Chapter 10
Redesigning Corporate Responsibility How Digitalization Changes the Role Companies Need to Play for Positive Impacts on Society

Nicolai Andersen

Introduction

Let us imagine a girl of 11. For about one year, she has owned a smartphone with theoretically unlimited and unrestricted access to the Internet. Her parents have decided that the right time to be "old enough" for a smart-phone would be the transition from primary school to secondary school. They saw it as their responsibility to allow her to be part of a digitalized social life on WhatsApp, Snapchat, etc. Again, they saw it as their responsibility to allow her to become digitally literate. And they saw it as their responsibility to allow her to make use of the convenience of digitally assisted life.

Positive developments occurred. The 11-year-old has contributed great works of digital art to the family photo collection. She recently helped her family to understand the entire Greek and Roman mythology through instant research in the ruins of ancient Greece. And she is able to ask her parents in real-time for advice when she wants to buy a dress or tries to fix her broken bicycle.

But of course, negative developments also occurred. Like so many other kids, she also spends more time chatting with her friends than actually talking to them. She developed an addiction to mobile games, sacrificing her time on more creative leisure activities. And she learned the hard way that there is no such thing as a free lunch, that getting something for free requires giving something in return—in most cases in the digital world, this means personal data.

Today's functionalities on the 11-year-old's smartphone are not the functionalities of tomorrow. Looking into the future, technological progress on her smartphone will occur that could be considered positive or negative—depending on how you look

Published December 2018 at Deloitte. Perspectives, https://www2.deloitte.com/de/de/pages/innovation/contents/redesigning-corporate-responsibility.html

N. Andersen (✉)
EMEA Lead Innovation and Deloitte Garage at Deloitte, Hamburg, Germany
e-mail: nicandersen@deloitte.de

D. Feldner (ed.), *Redesigning Organizations*,
https://doi.org/10.1007/978-3-030-27957-8_10

at it. Many researchers believe that digital technologies continue to develop at the pace of "Moore's Law" or faster, which would mean an exponential development (Shingles et al. 2016). Or in easier words: The change we saw within the last 12 years, is the change we will see in the next six years. Looking back 12 years ago takes us to the time before the market entry of the iPhone, thus before we all could even imagine what apps would do to our day-to-day lives. The same change, which we cannot imagine today, will occur to our lives in the next six years. Before the 11-year-old turns 18.

Is it just the responsibility of parents to make sure that Digitalization affects their daughters and sons only in positive and not in negative ways? Is it the consumers, employees and citizens that have the responsibility to create positive impacts on their society through Digitalization? Or is it the responsibility of governments to regulate Digitalization in a way that it only creates positive impacts on society? And what roles should companies play?

The intention of this article is to take a closer look on the responsibility of companies for the positive impacts of Digitalization on society, considering the increasing speed of change and growth of complexity of digital technologies.

Corporate (Social) Responsibility

Viewing companies as responsible for the positive impacts of their business is not a new concept. It has long been discussed and is, in parts, being executed by companies under the umbrella term "Corporate Social Responsibility" (CSR). In one of its wider definitions, CSR is seen as "the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large" (Moir 2001).

There have been numerous discussions on why companies actually should invest in CSR programs, including the view of CSR as a part of creating stakeholder value and thus shareholder value (Hübscher 2015). Benefits from acting socially responsible include—among others—talent attraction, public image, process efficiency and employee loyalty (Shingles et al. 2016), as well as creating new market opportunities, enabling proactive regulatory relationships and building resilient, sustainable supply chains (Mennel and Wong 2015, see Fig. 10.1).

Despite these positive impacts on a company's own benefits, investing strategically in social responsibility is not a given. A Deloitte study examining the social impact practices of the 2014 Fortune 500 global public companies revealed four business archetypes:

There may be differences in the percentages in each of the archetypes, if you take different samples, depending on the size and country of origin of the companies. Some companies just have a different corporate social performance depending on specific environments, stakeholders and local issues (Moir 2001). But it still has to

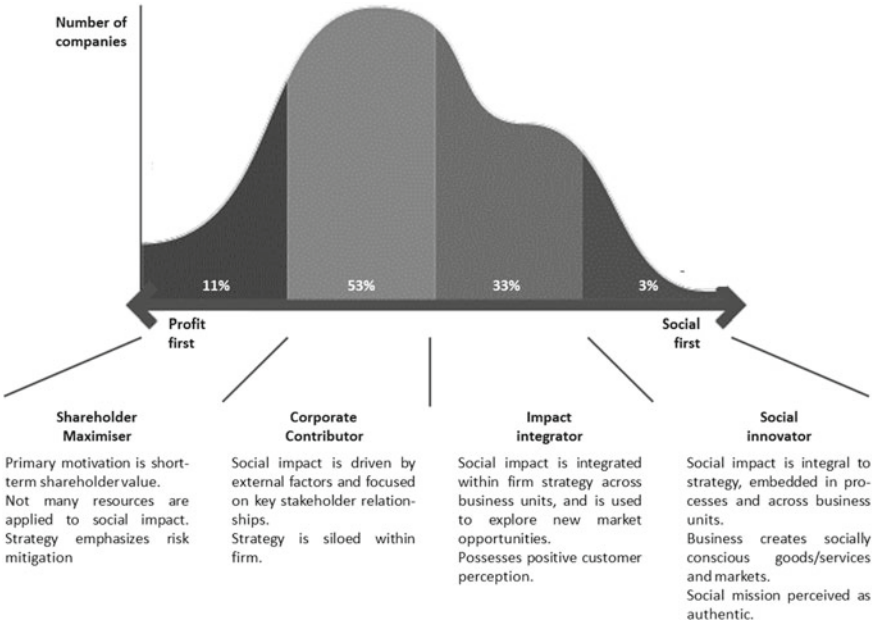

Fig. 10.1 Business archetypes of fortune 500 companies concerning their 2014 social impact strategies. *Source* Mennel and Wong (2015)

be concluded that CSR—for the majority of companies—is not perceived as being of the highest importance for a company's strategy.

The reason for that may reside in the two dichotomies that, according to Hübscher (2015), lead to CSR being treated in a rather reactive and residual way, versus treating CSR strategically:

- The dichotomy between responsibility for the economy versus responsibility for society
- The dichotomy between goals for the economy versus goals for society

Only if these dichotomies are cleared, Hübscher argues, would companies consider CSR as way to create positive shareholder value and would, thus, invest in it in a noticeable way.

As Digitalization is completely redefining not only the products and services landscape, but is leading to radical changes in the economy, society, politics and even our values and beliefs (Gärtner and Heinrich 2018), does this create a chance to also clear these dichotomies and radically change the way companies approach their own responsibility?

The Impact of Digitalization

Uncountable publications have been written and uncountable public discussions have been held about the good impacts and the bad impacts of Digitalization. Digitalization is driven mainly by the combination of the increase in available data and the ability to access and process this data, leading to new ways to produce, to consume and to work (Gärtner and Heinrich 2018). These "new ways" are often considered as innovations. And these innovations, in many cases, lead to opportunities and challenges at the same time (Mühlner et al. 2017). Take, for example, intelligent algorithms processing granular data on communication patterns: They could lead to a higher crime prevention rate, but could restrict the freedom and privacy of individuals and could affect the culture of a society.

Digital Innovations have already changed our lives in both positive and negative ways. Positive developments of Digitalization undoubtedly are the comfort of being able to access information and services 24 h a day, 7 days a week. The comfort of individualizing what, how and when we consume products, services and information. The comfort of being able to afford more because of decreasing product costs and increasing price transparency. The comfort of taking part in each other's lives through easily sharing visual and acoustical experiences (e.g., my daughter's video message to her Grandma from one end of the world to the other).

At the same time, there are current developments that are undoubtedly negative: The case of the last U.S. presidential election has shown how the processing of granular personal related data in connection with automated content generators and in connection with so-called "Fake News" have led to content bubbles of perceived truth. These may have actually influenced voters' behaviors and, ultimately, may have affected the outcome of the election (Voigt 2018).

A root cause of this—but also a separate negative development—can be seen in the so-called "digital divide": the gap between those who take part in digitalization and those who do not (see Fig. 10.2). There is a yearly survey in Germany analyzing the degree of Digitalization of the German population, taking into account four categories (D21 2018):

- Digital access (Internet use at home/at work, available equipment)

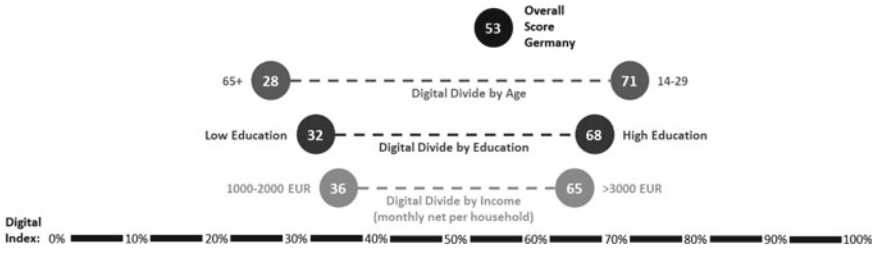

Fig. 10.2 Degree of digitalization of the German population in 2017 and selected gaps. *Source* D21 (2018)

- Digital use (Variety of applications used, average usage time of the Internet)
- Digital competence (Knowledge about digital topics (eHealth, cloud, …), technical competence)
- Digital openness (Mindset toward the use of the Internet and digital devices)

These categories lead to a score between 1 and 100, where people with a score <20 are considered as "Offliners" and people with a score >80 as "Technology Enthusiasts". The 2017 score for Germany is 53, which does not say much without taking a look at the gaps between certain parts of the population:

If there are positive and negative changes to our lives today through Digitalization, how about the development in the future? How will our lives be affected when the exponential advancement of technology, as discussed before, leads to new applications of Digitalization that we can hardly imagine? Will the future be as positive, as described by the visionaries of the Silicon Valley, who see technology as the way to solve humanity's greatest challenges (Diamandis and Kotler 2012)? "The financial services industry, for example, might explore new ways for Blockchain to democratize banking, enable micro-transactions, and simplify philanthropic donations. The consumer food industry could potentially leverage biotechnology to change the health benefits profile and affordability of their products. The entertainment industry might partner with educational leaders to leverage advances in augmented and virtual reality to revolutionize learning and education. By supporting the maker movement and exploring new ways to leverage 3D printing, manufacturers could help provide affordable housing and basic necessities to the world's underserved populations. Hospitals and the health care industry have opportunities to use digital medicine to reinvent and democratize prevention, diagnosis, and treatment" (Shingles et al. 2016).

These future visions sound desirable, and in the stated examples, maybe do not even have negative downsides. But how about a future vision of every human having a chip implanted in the brain, connected to our mobile phones. No, not for mind-reading and -writing purposes. This functionality may still be far out in the future. But in the nearer future, we could already be technically able to offer a very useful functionality that could save lives: The 11-year-old walks down the street, only focusing on the screen of her mobile phone, not watching the world around her. She does not notice the red light crossing the street and the truck approaching at high speed. Her mobile phone could detect the approaching vehicle, predict the likelihood of an accident and then send a signal to the chip in the girl´s brain that triggers an impulse for her to jump backwards. Surely a useful functionality, but is this a positive future or a negative future?

From CSR to CDR

Digitalization undoubtedly creates opportunities for positive futures for societies. These opportunities cannot and should not be realized by governments alone, but should also be realized by companies—with the side effect of capitalizing on the

business opportunities of these positive futures (Shingles et al. 2016). But at the same time, Digitalization creates an increasing degree of responsibility for politics and the economy to prevent negative side effects on our societies (Capurro 2017).

These considerations have led to a discussion in the recent past, about whether there is a general responsibility for companies resulting from Digitalization: Corporate Digital Responsibility (CDR). There is no common definition for CDR yet. CDR is seen as differently as:

- Extension of classical CSR into Digitalization: The responsibility of companies to act with discernment within and outside their boundaries when applying digital business processes, creating digital services and products and interacting with employees, business partners and society (Mühlner et al. 2017)
- Application of ethics in Digitalization: The responsibility of companies to embed ethical considerations at company, individual and societal levels (Raivio 2018)
- Creating trust of societies toward Digitalization: The responsibility of companies to create transparency on the use of data, algorithms and bots to increase the level of societal trust in Digitalization (Osburg 2017)
- Creating trust of consumers toward Digitalization: The responsibility of companies to keep and increase the level of trust consumers have in the use of digital applications (Thorun 2018)
- Solving problems through Digitalization: The responsibility of companies to help leverage digital technologies not only for their own benefit but for driving greater good in society (Shingles et al. 2016).

In summary, the existing definitions of Corporate Digital Responsibility agree in the aspect that CDR is not just using digital technology to be more efficient and effective in managing CSR. But the definitions seem to differ in two dimensions:

- Stakeholder Dimension: Just the consumer of a company versus stakeholders of a company (consumers, employees, business partners) versus wider group of stakeholders (society in general)
- Impact Dimension: Primarily preventing negative developments of a company's actions versus primarily achieving positive developments through a company's action

  For this article—and I suggest also for any further discussion and implementation of Corporate Digital Responsibility in companies—CDR should be considered in the widest possible definition: Corporate Digital Responsibility is the strategy and execution of a company to prevent negative impacts and achieve positive developments from Digitalization on the entire society.

While this definition may be academically easy to take on, it is in reality an umbrella term for at least four completely different mindsets regarding CDR (see Fig. 10.3).

Looking at the four different types of "CDR Mindsets", however, the dimensions lead to two different possible trade-offs:

- Stakeholder Dimension: The trade-offs between the responsibility of a company for its own consumers versus the responsibility of a company for society in general.

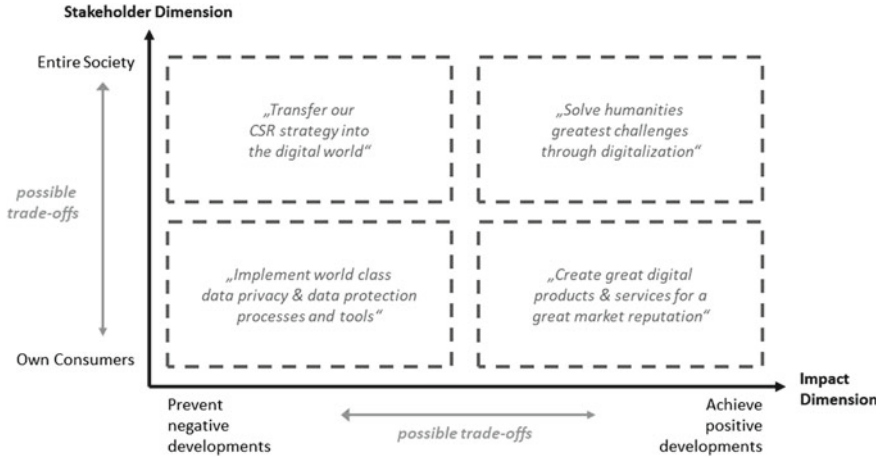

Fig. 10.3 Different mindsets on corporate digital responsibility. *Source* Own illustration, 2018

The example of e-commerce illustrates this quite well: Delivery of goods with the lowest possible costs in the supply chain creates value for consumers, because all-in prices for consumption will go down, ultimately leading to a higher standard of living for the consumers. But due to the negative effects of last-mile delivery (e.g., increase in city traffic, decrease of achievable income for delivery drivers), negative effects are created for the standard of living of the overall society.

- Impact Dimension: The trade-offs between the responsibility of a company to create positive impacts versus the responsibility of a company to prevent negative impacts from happening. Examples of this—which leads us to the ethical discussion in the next section of this article—are any kind of digital applications that help to optimize daily life situations by processing individual personal data. Our car may warn us about an icy part of the road just ahead of us, taken from the data of another car on the same street. This would motivate us to slow down, ultimately leading to a decreased probability of a car crash. But this requires cars to send individualized granular data to a central processing mechanism, decreasing data privacy and increasing the risk of data-protection violations.

We need to be aware of these trade-offs in general, but especially in specific daily life situations, to be able to take the first steps at implementing Corporate Digital Responsibility programs on the company and—more importantly—the country level.

Corporate Digital Responsibility in Our Daily Lives

To be able to debate the CDR trade-offs in daily life situations, we need to take one step back to define a framework for our digital lives. According to Mühlner et al.

(2017), we need to distinguish four different aspects of Digitalization that are causing challenges:

- Datafication: The ability to generate and process an increasing amount of granular data. This leads to the possibility of generating specific insights for a higher degree of individualization, with the downside of a centralization of these insights outside of the control of the individuals.
- Automation: The ability to make automated decisions based on algorithms. This leads to the possibility of quicker and more fact-based decisions, with the downside of possibly losing control over the question of what is right or wrong (e.g., discrimination based on facts).
- Connection: The ability to exchange and combine data from "things" (e.g., sensors). This leads to the opportunity to virtualize and remotely control actions, with the downside of losing a sense of responsibility for the effects of the action.
- Interaction: The ability to have machines work together with humans. This leads to the possibility of fulfilling tasks more comfortably and easily—and even less dangerously—with the downside of possibly eliminating jobs and/or personal relationships.

  These trade-offs in the four aspects of Digitalization according to Müller are actually existing ethical trade-offs applied to the new realities and/or opportunities caused by Digitalization:
- Trade-offs in values:
  - Accessibility versus Privacy (e.g., mobility data to optimize public transport)
  - Individualization versus Privacy (e.g., user behavior data to optimize products and services)
  - Customer Experience versus Objectivity (e.g., nudging to motivate behavior)
- Trade-offs in interests:
  - Insights versus Privacy (e.g., pharmaceutical/medical research on personal health data)
  - Security versus Privacy (e.g., crime prevention through tracking and storing of personal data)
- Trade-offs in consequences:
  - Short-Term Benefits versus Long-Term Risks (e.g., automation of tasks in work profiles)
  - Option 1 versus Option 2 (e.g., prioritization of digital infrastructure investments).

To understand and discuss these trade-offs, Müller suggests viewing them in the context of various areas of living: Learning and Education, Health and Personal Care, Communication, Mobility and Logistics, Work Life and Private Life (see Fig. 10.4).

There are uncountable trade-off decisions in daily lives. In many cases, companies have to make decisions for their consumers, for their employees and for their

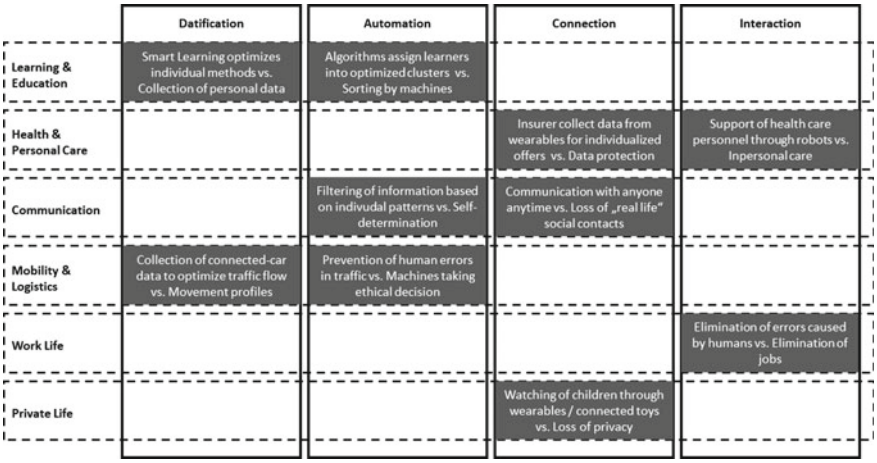

Fig. 10.4 Exemplary trade-off decisions caused by digitalization in various areas of daily lives. *Source* Müller and Andersen (2017)

business partners, with impacts on wider stakeholder groups or society in general. Or they have to help consumers, employees and business partners to make decisions in the full knowledge of possible consequences. Referring back to the definition of CDR presented in the last chapter, I would like to extend this view even further: Companies should see themselves as responsible for helping all members of a society—including governments—to make the right decisions regarding trade-offs caused by Digitalization that affect our daily lives.

For humans personally this would mean…

…in their role as a consumer: the responsibility of companies to develop digital products that increase the quality of my life. And the responsibility to explain to me, in easily understandable words, what data and algorithms they use for what purpose, what advantages this brings to me and what risks.

…in their role as an employee: the responsibility of companies to make my job—with the help of digital assistants—as easy as possible and to pay me a fair salary. And the responsibility to keep on educating me so that I can switch into a different job profile even at a higher age, when my original job has been replaced by a machine.

…in their role as a citizen: the responsibility of companies to make as much information available to me as possible to enable me to make self-determined decisions. And the responsibility to value the functioning of a free and open society based on a democratic system higher than the value of the company's own stock price.

…and last but not least—ending the consideration where I started off at the beginning of this article—in the role of a person as a parent: the responsibility of companies to close the gaps of the digital divide and improve overall digital literacy, especially of the younger generations. The education system cannot be blamed for not being able to teach our children every aspect of Digitalization, given the increasing speed and complexity of changes through Digitalization, as discussed earlier. I would like

to see the education system teach my daughter the principles of humanity to be able to consider ethical questions for herself. Companies should take responsibility for protecting my daughter from the negative impacts of Digitalization through open and honest explanations of context and consequences. And at the same time, they should take responsibility for getting my daughter excited about the opportunities Digitalization is creating.

Corporate Digital Responsibility can improve the overall well-being of societies through Digitalization. This requires a complete redesign of institutions and—in order to achieve this—an entirely different mindset in politics and society regarding the role of companies, and inside the companies regarding their responsibility.

It is not the sole responsibility of me as father to help my daughter benefit from Digitalization. It is the responsibility of all of us.

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Nicolai Andersen was first exposed to Artificial Intelligence at the age of 15, when he tried to teach his Atari 1040 ST to think like a human through a BASIC program. That did not work out. In the 1990s, he studied Business & Engineering at the Karlsruhe Institute of Technology and took courses in Genetic Algorithms for a second attempt at creating real AI. Again, it did not work out. In the meantime, he is heading The Deloitte Garage and serving as Deloitte's Chief Innovation Officer in the EMEA region. Through these roles, he is exposed to the question of how AI and other Tech Trends might replace our jobs—or how they could actually create new business opportunities. Even more importantly, he is exposed to the following question: How can you transform a traditional corporate environment into a platform for innovation? This is much more about the human side of change than its technological side. Nicolai thinks it is very important to build the future on the fundament of a well-educated society. He is a member of the board of "Initiative D21" and leads their group working on "Ethics in the digital world". In his free time, he also likes to build fantastic desirable futures together with his four daughters and tons of Legos. And he loves to let his thoughts take journeys while he plays music or runs through the mud.