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DEAR READER,

Welcome to edition 52 of the Capco Institute Journal of Financial Transformation.

Transformation has been a constant theme in our industry for several decades, but the events of 2020 have accelerated change in employee working patterns, and in the very nature of the workplace itself. This Journal examines three key elements of these new working paradigms — leadership, workforce, and organization.

As we explore in this edition, a key part of any firm's transformation agenda centers around digital leadership and how to tackle the novel challenges created by changes within organizations and society. Leaders need advanced organizational skills to build teams that use digital technologies, as well as to inspire millennial workers who have grown up in a digitally transformed world. They also need deeper technology skills to lead, and a broader understanding of the ethical paradigms introduced by the challenges created through new technologies such as Al. These enhanced skillsets will help today's leaders and their teams fully realize the benefits of new working models.

The topics reviewed in this Journal offer flexibility for employees, increased agility for teams, and a combination of both for organizations. When supported by the right technology, these can create collaborative, outcome-driven environments. Through the resulting remote or hybrid models, organizations can transform their workforce and operations to boost productivity, cost effectiveness and employee engagement, while enhancing resilience and customer experiences.

As always, our contributors to this Capco Journal are distinguished, world-class thinkers. I am confident that you will find the quality of thinking in this latest edition to be a valuable source of information and strategic insight.

Thank you to all our contributors and thank you for reading.

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Lance Levy, Capco CEO

DIGITAL LEADERSHIP: MEETING THE CHALLENGE OF LEADING IN A DIGITALLY TRANSFORMED WORLD

NELSON PHILLIPS | Professor of Innovation and Strategy and Co-Director, Centre for Responsible Leadership, Imperial College Business School, Imperial College

ABSTRACT

The digital transformation of organizations and society has created a set of novel challenges for leaders. To succeed in this new context, "digital leaders" require new competencies: new technological competencies to lead in organizations where digital technology is inextricably embedded in everyday activity; new organizational competencies to build and lead teams that can utilize new technologies as well as inspire millennial workers who have grown up in a digitally transformed world; and, finally, new ethical competencies to navigate the ethical dilemmas created by the introduction of digital technologies in their organizations. Developing "digital leaders" is, therefore, a key part of the digital transformation of any firm and a failure to develop digital leadership at all levels will limit the impact of even the best planned and executed efforts at digital transformation.

1. INTRODUCTION

A quick internet search on "digital transformation" vividly reveals the extraordinary level of interest in the impact of digital technology on organizations and society, and the wide range of opinions about what digital transformation is and what its impacts might be. Adding "COVID-19" to the search further reveals that many commentators believe that the recent pandemic has accelerated digital transformation. As Microsoft CEO Satya Nadella famously observed, the COVID-19 pandemic has driven "two years' worth of digital transformation in two months" [Green (2020)]. While some of this is certainly hype, there also seems to be a genuine shift happening that deserves attention.

In this article, I argue that the ramifications of digital transformation for leaders at all levels in firms are significant and complex. I begin by focusing on what digital transformation is at a societal level — and why we use the term "transformation" for what is happening — and then focus on some of the leadership challenges digital transformation creates within firms. My goal is to highlight the challenges

and opportunities that digital transformation presents for firms and at least partially explain why it is the focus of so much recent attention in the business media and among academics and consultants.

I then focus on a topic that I believe is critically important for organizations of all kinds: the need to develop leaders who can lead effectively following the digital transformation of their organizations. Firms are spending billions of dollars on digital transformation efforts, but surprisingly little on developing leaders who can exploit the resulting opportunities to improve existing systems and processes, and, even more importantly, to do entirely new things. From my experience working with companies from multiple industries, firms often fail to reap the full benefits of their investment in digital transformation because they fail to spend time and resources on developing the digital leaders necessary to take these transformed organizations forward. As Raskino and Waller (2015: 107) warn "[e]very leader must become a digital leader because every company is becoming a tech company". In other words, new leadership competencies must be developed for leaders

to successfully lead in this challenging new environment or firms risk failing to achieve the potential gains of digital transformation.

It is also important to point out that while much of what I will argue applies to firms in general, and even to other forms of organizations such as departments in government or not-forprofits, at points I will focus more narrowly on financial services as some of the details of my argument vary by industry. For example, my discussion of digital transformation applies broadly as does my claim that new leadership competencies are required for leaders to successfully lead in digitally transformed organizations. In addition, the broad categories of the new leadership competencies also apply broadly. However, the specifics of the new leadership competencies required will differ from industry to industry and from firm to firm within an industry. So, while I provide a framework for thinking through the new leadership competencies that need to be developed following the digital transformation of a firm, more work will need to be done to develop an appropriate competency framework for a specific firm.

2. WHAT IS DIGITAL TRANSFORMATION?

When I speak on this topic, audience members are often surprised when I say that we are only in the earliest phase of the profound changes that digital technology will bring to society. This is not to say that digital technology has not had a significant impact on society already. But, like all technological innovation, "we invariably overestimate the short-term impacts of new technologies and underestimate their longer-term effects" [Collins (2010)]. While much has happened, much more is yet to come, and the rate of change is accelerating. So how should we think about digital transformation and what is yet to come?

2.1 The digital transformation of Western society

Let us begin at the beginning: what is digital transformation? The term seems to be everywhere at the moment and sometimes it seems that anything and everything can be described as digital transformation. But digital transformation is not about new devices and new apps — although those are some of the causes — and it is not about the first trillion-dollar corporation or the way Amazon has changed the way we shop — although those are some of its effects. Digital transformation is, fundamentally, about how digital technologies are changing the way humans communicate and interact, and in doing so driving fundamental change in society, in firms, and, most fundamentally, in what we are as human beings.

Let us begin with the digital part of the term. The digital part of digital transformation refers, of course, to the process of encoding information in ones and zeroes. But the "digital" in digital transformation refers to more than just the simple encoding of information; it refers to the process of virtualization where existing activities increasingly move from the material world to the digital world, and make new activities possible in the process. As an example, think of retail banking, which used to take place in physical buildings – financial transactions involved a visit to your bank - and involved talking to people working with paper files and ledgers. Now, most retail banking takes place using an app on a smartphone and even a visit to a physical bank will lead to a bank clerk rapidly digitally encoding the information you provide in order to conduct the transaction in the "virtual bank". Pen and paper routines have been virtualized and the workers largely replaced with microprocessors and the internet.

But what about the "transformation" part? Calling something a transformation is a strong claim, so we should be sure that the situation we find ourselves in at the moment deserves the label. I find it useful to think about a previous period of profound change in society that was also characterized as a "transformation". The period I am referring to is, of course, the industrial revolution. In fact, Polyani and MacIver (1944) called their famous book on the industrial revolution *The great transformation*, specifically to try and capture some sense of the depth, rapidity, and pervasiveness of the change that occurred during this period.

So why did Polyani and MacIver refer to the period around the industrial revolution as the "great transformation"? Well, for several hundred years before this period of rapid change, the basic way of living in Europe was relatively stable. There were wars, national boundaries shifted, kings and queens came and went, but the life of the average person changed little. Grandparents and grandchildren led lives that were, in most respects, indistinguishable. What people ate and drank, the houses they lived in, how they were educated (or not), the way they worked, and the way they went about their days, was largely the same. Grandparents and grandchildren would have found most aspects of each others' lives unremarkable and familiar.

Then something momentous happened. In a generation, new ideas, new technologies, and new ways of living swept across societies, organizations, and individual lives in Europe and around much of the world. Work became something you did in an office or a factory, education became widespread,

the newspaper appeared, followed by the radio and then the TV, and the vacation was invented as the nature of work shifted. Society, organizations, and the lives of average people were fundamentally changed. Grandparents found the lives of their grandchildren unrecognizable and, in many cases, incomprehensible. It was, as Polyani and MacIver contend, a "great transformation". Western societies changed fundamentally, driven by new technologies and new ways of thinking, and things were never to be the same again.

The transformation that is underway at the moment is, arguably, another of these shifts. Digital technology - and particularly the internet - have transformed the way of life of billions of people. We are now connected and enabled in ways that would have been unimaginable even 10 years ago (remember, the iPhone was only introduced in 2007). A process of virtualization of activity has occurred that has fundamentally changed how we live, work, learn, and interact with each other. Try to imagine doing your job without a computer and the internet. Imagine life without Amazon, Google, Uber, and AirBnB. For better or worse, the internet and digital technology of all kinds have transformed work, education, and leisure in fundamental and irreversible ways. There has been a transformation of society once again, and the lives of grandchildren are again unrecognizable to their grandparents. The digital banks that I discussed earlier are open 24 hours a day, a bank transfer now takes seconds, and you can pay for a taxi with your smart phone. What would your grandparents have thought of that?

But, while what has happened so far is clearly pervasive and profound, the process of digital transformation is just beginning. While the internet, and the devices that connect to it, like the personal computer and the smart phone,¹ have transformed society, we are now on the cusp of the next phase of transformation driven by other digital technologies like the Internet of Things, robotics, and cloud computing that will accelerate and deepen the digital transformation of our society and the combined impact of this change will make the way we work and how organizations function unrecognizable. We will, in two generations, have gone from a society without digital technology, to a digital society.

This transformation has brought both great opportunities and great challenges. And, just as the transformation that occurred

around the industrial revolution fundamentally impacted leadership,² this transformation is also challenging us to rethink leaders and leadership. The old leadership competencies are not disappearing, but new ones are appearing. Leadership following digital transformation is even more complex and demanding and leadership development in firms must adapt to include developing these new leadership competencies to create leaders to manage the new challenges and opportunities that arise in firms following digital transformation. Let us turn to those now.

2.2 Digital transformation and firms

While digital transformation is exciting and presents many opportunities for firms, it also presents a number of challenges. First, and most obviously, digital transformation is, above all, a process of disruption [Christensen et al. (2015)], where traditional technologies and business models are being disrupted by new, digital offerings that often start out appearing to be low quality on one or more traditional measures, but have something that is found to be highly attractive to groups of customers whose needs are underserved by the traditional offerings of an industry. However, this new digital offering then improves quickly on traditional measures of quality and becomes a viable alternative for core customers, but one with new, added advantages. Suddenly, traditional market leaders find themselves left behind and with little that they can do to regain their positions. The nature of this process, how to spot the possibility of disruption before it occurs in an industry, and what to do in response, is a key challenge facing many incumbent firms as their industries are disrupted and as companies who were never thought of as a competitor start taking away customers.3

Second, while the ability to manage diversity has been a core success factor in most organizations for decades, the social change driven by the digital transformation of society, combined with the trend to working later in life or returning to work after a period of retirement [Gratton and Scott (2016)], makes managing generational diversity in organizations an increasingly important organizational competency [Knight (2014)]. The divide between the generation born into a world where digital technology is ubiquitous – digital natives – and the generations born before the arrival of the internet – digital immigrants – is particularly critical [Prensky (2001)] and

¹ Software is, of course, integral to these devices and is a critically important part of this story. As Marc Andreesen famously said, "Software is eating the world" (https://bit.ly/2Spfq2C).

² Max Weber, in one of his most influential articles, argues that the social processes that underpinned the industrial revolution also produced a new kind of leader based on a new kind of authority – the rational-technical leader who was fit to lead in the new bureaucracies that appeared with modernism [Weber (1958)]

³ Imagine you are a successful producer of street maps in Hungary in 2004. Is Google included in your mental map of competitors?

requires both sensitivity to the differences between these groups and new skills to not simply successfully manage this new dimension of diversity, but to gain advantages from the cognitive diversity that this divide brings to groups.

Third, to flourish following digital transformation firms need to develop a culture that supports and celebrates the value of experimentation and where teams who learn by running well constructed experiments can flourish. In a world of increasing uncertainty characterized by ever greater rates of change, experimentation becomes the primary mode of exploring options where information is either expensive or impossible to get [Reis (2017), Hampel et al. (2020)]. But this means that firms need a culture that supports experimentation [Pisano (2019)] and leaders skilled in helping team members put together experiments that test useful hypotheses about internal or external customers or the wider business context while minimizing the cost and risk attached. This is often a method that is diametrically opposed to the information gathering and analysis approach that leaders have mastered over their careers and feel comfortable using.

Fourth, firms will need to become adept at using new digital communication channels to engage with digital natives effectively and leverage the possibilities of the cloud-based tools available for enhancing team interaction and collaboration. Digital tools like Slack and Teams were revolutionizing how teams worked together before the pandemic and this has only been accelerated due to many employees working from home over the last six months. However, we are only at the beginning of this process and much more is possible as these tools improve, and new tools appear. This also means that leaders must ensure that less enthusiastic employees understand why they need to keep using these tools when they return to the office, ensure they know how to use them effectively, and that they develop habits to engage in the resulting revolution in ways of working. Social media tools such as Whatsapp are also important to engage with digital natives and firms have opportunities to connect with their employees, suppliers, customers, and others through these channels in new and exciting ways.

Finally, there are many challenging new ethical issues that digital transformation creates for organizations. Firms must answer the question of what acting ethically means in an organization that is increasingly virtual, exponential, and networked? Discussions of business ethics in firms, therefore, need to be expanded to include an explicit discussion of

cyberethics [Spinello (2010)]. For example, machines are increasingly making decisions in organizations and doing so in ways that can be difficult or even impossible to unrayel. What does it mean when some of the key decisionmakers in the organization are machines? How should firms keep track of where machines are making decisions and put in place checks and balances to ensure that fairness and the ethical principles of the organization are observed? Equally, new technologies allow the collection of huge amounts of data, but what sorts of analytics can be used on this data before the values of the firm are threatened? This will require firms to develop clear ethical principles for dealing with cyberethics based on an understanding of the ways in which digital technologies are transforming the organization. Digital transformation is, therefore, not just about implementing digital technologies. but also about rethinking the values and ethics of the firm to match the new reality of the digital organization.

3. THE NEW DIGITAL COMPETENCIES

In leadership development, it is common to talk about "leadership competencies" [Conger and Ready (2004)] and I will use this idea here to structure my discussion of digital leadership. Leadership competencies are simply the skills and behaviors that leaders need to successfully navigate the challenges they face in their organizations. But just to be clear, my intention is not to provide a definitive list of the new leadership competencies, but rather to start a conversation about what new competencies leaders need in a digitally enabled world that is networked, exponential, and virtual, and what this means for leaders, for leadership development, and for organizations that need digital leaders.

3.1 Leadership competencies

What makes a leader effective? At a general level, this is not, of course, a new question. The search for the key to leadership success has been a human preoccupation for thousands of years. Early discussions focused on the characteristics of "great men"⁴ such as Genghis Khan or Napoleon. By studying these individuals, observers hoped to divine the secret of their success. This approach became more systematic with the development of social science and the appearance of leadership studies. Using social science methodologies, early attempts were made to find a common trait or traits that might predict leadership. These efforts failed, however, and the search continued for a way of understanding leadership success.

⁴ The gender bias in this term is reflective of the focus of these early discussion. They were, sadly, focused almost exclusively on men.

Figure 1: Some common leadership competencies

ETHICAL REASONING	CONFLICT MANAGEMENT
INTERPERSONAL SKILLS	DECISION MAKING
COMMUNICATION SKILLS	POLITICAL SKILLS
PRUDENCE	INFLUENCING
COURAGE	AREA EXPERTISE

Eventually, leadership scholars and practitioners settled on the idea of leadership competencies — skills or behaviors that contribute to leadership success — as a simple organizing idea to understand why some individuals move up in organizations while others do not. A number of competencies have been singled out as particularly important for leaders (see Figure 1), including things like influencing, prudence, and courage. And one bundle of these competencies — emotional intelligence — has proven to consistently predict success in moving up the ladder in large companies [Goleman (2004)].

However, while various leadership competencies have proven to be important for leadership success across many firms and industries, what research and practical experience is increasingly showing is that although these well-known leadership competencies are still important, they are no longer enough once organizations are digitally transformed. This does not mean that these traditional competencies are not important, but simply that there are new ones that leaders must develop to lead effectively in digitally transformed organizations. Without these new leadership competencies, leaders can no more expect to be successful than leaders without traditional leadership competencies can expect to be successful in traditional organizations.

3.2 Technological competencies

Let us begin with what I call the new technological competencies. By this I mean the basic knowledge that leaders need to understand the digital technologies being introduced into the firm and their impact on the organization and broader industry. From my experience, three technological competencies are particularly important.

First, leaders need basic **technological literacy** to effectively lead organizations following digital transformation. This is in many ways the most straightforward of the technological

competencies and in many organizations considerable progress has been made on developing this competency. The goal here is not to make leaders into technology experts, but simply to familiarize leaders with the main technologies that are driving digital transformation and to make sure they feel comfortable talking about these technologies and engaging with experts and their followers around decisions and investments. As an HR Director in one of the companies I worked with observed pithily, "leaders don't need to be experts, but they need to know enough to be able to spot when what an expert is saying is B.S.!"

Using financial services as an example, all leaders in financial services at all levels need to have a basic understanding of four digital technologies that are transforming the sector: blockchain, cloud computing, big data, and artificial intelligence. It is not enough that "experts" in the firm understand these technologies, all leaders must have a basic idea of how they work and what they do for their use to become ubiquitous and transform the everyday work of the organization. It is middle managers that innovate new business processes and they need to know what these technologies can do in order to see the opportunities for their use. It is critically important that senior leadership identify the technologies that are important for their firm, and then ensure that all leaders at all levels are functionally literate in terms of these technologies just as they must be in terms of accounting, finance, and people management.

Second, leaders must have a **disruptive mindset**. Digital transformation is, above all, a process of disruption where traditional technologies and business models are "disrupted" by new, digital offerings. Without a disruptive mindset across the firm to drive disruptive innovation, market leaders will find themselves disrupted by others with little chance of regaining their positions. The nature of disruption,

how to spot opportunities to be the disruptor, and how to spot disruptive threats in the environment, all need to be widely understood by leaders in organizations if the firm is to have any chance of surviving the digital transformation of their industry.

Third, leaders need to understand the idea of a platform business model and have a basic understanding of **platform** strategy [Gawer and Cusamano (2002)]; they need to be platform strategists. Platform businesses are a common feature of digitally transformed industries that fundamentally change the dynamics of the industries in which they appear. Think of the effect of Booking.com on the hotel industry. Booking.com is a digital platform that has successfully inserted itself between the hotels and their guests in a way that is highly disruptive for incumbent hotels. When this happens, industry dynamics, strategy, and key success factors all change in ways that need to be understood by leaders across the organization if they are going to make the right decisions and ensure the organization thrives in the new digital world that follows the digital transformation of an industry. And this knowledge can not only reside in the minds of key experts or top management; it must be distributed throughout the firm.

3.3 Organizational competencies

In addition to the basic technological competencies that underpin digital leadership, there are also some new organizational competencies that successful leaders require. Rather than the more technical knowledge-based competencies that we have discussed so far, these are more about managing people and creating the organizational context for success during and after digital transformation. I will discuss four that I have found to be of particular importance.

Ironically, one of the most significant impacts of the introduction of digital technology into the workplace is that the need for a **coaching style of leadership**. While it may seem ironic, the more digital technology that enters the workplace, the more leaders need to be coaches rather than managers. Their job becomes more about development and motivation, and less about direction and decision making. The fact that they are leading teams of experts who often know much more about the technical task at hand intensifies this change. Digitally transformed organizations need the full engagement of a highly educated workforce who are motivated by leaders who are excellent people managers and can help them to contribute at the highest level and develop along paths of their choice. For this to happen, coaching skills must become an essential part of every leader's leadership toolkit.

Second, leaders need to expand their skills and become diversity managers. As I mentioned above, the social change driven by the digital transformation of society, combined with the trend to working later in life or returning to work after a period of retirement, makes managing new kinds of diversity in organizations an increasingly important leadership competency. This requires both sensitivity to the differences between these groups and new skills to not simply successfully manage these new dimensions of diversity, but to gain advantage from the cognitive diversity that this brings. The point is not to create harmony, but to stimulate creative conflict that brings everyone into the conversation and makes use of the increasing cognitive diversity in the organization to maximize creativity and innovation.

Third, leaders must have an **experimentation mindset** and be competent to lead teams who learn by running well constructed experiments. This means, first, that leaders must understand how to run experiments to test the hypotheses that underpin new ideas and how to run these experiments cheaply and quickly. But this also means that the leaders must create a culture that supports experimentation and the systems and processes to allow rapid failure while maximizing learning. This is often an approach that is diametrically opposed to the "pilot project" and "market research" approach that leaders have mastered over their careers and feel comfortable using.

Fourth, leaders need to become digital communicators to leverage the new possibilities of the incredible digital tools available for enhancing team interaction and sharing. Most organizations I engage with are very much at the "virtualize existing work practices" stage and little has been done in terms of really innovating how teams work together and how communication and collaboration happen across organizations. Leaders need to both model the behavior that they want in terms of engagement with social media and cloud-based collaboration tools and also learn how to motivate teams and give feedback in these new environments. Even more problematically, leaders need to learn how to replenish the "social glue" that holds teams together when teams are not co-located. From all accounts, we are not going back to a situation where most of the interaction among team members will happen in an office face to face. Leaders need to not only learn how to lead in a virtual environment but to also enlighten the users of the new tools that continue to appear and that will continue to disrupt our ways of work.

3.4 Ethical competencies

The final set of competencies are what I call ethical competencies. These involve the skills to understand and

manage the ethical challenges that digital technologies create. While leadership has always been about ethics, digital transformation creates entirely new challenges that leaders across the firm need to be ready to tackle. These ethical competencies require that the technological and organizational competencies that I talked about above are in place as the new ethical competencies build on the technological and organizational competencies in a direct way. I would like to talk about two ethical competencies that I think are particularly important, although the exact nature of the ethical competencies are much less clear and more organization specific than those I discussed in earlier sections.

First, digital leaders must have an understanding of the ethical challenges that accompany the introduction of artificial intelligence (AI) into the everyday work of a firm: that is, an understanding of **machine ethics**. This goes far beyond the technological competencies around understanding different kinds of AI and what it can and cannot do (although it is dependent on it). This is about understanding how AI becomes embedded in organizational routines and processes and what this means from an ethical point of view. What are the ethical risks and how are they being contained? Who is responsible for the decisions of the machine and do they understand their responsibilities? While manufacturers are responsible for the ethics built into the AI system, the company that implements them is responsible for the way in which the AI system is trained and put to work. This will require clear ethical principles

based on an understanding of the ways in which machines are being empowered to decide and where human responsibility for these decisions are located.

Second, digital technology is exponential, and this requires digital leaders to have an exponential mindset [Berman et al. (2020)]. We are moving from a world that was largely linear to one that is increasingly exponential. This characteristic explains the meteoric growth of new digital companies and underpins the arguments about digital transformation I made earlier, but also brings with it a major challenge: we think linearly but need to try to understand the impact of technologies that cause exponential effects. This creates the possibility of huge and unexpected (and often unintended) effects that can raise serious ethical issues for leaders. Many of the ethical questions that arise are completely new, such as those Mark Zuckerberg has struggled with over the last several years. Leaders throughout a firm need an exponential mindset to understand the opportunities of digital technology and also the potential problems that might be caused by decisions and actions that fail to spot exponential dynamics and the astonishing effects they cause.

3.5 Putting it all together

The framework I propose for understanding the competencies underpinning digital leadership — the "digital leadership pyramid" — is depicted graphically in Figure 2. The three types of competencies are shown in the order of dependence

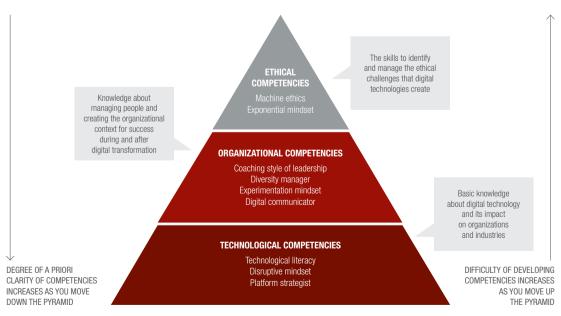


Figure 2: The digital competencies pyramid

and inversely in terms of the difficulty to develop in leaders. Technological competencies are the most fundamental, but also the easiest to develop in leaders; organizational competencies depend on technological competencies and are somewhat more difficult to develop; and, finally, ethical competencies depend on leaders having deep competencies in technological competencies and organizational competencies and are the most difficult to develop. The digital leadership pyramid provides a visual map for senior leaders and HR professionals involved in planning the leadership development plan component of a digital transformation program.

4. CONCLUSIONS AND IMPLICATIONS

At this point, let me go back to where I began: we need to get as good at digital leadership as we are at creating and applying digital technology if the new digitally enabled firms we are creating are going to achieve the potential of digital transformation. We need leaders who can thrive in organizations characterized by the virtual, the exponential, and the networked. The old leadership competencies are not obsolete, but in addition to competencies that led to leadership success in the analogue world, we need leaders with new competencies who are prepared to lead in the new digital world we are rapidly constructing.

This means that any digital transformation plan needs to include a well-thought out leadership development component. To put it simply, there should be no large-scale technology plan that does not have a talent development plan at its center. In addition to asking what technology do we need and how will we roll it out in our organization, change leaders also need to ask how will we develop our leaders to be ready for the new challenges and opportunities that will accompany the process

of digital transformation? How digitally savvy is our leadership and what needs to be done to get them ready to lead in the new environment that will accompany the digital transformation we are embarking on? Successful digital transformation programs are about changing technology, organizational processes, and, perhaps most importantly, leaders.

But there is one caveat. In order to make this happen, leaders in organizations are going to need to be more honest about what they do not know. After working with a number of organizations on this problem, I have seen that one of the biggest barriers to developing digital leaders is resistance on the part of existing leaders to admit what they do not know. This is partially a lack of knowledge about what they need to know, and partially a result of a fear of admitting that they do not know. The latter problem is the really difficult one and it takes senior management setting an example to encourage middle managers to admit they do not know.

In summary, digital transformation is happening and holds huge opportunities for companies to do new things, to do existing things better, and to reach new markets for their products and services. However, in order to get the most out of the opportunities associated with digital transformation, companies need to transform their leaders as a central part of the process. Exciting new opportunities to create new areas of business, improve existing processes and systems, and drive efficiency in the business exist, but digital transformation is also creating significant challenges in terms of unfamiliar and hard to evaluate sources of competition, the need for rapid and difficult to quantify change, and profound people management issues. The successful firm of the future will be the one that can effectively build the knowledge and skills among key employees to seize the opportunities and deal with the challenges of digital transformation.

REFERENCES

Berman, A. E., J. Dorrier, and D. J. Hill, 2020, "How to think exponentially and better predict the future," SingularityHub, April 5, https://bit.ly/34kxNv4

Christensen, C. M., M. E. Raynor, and R. McDonald, 2015, "What is disruptive innovation?" Harvard Business Review 93:12, 44-53

Collins, F., 2010, "Has the revolution arrived?" Nature 464, 674–675

Conger, J. A., and D. A. Ready, 2004, "Rethinking leadership competencies," Leader to leader 32, 41

Gawer, A., and M. A. Cusumano, 2002, Platform leadership: how Intel, Microsoft, and Cisco drive industry innovation, Harvard Business School Press.

Goleman, D., 2004, "What makes a leader?" Harvard business review 82:1, 82-91

Gratton, L., and A. J. Scott, 2016, The 100-year life: living and working in an age of longevity, Bloomsbury Publishing

Green, N., 2020, "Microsoft CEO: 'We achieved two years of transformation in two months' in Q3," Channel Partner Insight, April 30, https://bit.ly/2SpFs5L

Hampel, C., M. Perkmann, and N. Phillips, 2020, "Beyond the lean start-up: experimentation in corporate entrepreneurship and innovation," Innovation: Management & Organization 22:1, 1-11

Knight, R., 2014, "Managing people from 5 generations," Harvard Business Review 25:9, 1-7

Pisano, G. P., 2019, "The hard truth about innovative cultures," Harvard Business Review, January-February, 62-71

Polanyi, K., and R. M. Maclver, 1944, The great transformation, Beacon Press

Prensky, M., 2001, "Digital natives, digital immigrants part 1," On the Horizon 9:5, 1-6

Raskino, M., and G. Waller, 2015, Digital to the core: remastering leadership for your industry, your enterprise, and yourself, Routledge

Reis, E., 2017, The startup way, Penguin Random House

Spinello, R., 2010, Cyberethics: morality and law in cyberspace, Jones & Bartlett Learning

Weber, M., 1958, "The three types of legitimate rule," Berkeley Publications in Societies and Institutions 4:1, 1-11

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