



Participation in a Digitalized World

Digitalization at the service of society

As digitalization progresses, considerable changes are taking place in the political, social, cultural and economic structures found in societies all around the globe. The worldwide expansion of information and communication technologies is resulting in greater connectivity and a faster pace of life. This expansion is making communication easier regardless of time and place; it is also increasing transparency within society and, thus, fostering opportunities for political participation. At the same time, digitalization is boosting productivity and resulting in more efficient value chains. It is creating new possibilities for exchange and collaboration. Finally, digitalization is improving access to consumer, investment and intermediary

goods that are custom-made to meet individual needs, as well as to personalized products and to public services, such as education and health care.

Yet digitalization is also giving rise to challenges. These include the current barely containable flood of information, new demands placed on employees as a result of changing production processes or business models, the threat of job losses, increased pressure on social welfare systems, and evolving requirements in the area of data protection, data sovereignty and public safety.

At a glance

Until now the discourse on digitalization has often focused on the attendant dangers and technology, a situation the Bertelsmann Stiftung would like to change by contributing a new perspective, one that highlights societal aspects and opportunities for shaping digitalization and its impacts. To that end, we are using this paper to state overall positions shared by the programs at the foundation. The aim is not to consider concrete demands or current approaches, but to explain the foundation's general attitude towards digitalization as it affects participation in the areas of education, democracy, social affairs, health, culture and the economy. In our role as bridge builder, agenda setter and solutions developer, we want to use the principles stated here [to help put digitalization at the service of society](#).

Shaping digitalization to increase opportunities

Digital developments must now be shaped proactively, a process that needs to include all societal actors. To that end, we view digital change processes as a valuable opportunity: They need not be seen as yet another problem, but can help respond to analogue challenges instead. At the same time, digital technologies are not a magic bullet, and over-expectations should be avoided. These technologies need to be intelligently deployed, and adjusted to the relevant situations and target groups in a way that promotes participation.

Responding proactively to negative impacts

The risks inherent in digital developments must be recognized early on and actively addressed. Basic principles such as solidarity, representation and freedom are sometimes questioned – a line that, we firmly believe, must not be crossed. In addition, digital processes magnify developments that are detrimental to society such as the “digital divide”. It is therefore imperative that everyone be able to participate in digital innovations by developing the skills needed to do so. After all, digital participation is the prerequisite for social participation.

Putting the focus on people

Digitalization cannot become an end unto itself. The goal of digital developments must instead be ensuring such developments are of true benefit and that every individual can participate in them. When deployed in a responsible manner, digital technologies have, for example, the potential to free up time for the fundamental things in life and for engaging with others in person. With their new possibilities for dialogue, cooperation and participation, digital applications create value for society. Moreover, when used as the basis for intelligent applications, open data offer the chance to increase participation and transparency for everyone in society. For this to be the case, individuals must be authorized and empowered to deal with their personal data as they see fit, and must be supported in doing so by public governance mechanisms.

Focus and goal

In keeping with the Bertelsmann Stiftung's mission – “Inspiring people. Shaping the future. Participating in a globalized world” – we engage with digital developments by focusing on digitalization's opportunities and risks as they relate to social participation.

Definition of “participation”

We view participation as the actualized possibility of autonomous, self-determined and active involvement by everyone in society in political decision-making and consensus-building processes and in social, cultural and economic developments. The prerequisite for participation is, on the one hand, a free democratic state governed by rule of law that offers equitable opportunities to all citizens. It also means that each individual must have a minimum of material means at his or her disposal, making it possible to take part in society. On the other hand, people must be empowered to make full use of these opportunities for themselves. The state and the community are responsible for this, as is each individual, who must strive to empower himself or herself. Given the need for lifelong learning and the multiple job changes most people will experience, this is an issue that must be addressed on an ongoing basis.

Participation is affected both positively and negatively by digital change processes. On the one hand, digital applications create more equitable opportunities thanks to new forms of and new venues for participation, for example by providing easier access to educational and health-care offerings and to policy-making processes. On the other hand, digital change processes can also make opportunities less equitable if not everyone is empowered to make use of digitalization's

potential to the same degree. In addition, algorithms, platforms and other similar phenomena taking place in the digital sphere make it possible to redistribute the opportunities people have to participate, for example when job candidates are evaluated by software applications.

In its program areas, the Bertelsmann Stiftung addresses the diverse social change processes that are being initiated and determined by digital technologies. More specifically, it does so in the areas of health, education, the economy (with a focus on employment), democracy, culture and social affairs. In this paper, we are stating the overall positions shared by the foundation's various programs and projects. The focus is not on concrete demands or solutions, but on how the foundation views digitalization in terms of the latter's impact on participation.

The foundation and its various roles

Based on the positions described here, we engage in various ways in the public discussion of digitalization, above all in the areas of education, health and the economy/employment, and by addressing the interdisciplinary topic “the ethics of algorithms.” We want to enrich what is often a debate dominated by specific interests by adding a voice that speaks for the common good. We also want to encourage other civil society actors to become actively involved.

We view ourselves, first, as a *bridge builder* who brings together the relevant actors to discuss and assess digitalization's opportunities and risks. In addition, we consider ourselves to be an *agenda setter* who analyzes the impact digital change is having on everyday life, including the workplace. In doing so, we provide, on the one hand, a concise summary of complex developments and

show the affects they are having; on the other, we introduce new subjects into the debate and present our findings on issues of critical importance to society's future. Based on this, we design concrete solutions that can increase participation in a digitalized world, thus taking on the role of *concept developer*.

The Bertelsmann Stiftung's positions

Digital technologies are transforming all areas of life. They influence how we communicate and are informed about current events, how we learn and work, how we engage with society and how we access information and services. This transformation will only accelerate in the future. Yet digital change processes can be shaped, which is why we see them as an opportunity; at the same time, we recognize the attendant risks. To that end, we want to add a new perspective to a discourse that has often been fear-laden and technology-driven, a perspective that focuses more on shaping participation to benefit society.

On the one hand, digital applications offer the chance to get everyone more involved. This considerable potential will not be realized on its own, however. It will take effort to ensure that digital change succeeds as it should. It must therefore be proactively shaped, with all its opportunities and risks, so that its potential for benefitting society can be fully tapped. Otherwise the risk exists that participation will remain limited and social inequalities could even increase. This situation must be avoided at all costs. Moreover, efforts must be made to show people the positive impact that digitalization can have on their lives.

Shaping digitalization for better opportunities

Shaping digitalization now

Digital change processes can neither be reversed nor prevented. That makes it all the more urgent to shape digitalization, one of today's megatrends, and to do so now. For example, we need to be more open to innovation and we need a policy framework that addresses the increasing use of digital technology in the working world. Similarly, solutions for digitally connecting all regions in Germany are required, as are intelligent approaches to education that go beyond mere technical infrastructure. An overall digital strategy must also be developed for the health-care system.

Technology and digital developments need to be shaped by everyone in society. In addition to the interests of economic actors, which currently dominate the discourse, the interests of the community and civil society must also be considered and their voices amplified within the public discussion.

Instead of simply waiting, we must shape and steer digital developments proactively and in a far-sighted manner – thereby ensuring everyone can participate. For example, we must examine today how to make algorithm-driven predictions accountable before they begin determining how decisions are made in many areas of life.

Instead of hesitating to get actively involved because of the potential dangers, we must focus on the opportunities digitalization offers for increasing participation – including one key opportunity: the fact that digitalization itself can be shaped to benefit society.

Smartphones, the Internet, networked devices and software are part of everyday life and are here to stay. Their impact on society will grow considerably in the future. Products and services are becoming increasingly personalized and, because of the burgeoning Internet of Things, more and more data are being collected. Productivity and efficiency are increasing thanks to networked devices, while connectivity is playing a greater role in the workplace and in today's communications. Against this background, it is important to assess the medium- and long-term consequences of digital change processes so that participation will be possible in the future as well. That means skill sets must be expanded today to ensure people can be part of tomorrow's digital job market.

Digital solutions to analog challenges

We do not view digital change processes as a new problem, but as an instrument and lever that can be used to overcome existing or emerging social problems. As part of the democratic process, for example, I-voting (voting via the Internet) and online participatory processes can also reach younger, Internet-oriented citizens who have seldom voted in the past and who have consequently been underrepresented in election results. Intelligently used, digital data and applications also offer sustainable solutions to challenges stemming from transit- and transport-related issues (e.g. managing traffic flows). Thanks to telemedicine, regional gaps in health-care provision can be minimized and existing shortcomings overcome. In education, software can promote individualized learning, making it possible to respond to the growing diversity among learners.

This goal will not be achieved, however, if these digital options are merely explored in theory, if entire systems are reconceived or if the most far-reaching solutions are found. We must begin where digital possibilities already exist or where analog problems are preventing progress from being made. In such cases, ideas must be developed step for step and then tested. Concrete approaches of this sort can then be used as the basis for policy responses over the long term.

Digitalization is not a magic bullet

Digital applications do not offer a solution to every problem per se. Many challenges are too large to overcome with digital technology alone. Digital platforms for participation, for example, cannot completely close the social divide and it is important not to foster expectations that digital technology cannot meet. Some tasks, moreover, are too complex to be accomplished with the help of algorithms.

For other goals it's important to adjust digital technologies to match the context, thereby fostering participation. For example, digital platforms (e.g. Facebook) are very well suited to assembling groups or mobilizing people, but less suited to engaging in productive policy discussions. New venues are needed that are structured differently – through the inclusion of facilitators, for example – so that the public can take part effectively in the discourse and in digital democracy. Digital applications designed for political participation (e.g. online participatory processes) have to be adjusted in terms of language, function and complexity to reflect the desired target group, so that its members can make use of the opportunities these applications offer to participate.

Responding proactively to negative impacts

Planning for risks and tensions

The risks that digital developments bring cannot be ignored, since digital change processes necessarily give rise to tensions that will require ongoing attention. To that extent, both positive and negative consequences could arise for both individuals and society. In the area of education, personalized learning offers the advantage of tailor-made products and services, as well as the disadvantage of potential discrimination (e.g. by future employers) because of the data collected for the products and services. Digital health-care initiatives could serve as the basis for bonus or prevention programs offered by health insurers. Yet they, too, can generate new data that, once evaluated, could result in certain individuals losing the protection afforded by membership in the larger insurance pool. Such risks relating to data protection and security must be identified early on and proactive responses introduced to counteract them – through regulatory mechanisms, but also by educating and empowering the public.

Negative consequences of this sort are a “line in the sand” that cannot be crossed, especially if basic social principles such as solidarity, representation and freedom are called into question. In a health-care system based on the principle of solidarity, for example, a bonus cannot devolve into a penalty when bonus programs are used to promote digital health-care services. Moreover, as the contact between patients and doctors increasingly takes place using digital media, personal interaction cannot be allowed to become the exception, i.e. the preserve of the privileged few. Democracy’s processes of representation cannot be replaced by algorithm-

based decisions. In the workplace, the more flexible working arrangements that are made possible by digital technologies must not be allowed to result in workers being exploited and in their having less freedom. In particular, issues that present such a “line in the sand” must be proactively addressed and regulated – instead of waiting until boundaries have been crossed.

Digitalization as negative trend accelerator

Digital processes accelerate trends and can therefore reinforce negative social developments such as the growing social divide. Digitalization-related phenomena can contribute to widening the gap. For instance, it is possible that algorithmic decision-making (ADM) processes can exacerbate existing disadvantages if metrics used for discrimination (e.g. income, place of residence) serve as the basis for calculations that lead to further discrimination (e.g. denied credit access, rejection of job applications, higher insurance rates). Whenever opportunities to participate are threatened, an urgent need exists to modify the system. It is important to increase transparency about when ADM processes are used and why. In addition, it must be possible to evaluate both the process and its results using an array of predetermined criteria and values.

Social divisions are also reinforced when people who are already disadvantaged have less access to digital developments than their more advantaged counterparts; this is also true if their knowledge of how to access these developments is limited (“digital divide”). In this case, they cannot benefit from digitalization’s diverse potentials and will be able to take part in even fewer social processes than before. To counteract this threat, low-threshold, target-group-specific products and

services are needed that can help people acquire the relevant digital skills.

No social participation without digital participation

In today's world, participating in digital processes is increasingly becoming a precondition for taking part in society. Information and communication technologies offer various possibilities for getting involved in social processes, for initiating and shaping them. Thanks to the Internet and other digital applications, people can make use of a large amount of highly diverse information and knowledge, as well as personalized services, to which they previously had no or only limited access. In addition, the Internet offers them new options in the realms of finance, employment and participation, such as crowdfunding websites and online civic engagement platforms. These digital solutions provide rural regions in particular with the possibility of involving people in social developments to a greater degree that has been the case until now. Thus, when designed properly, they can arrest the process that is increasingly leading to regional inequalities in Germany and elsewhere.

Yet the mere existence of such opportunities is not enough – people must be able to make use of them. That means people must be empowered to choose, use and actively shape digital services. In addition to nationwide high-speed Internet access, digital skills have a key role to play: People must have a fundamental understanding of how digital change processes work and must be able to engage thoughtfully with digital applications (e.g. when searching for information on the Internet or in social networks). Being able to manage one's own data sensibly and responsibly is also a prerequisite for engaging

with the digital world in a way that is both self-determined and safe.

Putting the focus on people

Making usefulness for people a priority

Our mission is “Inspiring people. Shaping the future. Participating in a globalized world,” which means we always focus on people and the human aspect. Digitalization is, for us, not an end unto itself. It is about finding solutions that are truly useful. Deploying digital technologies is not enough. They must be designed in a way that makes it possible for people to get actively involved and allows them to benefit in a truly meaningful manner. In other words, technology has to be geared towards people's needs – and designed accordingly.

This approach is typical of digital organizations, and others would do well to emulate it. For example, electronic identity cards have been introduced in Germany to reduce the number of visits people must make to public authorities and to protect them from online threats (e.g. identity theft). The German public views the matter differently, however, since only one-third of those who have received a new identity card have activated its online features. Ultimately, the public decides which technologies are actually useful. Getting them to accept and trust new digital applications should be a key goal when those applications are introduced. Practical everyday examples must be used to familiarize people with technical solutions. This, in turn, would reduce many of the fears the public has about digital technology.

More time for what counts

Digital applications have the potential to relieve us of undesirable, time-consuming tasks, so that we have additional time to concentrate on more important things. While people can sometimes feel that new applications only add to the flood of information that already exists or are just a new distraction or new challenge to master, digital tools can in fact make it easier to complete various chores more efficiently. Yet this does not usually happen overnight. People must first learn how they can use digital media in the most productive way and when they should favor online options over offline media, and vice versa. This learning process requires support; for example, the relevant skills must be imparted. When that happens, time is saved – time that can then be spent face-to-face with others, focusing on relationships and making them more meaningful. For example, when basic knowledge is imparted using software applications, teachers have the freedom to interact with students more closely, discussing the relevant subjects and providing them with additional support. Similarly, when telemedicine replaces house calls, doctors must travel less and have more time in their practice to interact with patients in person and develop more rewarding relationships with them. We must make use of this potential.

Regulatory frameworks must be changed if this is to be the case. For example, software-based learning must be included in the curriculum, and the appropriate remuneration must be determined for doctors who videoconference with patients. Greater demands could also be placed on workers when time is saved because of digital technologies. If the time freed up by digital applications is used solely to increase efficiency, then valuable potential will be wasted. We must

make an active effort to ensure this does not happen.

More dialog, cooperation and participation

Information and communication technologies add value to society since they offer new possibilities for exchanging ideas, working together and getting involved. In the area of health care, for example, patients can gather information online prior to or following a consultation, allowing them to better discuss their situation with their doctor. That means the patient and doctor can decide together, instead of the doctor simply informing the patient of what comes next. In the cultural sphere, digital platforms and communication forums offer an opportunity for dialog, for example between artists and their public. In democratic processes, digital applications facilitate dialog and participation, for example by allowing people to network more easily online, thereby building groups that can represent their political interests. Moreover, digital technologies offer numerous possibilities for promoting cooperation, for instance through video conferences, web-based further education courses and organizational tools that foster teamwork.

More data sovereignty for each user

Anyone who makes use of these possibilities to network, collaborate and participate necessarily shares his or her personal data at a number of points along the way. If people are to move about freely in the Internet, they must be sure that their data are transmitted securely and are protected (e.g. against identity theft). They must also be able to determine which data have been collected and used and by whom. Digital applications can

help here, too, for example in the form of consent receipts that make it easy for users to understand where their data has been stored and who is using it and how. Software can also make privacy disclaimers more transparent by comparing them to quality standards and displaying the results clearly and comprehensibly. Measures such as these can be employed to give users more control, allowing them to maintain sovereignty over their own data and decide as they see fit who can use them and how. Everyone should be provided with the skills needed to achieve this goal.

With this focus on data sovereignty, we have chosen an approach that envisions an active role for the individual. It replaces an approach that views data protection as solely the responsibility of external actors. At the same time, big-data applications pose a major challenge for methods that rely on individual control alone. This is because evaluations of data from a smaller number of individuals can be used to extrapolate information about larger groups – even individuals who have not made their data available. Individual actions must therefore be supplemented by communal regulations.

To deal with personal information responsibly in the age of big data, companies must self-regulate by carrying out voluntary risk analyses. To make sure their processes are truly transparent, moreover, risk assessments must be mandated by public authorities and conducted by independent third parties. This will ensure the processes companies are using are comprehensible to the public.

Using open data for participation and true transparency

We see open data as yet another chance to deploy digital applications to support society by fostering participation. Open data from public authorities, for example, can serve as a basis for developing useful applications capable of solving social problems (e.g. energy supplies or traffic flows) and to make decisions and services more comprehensible to the public. Political governance can also benefit, since open data make fact-based decisions possible that are easily understood and thus readily communicated to the public. Applications such as these can increase the legitimacy of policy decisions. In the area of health care, data generated during routine processes can result in high-quality, efficient health-care management if they are intelligently pooled and evaluated. Data protection and security must always be considered, also in the case of open data. Methods for sufficiently anonymizing data are therefore required to protect users' privacy.

Open data can result in significantly more transparency – although that is not necessarily the case. This is because open data can contain incorrect information, which reduces transparency. Excess amounts of data, moreover, can lead to output that is impossible to understand. To be truly transparent, data must be sorted and categorized, something that can be done with digital technologies. Information prepared in this manner generally offers new understanding and insights.

For example, users can follow the activities of their political representatives or compare doctors or hospitals with the click of a mouse. On the one hand, this offers them the possibility of acting more autonomously, since their decisions are based on better information. On the other, there is increased pressure on public leaders and other decision makers since their actions are being observed. This means that, by providing greater transparency, digital technologies can also ensure higher-quality services.

Contact

Education



Ralph Müller-Eiselt
Phone: +49 5241 81-81456
Mail: ralph.mueller-eiselt@bertelsmann-stiftung.de
Twitter: @bildungsman

Democracy



Emilie Reichmann
Phone: +49 5241 81-81561
Mail: emilie.reichmann@bertelsmann-stiftung.de
Twitter: @EmilieReichmann

Health



Timo Thranberend
Phone: +49 5241 81-81117
Mail: timo.thranberend@bertelsmann-stiftung.de
Twitter: @thranberend

Culture



Dr. Ute Welscher
Phone: +49 5241 81-81395
Mail: ute.welscher@bertelsmann-stiftung.de
Twitter: @UteWelscher

Economics



Labor Market and Employment
Dr. Daniel Schraad-Tischler
Phone: +49 5241 81-81240
Mail: daniel.schraad-tischler@bertelsmann-stiftung.de

Society



Digital Municipalities / Smart Country
Carsten Große-Starmann
Phone: +49 5241 81-81228
Mail: carsten.grosse.starmann@bertelsmann.de
Twitter: @Cagrostar



Business and Workplaces
Dr. Ole Wintermann
Phone: +49 5241 81-81232
Mail: ole.wintermann@bertelsmann-stiftung.de
Twitter: @olewin



Ethics of Algorithms
Konrad Lischka
Phone: +49 5241 81-81216
Mail: konrad.lischka@bertelsmann-stiftung.de
Twitter: @klischka



Digital Leadership
Martin Spilker
Phone: +49 5241 80-40283
Mail: martin.spilker@bertelsmann-stiftung.de
Twitter: @spilker_martin

Address | Contact

Bertelsmann Stiftung
Carl-Bertelsmann-Straße 256
33311 Gütersloh
Phone+49 5241 81-0

www.bertelsmann-stiftung.de/digitalisierung

Publication Details

© June 2017
Bertelsmann Stiftung, Gütersloh

Photos:

Cover: Pixelfit / iStockphoto
Page 11: Studio Clemens, Kai Uwe Oesterhellweg,
Jan Voth, Thomas Kunsch

Editors:

Sarah Fischer, Ralph Müller-Eiselt

www.bertelsmann-stiftung.de