Sustainability in a Digital World Needs Trust

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1 Introduction

A farmer, who plants tomatoes and potatoes, can estimate the consequences of his work pretty easily—on the soil, on people, on the environment. But a trader, who uses millions of data from around the globe and acts based on algorithms, can't. We see a dramatic shift over the last three centuries when talking about sustainability.

When Hans Carl von Carlowitz first published his famous Sylvicultura oeconomica in 1713, the boundaries for acting sustainable were either the local forest or maybe an area that could be overseen rather easily. Not cutting more trees than what can regrow is easy to calculate and predictable, the consequences are rather clear and local (Sächsische Hans-Carl-von-Carlowitz-Gesellschaft 2015).

This well-understood concept of sustainability is now confronted with a technological leap we call Digital Revolution or Digital Transformation. Digitalization offers new possibilities and pathways of how to shape the future of living together. Predictive medicine enables the monitoring and curing of how infectious diseases spread globally. Algorithmic capacities allow for data processing and analysis that open up unseen capabilities. Digitalization bears consequences for transparency and accountability which create entirely new ways to shape, monitor, and govern sustainability. In conclusion, both megatrends, sustainability and digitalization, impose major transitions on our world and how we picture it. Ultimately, Digitalization will fundamentally change the structures of our societies (Müller von Blumencron 2016)

As the world is moving to *Digital*, more and more services are delivered online: Daily Papers, Banking, Education, Machines talk to each other and personal data is in some cloud. While a lot of focus has been on Innovation and New Technology,

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there was little discussion on what impact all this has on supporting Sustainability goals (Osburg 2013). Why is that so? Typically, we view Digital products as *Carbon Light*, means that they are supposed to have little impact on emissions and pollution. However, producing and delivering digital products requires significant energy, produces carbon dioxide emissions and has significant impact on the society at large—how we behave, how we consume, how we work and how we live.

The Digital Economy offers enormous opportunities: You can reach rural and underdeveloped areas of this world with state-of-the-art education, intelligent machines can do jobs that humans don't want to do, patient care can improve through new forms of caretaking, and of course we all don't want to miss the comfort of accessing all our data anytime and anywhere.

One of the key questions in all this development is not yet fully answered: How does the ongoing move towards a digital world contribute—positive or negative—to a more sustainable world? Is a more digital world always more sustainable? What are the key focus areas to look at, what are the opportunities but also the challenges? How does the Society at large support all this?

In the wake of digitalization, megatrends such as mobile internet, the internet of things, big data or digital innovations are creating development opportunities faster than ever. Digital is a crucial driver for decent work, growth and well-being, and is having a profound impact across all sectors. The internet and digital technologies can and will boost economic, social and political development, including by vastly expanding the capacity of individuals to enjoy their right to freedom of speech and expression, which is key to empowering human rights (De Croo 2015).

But how much digitalization do we want? Do we always want more? Do we always need more? And do we even have a choice? How much are we ready to 'pay' for it, not in Euro or Dollars, but in potential loss of privacy and security. What tradeoffs do we need to make and what impacts will this have on society as a whole? What is the new role of Government? Protecting or enabling, i.e. like in Estonia that considers itself 'Country as a Service' (Domscheit-Berg 2016)?

2 Changing Concepts of Sustainability

Ecological Sustainability

Since the early 1980s environmental aspects of sustainability were the primary focus, with major concerns about air pollution and acid rain. Over time, discussions included other environmental aspects such as water and other natural resources, biodiversity, clean energy, agriculture and food. Now the theme of Climate Change is perhaps the predominant concern (Tardieu 2014). As such, Ecological Sustainability can be seen as the capacity of ecosystems to maintain their essential functions and processes in the long run.

The current emergence of Digital Solutions, Big Data, Internet of Things (IoT, connected objects and people) and so on will generate vast amounts of data that with the application of smart analytics and visualization techniques will help us to understand more about the way we interact with each other and our environment; with businesses; and with the world around us. Unlocking such insights will enable us to discover patterns for more sustainable behavior, for example (Tardieu 2014):

- Improving forecasts of natural events or disasters
- · Optimizing global agricultural production and food supply
- Anticipating traffic congestion and managing low emission zones
- Limiting energy production up to the precise needs of consumers
- Allowing preventative maintenance that avoids failure and replacement

Even though it is mostly understood that delivering such a connected world and managing the resulting data will in itself impose an environmental load (i.e. server parks), the impact of digitalization on the environment, like virtualization, de-materialization, efficient hardware components, free air cooled data centers, etc. will certainly help to reduce negative environmental impact (GeSI 2015).

Economic Sustainability

Understanding Sustainability as a normative concept of 'capacity of ecosystems to maintain their essential functions and processes in the long run', economic sustainability is grounded in the use of various strategies for employing existing resources optimally so that a responsible and beneficial balance between business and society can be achieved over the longer term. It can be understood as the maximazation of revenue and profit while at the same time maintaining needed resources over a longer period of time (Osburg 2017). Within a business context, economic sustainability involves using the combined assets of the company efficiently to allow it to continue functioning profitability over time.

In addition, positive company behavior was partially encouraged by government policies that enabled positive financial impacts for those firms that engaged in sustainable activities (e.g. by subsidies) or penalized non-sustainable activities through taxation. This can be understood as the 'economization of environmental/ social aspects of sustainability' (Tardieu 2014). As a goal, there are tangible positive economic benefits to be expected from sustainable approaches to business, like

- Less waste, less energy consumption, time saved.
- Attracting consumers who are motivated by environmental concerns.
- Positive contribution to the Triple-Bottom-Line reporting of the firm.
- Using only needed resources through '... as a Service' concepts, enabled largely by Cloud Computing, where only the actual usage of a product or service is paid for.

Social Sustainability

The ability and willingness of a society to develop processes and structures that not only meet the needs of its current members but also support the ability of future generations to maintain a healthy community and intergenerational justice is a key component for concepts of Social Sustainability. At a larger scale, it also includes concepts of trust (to companies and institutions), ethical behavior (of organizations) and can be a parameter for the equitable distribution of a nation's wealth by providing people access to resources, goods and services to fulfill their needs.

Compared to ecological and economic aspects of Sustainability, where investors often benefit from its positive outcomes (i.e. minimization of energy consumption to help reduce costs and thus generating ROI and profit), those who invest in long-term technologies, solutions and polices for Social Sustainability are not likely to be those who will be able to benefit from them. 'The social aspect of sustainability thinking becomes a key success factor for our planets longer term future wellbeing' (Tardieu 2014).

This is an area where Digital Transformation will ultimately change the game, enabling new models of society often based on sharing—which is a key principle of sustainability thinking.

- New economic models, where providing personal data in exchange to free services or products.
- Ethical projects with usually little success in finding seed money can be facilitated through crowdfunding: trust is needed but sustainability is generally a world of trust.
- Mobility is obviously a way to enhance availability and connectivity, again building on trust of systems and people.
- The reinvention of work, often referred to as "Industry 4.0", is certainly a major breakthrough in delivering enhanced productivity, environmental benefits and collaborative work concepts.

Ultimately Social Sustainability can be understood as '...identifying and managing business impacts, both positive and negative, on people' (UN Global Compact 2016).

3 Digital Technology with Impact on Society

We live in exponential times. While the world has seen many dramatic changes over the years (Electricity, Industrialization, Trains, Information Technology, etc.), the speed of today's changes is the key challenge. At no time before in history people had so little time to adapt to societal and technology changes. While this brings tremendous progress, wealth and (sometimes) peace across the globe, we are now at a point in time where we need to realize that this might not be true for all.

There are people who will loose and people who will win. Maybe Charles Darwin (1859) was never so right as of today: 'It's not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change'.

Translating these thoughts into today's world, we certainly do not talk about physical survival anymore, but economic win-lose situations. Digitalization will see a lot of winners, but, at least in the short to medium term, also people who are left behind. People, who are either unwilling or unable to follow today's societal and business development. These people are, at least today, not necessarily losing, but they are not winning and thus leaving (economic) advantages to the ones who are willing and capable to adopt (see Fig. 1).

We will see a divide into Digital Elites and Analog Illiterates with dramatic consequences for societies. And this leads to concepts of Social Sustainability. What kind of society do we want to have in the next years and decades? What impacts from Digitalization can we expect and how do we deal with it?

This section will deal with three major areas of digitalization, that will impact, more than others, Social Sustainability of our Societies.

- Data: A constant focus on data will be key in the coming years. What kind of data are available, who owns those data, how are those data used? What kind of acceptance is needed from consumers? And how can consumers keep their rights on their own data?
- Algorithms: What used to be a more technical term in the past is now quickly becoming a critical gate-keeper in today's information society. More and more decisions, at all levels, are determined by algorithms, which are a self-regulated sets of operational steps that need to be performed. But should algorithms

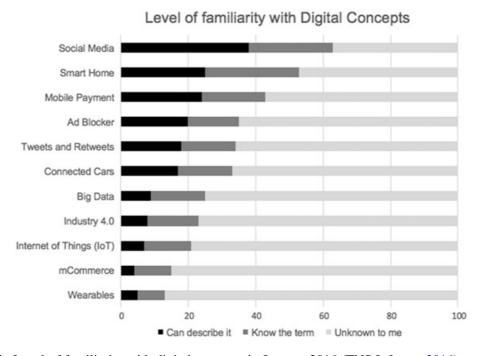


Fig. 1 Level of familiarity with digital concepts in January 2016 (TNS Infratest 2016)

determine our lives? Algorithms are always programed by humans, so what kind of credibility and social license to operate do these programmers and companies have?

• **Bots**: A more digital world, with digital processes all around us, will have significant impacts on our jobs in the future, as machines and (ro-)bots are increasingly capable to replace tasks people perform today. For the moment it remains unclear, if there will be positive or negative impacts, and within which timeframe. Will (ro-)bots take away our jobs? And, if so, which jobs? Current studies are partially contradictory.

Data

We all know by now that data is the new gold, the new oil or the new currency. Having access to customer data, for example, is key in remaining competitive in the next years and decades. We can see this battle for data amongst firms in nearly all business sectors: In the car industry, in retail, in the health sector and so on (Steinbrecher and Schumann 2015). The advantages are obvious, as the possession of data allows a much more detailed customer targeting and thus potentially better suited prices, offers and ad's (Wadhawan 2016). We call it 'personalized experience' and it is based on all the data collected from consumers at various levels and steps during the shopping process.

While this is a known phenomenon within the online world—Google estimates that it can look at more than 50 signals a person sends out while using a computer, i.e. location, browser, PC, pages visited, products bought, etc. (Pariser 2011a)—we are now seeing more and more in-store systems generating similar data and thus predicting the potential next moves of the shopper. Face-recognition software of cameras at the shop entrance are revealing if a known customer is in a good or bad mood, if he comes alone or with his wife, if he is dressed in business clothes or rather casual or if he belongs to the top-customers, so the manager will come immediately to greet him (Frey 2016). In-store tracking systems detect the paths any given customer takes, what products he is looking at for how long and what finally ends up in his shopping basket (Clauß 2013).

So staying anonymous is nearly not possible anymore for consumers who prefer not to be tracked or leave traces. All these tracking tools, however, have one commonality: While customers are increasingly aware that they pay with their data, somehow, it remains unclear to them, what kind of data they exactly hand out, and at what price. They have little or no influence and control of the usage of their own data, and they have to trust the data-owner that a confidential use of their data is guaranteed and is leading to advantages (more targeted ad's, free services, etc.) they might or might not use. This, however, is an unintentionally provided trust by the consumer. They were never asked, if they wanted this. 'It is not the countries or companies who perform a 'digital striptease', but citizens and consumers', concludes Daniel Domscheit-Berg (2016).

The World Economic Forum categorizes data revealed from consumers into 'Volunteered Data, Observed Data and Inferred Data' (World Economic Forum 2011). Some of the Observed data collections, as described above, will likely be around for the coming decades and mainly driven by available technology and regulatory frameworks. Contrary to all the Big Data discussions, which means the massive collection of Data for analytic and predictive use, there is an emerging discussion about the real value of all this Big Data. Lindstrom (2016) believes that there is still more value in constant observation of the consumers as a base for deducting the right conclusions from this observation. He calls it 'Small Data' and assumes that two out of three successful innovations stem from Small Data, not Big Data.

Where we will see major changes, however, is in the area of Volunteered Data. Today, this mainly centers around information revealed while subscribing to Newsletters or Customer Profiles, Bonus Cards and Social Networks. We will see an emergence of requests from companies to provide more (volunteered) data, that offer significant advantages to customers. For example, you might get a 10 Euro discount on a purchase, if you share a subset of personal data with the store, or a 10% deduction from your health insurance provider's bill if you prove a healthy and sustainable lifestyle, i.e. with the help of smart watches, step trackers, etc. (Rosenbach 2016).

Ultimately, it is nothing else than putting back the control of data value into the hands of the consumer, as he or she can now reveal personal data or not, it becomes an individual's choice. This could be seen as '...expanding the capacity of individuals to enjoy their right to freedom of speech and expression, which is key to empowering human rights' (De Croo 2015).

Algorithms

'Information technology is a formidable enabler of freedom. For example, it lowers barriers to freedom of expression and allows people to get a better grasp of their lives' (De Croo 2015). This statement reflects to a large degree a widespread thinking, about freedom of the Internet and same opportunities for all. But this is changing and these changes will have significant impact on many ways we live together. It touches upon the information people receive and that they use as a base for their behavior. Eli Pariser (2011b) calls it a 'Filter Bubble' and describes it as a result of web site personalization in which algorithms increasingly guess what a user would like to see and what he or she would not like to see. In a first step (see Fig. 2a), the user is still surrounded by a wide variety of media and opinions, but gets to see mainly the pieces of information within the inner 'bubble'. In step 2 (see Fig. 2b), the user is not even aware of anything outside the Bubble and has to assume that the world is only what is visible within this bubble. Different opinions or news are not reaching him or her anymore. The algorithms on the Internet act as

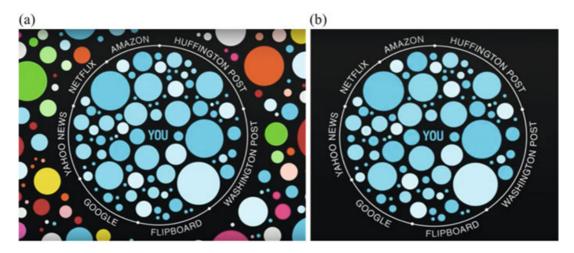


Fig. 2 Concept of the filter bubble (Pariser 2011a)

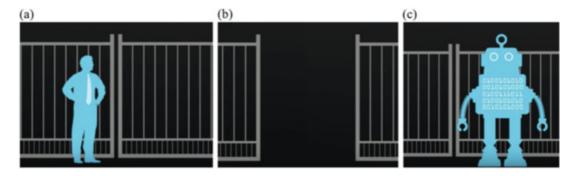


Fig. 3 Changes in "Internet Gatekeeping" (Pariser 2011a)

self-reinforcing forces to continuously reduce the breadth of information down to what the user might like.

The reason for this development is seen in the rise of the importance of algorithms. While there has always been a sort of control of information, usually through editors of journals, newspapers and TV emissions (see Fig. 3a), the first years of the Internet were dominated by openly available information for all (see Fig. 3b) with no or very little pre-defined content. Today, however, non-transparent algorithms have taken some kind of invisible control over what users see and read (Fig. 3c). Users get less exposure to conflicting viewpoints and are isolated intellectually in their own informational bubble. According to Pariser, the bubble effect may have negative implications for civic discussions (Pariser 2011b) and thus influence political elections and societal developments (Weingarten 2015).

Bots

'We hope that the current Industrial Revolution will develop as previous ones: Few jobs will disappear, but the power of Innovation will lead to a creation of many

more jobs' (Ford 2015). This opening of the bestselling book 'The rise of the Robots' summarizes the situation pretty well. We hope—but we don't know. Among the various studies and analyses currently available, it is unclear what the increased usage of technology means for the job market.

Digitalization is seen as a key influencer on future work concepts over the next decades. We can assume, that specific tasks performed by humans today will most likely disappear, if (ro-)bots can do the job as well. There will be new jobs emerging, as always, like Data Analyst and Programmer, but it is unclear if the number of new jobs will be higher or lower than the ones lost.

OECD estimates, that across all member states, approx. 10% of all jobs are automatable, another 15–35% of jobs will see significant changes in tasks (OECD 2016). Other studies operate with different numbers, but overall there seems to be some consensus that between 10 and 20% of all current jobs might be at risk, while another 20–30% are highly affected by digitalization (Dettmer et al. 2016). This means that up to 50% of the jobs currently performed today are highly affected and will see significant change in the coming years.

Changes in workplaces are not new. Some 200 years ago, 70% of Americans worked on farms, today it is less than 1% of the workforce (Schultz 2016). When machines took over the farm work, farm workers took care of Maintenance and Management. But today, we face a different scenario: This time, not only physical jobs are replaced by intellectual ones, but machines carry out more and more intellectually challenging tasks (Brynjolfsson and McAfee 2014).

Contrary to the past, it will not necessarily be the lowest-paid, lowest-qualified jobs that will disappear. There are different criteria at play now. A large number of more or less serious 'check-lists' are available to determine which jobs are at risk (see as an example Meyer 2016): 'Does your job rely on existing knowledge and existing rules? Do you perform repetitive tasks? Are there many people like you doing exactly the same job? Are you manually transferring data? Can your performance be acquired outside of the company?'—those are typical questions to check whether a specific job is at risk.

Who will take those Jobs? Automated systems and industrial robots are already common in Manufacturing settings and will add more and more intelligence over time. In Communication jobs, we have seen the rise of Chatbots (computer programs developed to simulate intelligent conversations with human users via auditory or textual methods) and Social Bots (a sort of Chatbot for Social Media to automatically generate messages and tweets). Especially Social Bots are capable of advocating specific content and ideas and can act as followers or pretend to be humans in Social Media. This includes the risk of spreading "fake news" (systematically planned and executed disinformation, i.e. for political campaigns).

4 Trust as a Key New Paradigm in a Sustainable Digital World

Trust as the Overarching Challenge

Most of the positive effects of Digitalization are currently still promises. Cleaner energy, higher productivity, shared economy, less resource-usage, and so on. Promises, people have to simply trust.

The previous chapter looked at three different areas of Technology Development and Digitalization—Data, Algorithms, Bots—that all are somehow interlinked and present both opportunities (mainly for Business) but also huge challenges for the way we want to live and work. Thus, they can be looked at as key influence parameters for concepts of Social Sustainability.

Focusing on the growing importance of Data and Data Management, a general fear for citizens lies in the perceived lack of privacy and intransparency of their data. It remains unclear what data are given (Splendid Research 2016), who is using the data and for what purpose, what is the value of these data and if customer even understand what data could be relevant for the store or service provider. It also remains unclear who controls the algorithms and what jobs are at risk. There is a significant lack of trust to companies, that is currently compensated with discounts and convenience, additional services and job enlightments.

While unclear usage models of personal data mainly concern individual users, the risks of any uncontrolled usage of algorithms in Social Networks is rather a general societal issue. Today, it seems very convenient to always get the famous '...customers who bought A also bought B...' message, it deprives users from surprises, from new stimulus and potentially new and positive experience. More importantly, it might exclude them from reality, i.e. political discussions that remain unseen, as voters believe opinions within their bubble. The risk of giving more and more power to algorithms who then decide as the programmers told them, but often with unintended consequences, is certainly rising for all societies worldwide.

Regarding the usage of Social Bots, we have seen significant influencing of the US Presidential Election 2016, where about 20% of tweets used during the campaigns came from machines (about 4 m tweets, hiding behind 400,000 fake identities) (Collett 2016) and we have seen attempted murder in the U.S., based on fake news generated by Bots (Kang 2016).

The impact of 'bots rising' for the labor market is unclear as of today. Most predictions estimate a disappearance of approx. 10–20% of today's jobs overall, but this could be up to 70% in some sectors, while others are barely affected. It also becomes clear that even today's high-paid jobs (like basic tasks of lawyers or doctors) can be threatened by bots. This will leave a significant level of uncertainty, both for the job market as well as for the individuals, and potentially a new level of distrust towards your employer. The impact of these three high-levels influencing factors of Digitalization can be visualized as in Fig. 4.

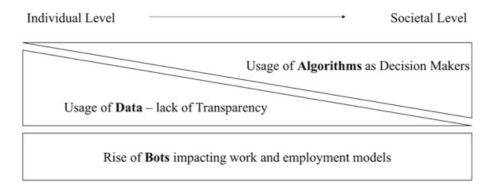


Fig. 4 Impact direction of key digitalization vectors

Need of Trust

With more and more data usage, people are increasingly afraid that privacy and security will disappear. More and more citizens seem convinced, that with increased importance of algorithms, diversity and broader knowledge will go away. And with the entrance of (ro-)bots, jobs and employability will vanish. Trust in the relevant institutions can change this.

Data, Algorithms and Bots present key components of a Digital Society, but the impacts need to be aligned with societal expectations. Trust is needed at individual level to participate in the data economy and understanding personal and professional opportunities and threats. It is needed in believing news and updates on Social Media that they really come from trustworthy sources. And trust is needed at the employment level to believe in employers and in own (maybe new) capabilities not to be replaced by bots soon.

Level of Trust

Over the years, with a small exception in 2015, we have seen a modest increase of trust towards business by consumers around the globe (Edelman 2016). However, there is one important aspect to pay attention to: The Informed Public (university graduates who follow the media and have incomes in the top 25%) is significantly more trusting institutions (Business, Governments, NGO's and Media) than the general population. According to Edelman, people who understand the changes and are capable or willing to adapt, are more likely to trust the changes that business and technology initiate. The more one understands the concepts of the 'New World' the more likely he is to trust the key actors.

It is also remarkable, that many people who say they do not trust businesses, have actually little ideas who *business* is and who are the people leading them. Name a CEO? 53% of people in the US could not name one, 68% of UK residents failed and 80% of German respondents did not come up with one single name. At a global level, only Mark Zuckerberg and Bill Gates received significant mentions (Edelman 2016).

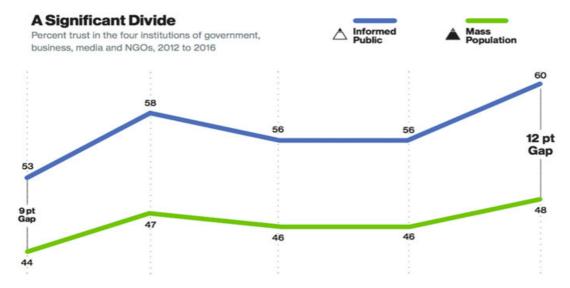


Fig. 5 Trust in Institutions among the Informed Public and the Mass Population (Edelman 2016)

Industry	2012	2013	2014	2015	2016	5 yr.Trend
Technology	76	73	75	73	74%	▼ 2
Food & Beverage	63	63	64	63	64%	▲ 1
Consumer Packaged Goods	57	60	61	60	61%	▲ 4
Telecommunications	58	60	61	59	60%	▲ 2
Automotive	62	65	69	66	60%	▼ 2
Energy	53	57	57	56	58%	▲ 5
Pharmaceutical	54	54	55	54	53%	▼ 1
Financial Service	43	47	48	48	51%	▲ 8

Fig. 6 Trust levels across Industry sectors 2012–2016 (Edelman 2016)

In understanding the widening trust gap, the information process also needs to be looked at—and Social Media plays a significant role: Today, general public is relying less on newspapers and traditional magazines (as the informed elite does), but choose self-affirming online communities as the most credible source of information. People active in social networks mention *friends and family* (undoubtedly with a similar value system) and *Search Engines*—as the predominant information source (Edelman 2016) (Fig. 5).

Looking at the trust levels by industry, we see that for the last years, trust in Technology firms was higher than for all the other sectors, though a little declining over the years (Edelman 2016) (see Fig. 6). This is especially surprising, as it seems that the industry driving change more than any other sector is at the same time the most trusted.

This, however, might not be the case in the future. Even the informed public is increasingly skeptical that the pace of innovation is at the right speed. Only 1 in 5 said it's right, but more that 50% of global respondents consider that innovations

TRUST IN BUSINESS INNOVATION: PACE IS TOO FAST BY A 2-TO-1 MARGIN



THE PACE OF DEVELOPMENT AND CHANGE IN BUSINESS AND INDUSTRY TODAY IS...

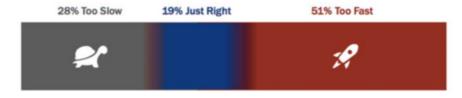


Fig. 7 Trust in Business Innovation among the Informed Public (Edelman 2015)

INNOVATIONS PERCEIVED AS DRIVEN BY TECHNOLOGY, BUSINESS TARGETS AND GREED/MONEY



DRIVERS OF CHANGE IN BUSINESS AND INDUSTRY TODAY ARE PERCEIVED TO BE:

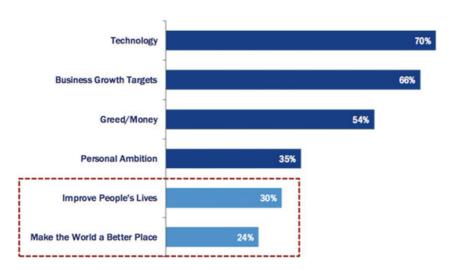


Fig. 8 Perception of importance of Innovation drivers (Edelman 2015)

come out too fast (see Fig. 7). This might be an indicator of potentially declining trust in the future.

Another aspect to worry about future trust to Business stems from the survey results that innovation is seen less and less being motivated to improve people's lives and make this world a better place (Edelman 2015).

Overall, we currently see a rather high level of trust into businesses, mainly in the IT Industry. There are two things to watch out for, though: The general public is trusting institutions much less than the informed public, indicating that more and more people risk of being 'left behind'. Overall, there are risks of declining trust to Business, as the motives for innovation center less and less around people and societies (Fig. 8).

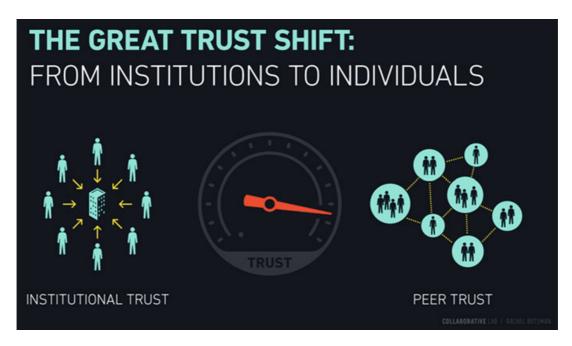


Fig. 9 From trusting institutions to trusting individuals (Botsman 2016)

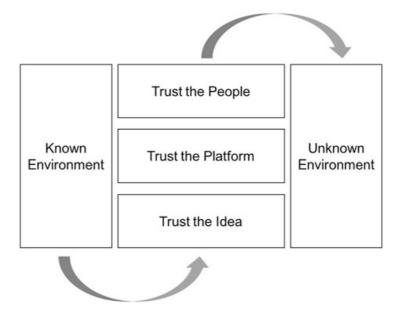
A New Model of Trust

Rachel Botsman, known for her research in the area of collaborative consumption (Botsman and Rogers 2010), where trust is also a dominant prerequisite, recently presented the concept of the 'Trust Stack', that is very helpful in understanding how trust can be improved at three different (building on each other) trust levels. The sharing economy is largely based on peer-to-peer marketplaces that depend on the social glue of trust between strangers. We are currently at the start of the shift from trusting people more than corporations or government (Fig. 9).

This new era of trust needs a measure, namely 'reputation capital' (Botsman 2016), which can be understood as the 'the sum value of your online and offline behaviors across communities and marketplaces.' It will transform how we think about wealth, markets, power and personal identity in the twenty-first Century—and it will be the key basis for societal trust in a digital world. Conventions of how trust is built, managed, lost and repaired—in brands, leaders, and entire systems are being turned upside down. Technology is creating new mechanisms that are enabling us to trust unknown people, companies and idea (Botsman 2016).

In order to build this reputation capital, a new trust framework is emerging in the collaborative economy, the 'Trust Stack'. In the first layer of the Trust Stack, people have to trust that a new idea is safe and worth trying. The next layer is trusting the platform, system or company facilitating the exchange. The third layer is all about trusting the other user while interacting with each other (see Fig. 10).

Fig. 10 The trust stack (Botsman 2016), own illustration



Over time, people open up to changing their behavior the more they 'live' in these trust structures, and then eventually regulations and policies adapt to ultimately change a system that is sustainable for society in a digital world.

5 Summary

This contribution took a look at three of the most relevant developments in technology, their impact on Digitalization and in the long run on how we want to live and work—Social Sustainability. We have only seen the beginning of it yet and the future is all but clear. Innovations happen at an ever increasing speed and new technology will continue to enhance our lives. At the same time, and not downplaying all positive outcomes of digitalization, we need a closer look and more focus on what the relevance and impact for society will be. Because it will affect how we act as a community, what values we pass on to the next generations and how sustainable our society is as a whole, in ways we want it to be. If we are not careful, digitalization might have impacts on how humans live together that can't be easily redone. We need an open discussion on the consequences of digitalization and we need transparency. As Digitalization continues, it mainly requires trust as a new glue. Not only for the informed Elite, but for all people. We all need to trust the ideas, trust the platforms, and trust the people behind. Over time, people are only likely to change their behavior if they 'see' these trust structures, and then accept changes in a system that is really sustainable for society in a digital world (Fig. 11).

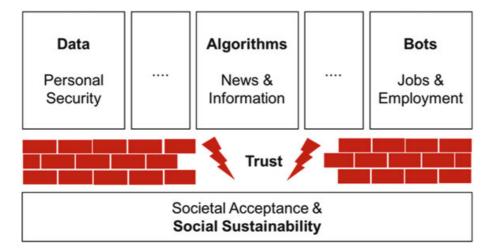


Fig. 11 Relevance of trust to move to sustainability in a digital world

Richard Edelman (2017) summarized the new challenge well: 'We have moved beyond the point of trust being simply a key factor in product purchase or selection of employment opportunity; it is now the deciding factor in whether a society can function'.

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