to develop a vision: “I cannot say my Board members are not digital at all. One was CEO of ING Bank. They also had the system discussions. Like me, although we haven't studied computer science, we can very much develop a kind of vision.”



## 2

Safe and experienced hands are needed

In the main, digital board members are sought who combine technical knowledge with business know-how, gravitas, and the ability to influence fellow board members. It is this 'T shaped profile' that combines digital, context-sensitive, management experience.



The Board Member of several listed companies prefers: "somebody who has implemented a digital business model. Now for the Board role it should also be somebody who has had a P&L responsibility. So you need a combination of both, to bring a little bit of reality into a digital business model. For an Advisory Board role you could very well have somebody who doesn't care about P&L and only cares about content. But at the end of the day you need somebody who can manage both. Because otherwise that person will not be successful in the Board."



Of course people who have worked for technology companies have had some exposure to the concepts, but the capability to challenge Management on issues relating to process improvement through digitization is a completely different issue and requires a much higher level of capability, which one doesn't simply learn by being in the industry."

Another questions the digital knowledge of the so-called 'digital' profile, and is most interested in the skill and weight to positively confront senior peers. "I know a lot of people from technology companies who know very little about technology. They are professionals within their own function in a digital environment but often unaware of recent technologies or digital disruption around the world. Of course people who have worked for technology companies have had some exposure to the concepts, but the capability to challenge Management on issues relating to process improvement through digitization is a completely different issue and requires a much higher level of capability, which one doesn't simply learn by being in the industry."

The Chairman of a leading national bank has hired a CIO/COO from a US competitor to run the digitization agenda and infrastructure decisions. He makes it clear to Amrop that 'business' has to take the lead. Key to success is putting digital applications in the hands of customers and providing basic functions. Yet again, the fundamental need, when it comes to NEDs, is gravitas.

For the Board Member of a major oil refining business, the CDO may come from another industry, such as telecommunications, but this would not give the new hire a real grip on what is a complex business, and ultimately, an engineering company. As such, the Board needs engineers with corporate experience in order to develop their business.

# 3

Boards must resolve the dilemma of youth and maturity

A trend is emerging towards tech talent complemented by the track record of a mature business heavyweight. But this is creating dilemmas for hiring organizations.

The Deputy Chairman of a bank is looking for an engineering or technology background, combined with consulting experience and people management skills. Another interviewee would prefer manufacturing industry experience, especially with competencies in implementing IT solutions in that specific industry.



Though I try my hardest to keep myself up to date and be at the cutting edge, it's hard for me to keep up and I don't have enough time."

Meanwhile the CEO of a national postal service told Amrop: "I can give an example from another board where we are searching for a digitization expert. We had three candidates, all equally competent, but one was about 10 to 15 years younger than the other two and I ended up recommending the youngest. I have a hypothesis that technological change has been so big that the younger generations are much more accommodated to these technologies and use them much more than the people of my generation do. Even though I try my hardest to keep myself up to date about emerging technologies and tools of communication and be at the cutting edge, it's hard for me to keep up and I don't have enough time."

Herein lies the challenge – if other interviewees raise the need for digital expertise to blend with board level gravitas, one interviewee questions whether younger profiles would even be interested. "My hope is that a younger Board Member would be in closer contact with these latest and greatest technologies and tools. This also poses a great challenge to the Boards, as they need young people who might not have the experience, but do have information. The real question is, where do we find this know-how and talent?



There is such a small number of people with relevant competence, and those cutting-edge individuals won't move – they work for companies such as Supercell. Alternatively they would rather live in their own micro world and thus these management or board roles aren't interesting to them."

We've been recruiting, used headhunters, and these people just cannot be found. It's not a matter of compensation, but a matter of no people matching the profile. The problem in our country is that there is such a small number of people with relevant competence, and those cutting-edge individuals won't move – they work for companies such as Supercell. Alternatively they would rather live in their own micro world and thus these management or board roles aren't interesting to them. So it's a supply-demand-availability related problem."

Boards also face a trade-off between startups and corporates as a talent source. As one board member told Amrop: “whilst experience with startups is valuable, it must be complemented by experience in large companies - Financial Services, Telecoms, Cyber Security - people who are up to speed with the regulatory issues and large-scale information systems and who also have an international profile. Pure digital experience garnered in marketing or sales is just not enough.”

## 4

T-shaped solutions can be grown from existing, or several, profiles

### Digital board members can be grown inside the company

One board member reports that his Director of Human Resources has created a central unit to spur innovation within the different businesses. He also has an answer for the Board Member frustrated in his attempts to secure external talent. “We’ve invested heavily in internal training. I am taking my entire Management Team to Silicon Valley and we’ll participate in Stanford’s digital training. We will try to absorb everything we can. I’ve also sent members of the management team to trainings abroad, and other similar efforts. These are big investments, but at the end of the day, it’s better than trying desperately to find talent externally as it is in such scarce supply. The key takeaway is that companies need to invest in training related to digital understanding and raise the level of know how significantly. This concerns the CEO, the management team and the Board. The competences need to be built systematically.”

### A T-Shaped profile can be composed of more than one individual

For the Board Chairman of a food packaging company it is pointless to expect one individual to unite multiple – even conflicting - competencies. “I don’t think that bringing one single technology profile into the Board is the ultimate solution. The companies that really need some deep technology knowledge - heavily technology-focused - might benefit from a digital profile in the Board. But even then, the other people already in the Board should also possess that know-how. It’s not the responsibility of one person. Just one digital native will not be enough to bring the impact, there is not enough gripping surface, which is why digitization needs to be brought in from various directions.”



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I am taking my entire Management Team to Silicon Valley and we'll participate in Stanford's digital training. We will try to absorb everything we can."

Another Board Member is thinking along similar lines - with the proviso that the board has to be big and well-resourced enough to accommodate more than one new member: "First of all it is extremely helpful, if not, mandatory these days to have someone with that kind of background in the Board. First, they are a board member and secondly they may have an area of specialization, or are more focused... An IT expert in my view is somebody with a somewhat different profile from a more e-commerce or digital type. Depending on the sort of company you may want both profiles but that maybe depends on how large the board is." He continues: "you also need to transfer [your] vision of digitization into what can be done and how. And especially the 'how' might be the additional attribute you would need. And again, you need to be able to afford it."

### Should the CDO be programmed for extinction?

Referring to his organization's recent CDO hire, the Board Chairman of a leisure company tells us: "It is above all, a transformation job: the faster the role becomes extinct, the better we have succeeded. The idea is that the need for a CDO disappears as everything, including digitization, becomes mundane. And although we now have a CDO and it signifies speeding up the digitization process, the overall investments into digitization haven't increased. It's more about resource agility, meaning that the goal is to make existing internal resources and tools match newly-developed digital equipment and products. Technologies, digitization and the associated mindset are transforming the entire business and that's why it's good to have a sort of headline, in the form of a CDO, act as the person who's responsibility is to coordinate the whole thing."



The idea is that the need for a CDO disappears as everything, including digitization, becomes mundane."





## Committees | Questions surround the relevance of a Technical Committee

### Findings

1

The big picture has to precede committees

2

Other committees are already doing the job

3

Digital is bigger than one committee

4

Digital is a management task



Spanning 300 Boards of listed companies, our analysis surfaced only 9 official Technology Committees, in 6 countries – in other words, 3% of the boards analyzed. Their scarcity contrasts vividly with the far wider presence of other committees. For several board members, a further committee would be superfluous to requirements.

# 1

## The big picture has to precede committees

For the Board Chairman of a packaging multinational, committees largely depend on a company's situation, culture, and the balance between the capabilities of Management and the Board.

However, strategy comes first: "When thinking about how to best develop digitization further in an organization, you have to look at the big picture and think it through before you are even able to estimate whether it is being done in the right way.

After you've thought through the components of the current situation, know-how, capabilities, available time and current priorities, you can start to think about the best way to get to the next level with digitization.

The question should be: what different ways have created the best impact to drive digitization forward? It would be interesting to find out the different ways companies have managed to get good results. It would also require knowing the environment they've worked within to understand which parts can be learnt from and adapted to the use of your own organization."



When thinking about how to best develop digitization further in an organization, you have to look at the big picture and think it through before you are even able to estimate whether it is being done in the right way."

# 2

## Other Committees are already doing the job

Several interviewees saw no need for yet another committee, distinct from other committees which are already capable of addressing digital needs.

"I would not consider it a good idea to have a separate committee," said the Board Member of a bank. "I think it would be duplicating things instead of making things more efficient. I would much rather have advisory boards." Another is of the same mind: "I believe we need an innovation committee (without calling it digital or strategic) as it could integrate innovation with business, permeating from all sides. Innovation should not be separated."



Innovation should not be separated."



We have a Risk Committee, and given that digitization and IT is part of your risk profile, it does mean that IT shows up in the Risk Committee. It comes on the agenda of the Audit Committee as well, which is more about effectiveness. And sometimes therefore there is also an challenge, what belongs to Risk and what belongs to Audit?"

For other Board Members, a Technology Committee would simply duplicate the remit of innovation and strategy bodies, as in this case: "We had a phase at SAP when we just had a Technology Committee but about four years ago we combined it with Strategy and now it's a Technology and Strategy Committee. That was a really good decision, because observing technology separately from strategy would mean circulating among too narrow, technology-based issues.

When technology was combined with strategy it formed a good whole, as technology was continuously linked back to the strategy. It is not always easy for the Board to understand the significance of technology alternatives if the issue isn't linked back to the layer that has been built and agreed-upon in a strategy context. Someone needs to build the logic between the agreed steps.."

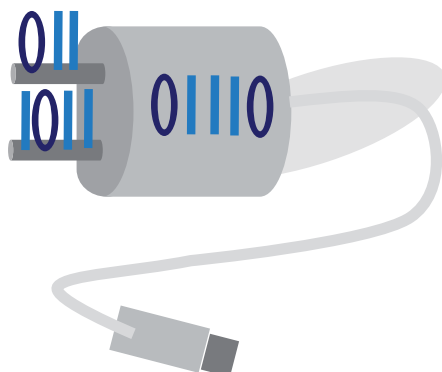
He is not alone: "The Board remains focused on Strategy with Committees 7-12 times a year and does not see any necessity of creating a full time Technology Committee for the time being."

For technology-based companies, technology and risk (and the corresponding committees) go hand-in-hand. This financial services organization is one example: "We have a Risk Committee, and given that digitization and IT is part of your risk profile, IT shows up in the Risk Committee. It comes on the agenda of the Audit Committee as well, which is more about effectiveness. And sometimes therefore there is also an challenge, what belongs to Risk and what belongs to Audit? In a Financial Services company, risk is more forward looking and audit a bit more backward looking."



"The Technology Committee at SAP was justifiable as the company is so dependent on the technologies and they involve great risks.."

SAP, similarly. "The Technology Committee was justifiable as the company is so dependent on the technologies and they involve great risks. One needs to understand what decisions are made, what technologies are chosen and their potential risks, the investment dimensions."



# 3

Digital is bigger than one committee

On the other hand: “regarding Digital Committees, I don’t think anyone should have one”, says the Board Chairman of a multinational leisure company. “I think it’s actually rather stupid to have one. Digital and technology are parts of normal business, not some separate function.”

For another: “you must really look into the company at hand since the things affecting the decision are so nuanced and delicate and it’s all about finding that balance between the Board, the CEO and the rest of the Management. One size doesn’t fit all... To have just one dedicated committee is a bit too narrow, too structured and a bit of a boring way to look at it.”



To have just one dedicated committee is a bit too narrow, too structured and a bit of a boring way to look at it.”

A similar view came from this Board Member: “What single thing relating to digitization would require establishing a committee? Digitization is after all an overbearing thing, which impacts everything the company does: people, processes, ways of working, manufacturing, information etc. So it’s not something you can encapsulate and define.”

# 4

Digital is a management task

One board member insisted on separating ownership, governance and management. These are “three separate disciplines and shouldn’t be confused with one another.”

He explains: “In ownership, there is typically no need to do anything with a digitization angle. On the other end of the spectrum, Management need to deeply understand the changing environment, including the changes created by digitization. And finally, the job of the Board is to appoint a CEO, prepare and accept the strategy and oversee that the strategy is aligned with operations, and ultimately to make sure the company operates in accordance with the law.

There is no point in putting up a Digital Committee because it simply isn’t the Board’s responsibility, it’s Management’s responsibility... the Board can support through asking questions and in that way steer Management’s preparations regarding strategic topics, such as technology and digitization, back to the Board’s agenda. This is especially the case in companies that aren’t originally technology-focused. Digital committees in such companies are currently scarce, as building a bridge between the topics handled in the Committee and the Board’s work is challenging.”



There is no point in putting up a Digital Committee because it simply isn’t the Board’s responsibility, it’s Management’s responsibility.”

# Credits

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Sincere thanks go to the board members who took the time to share their insights and experiences with Amrop.

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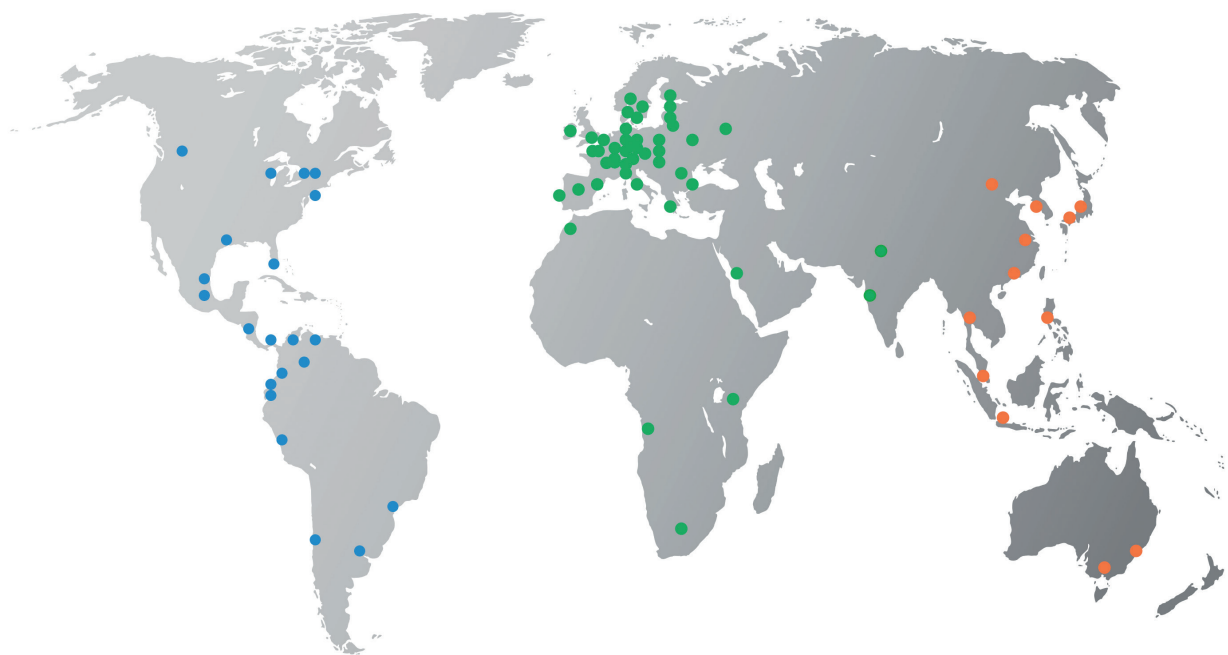
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