Chapter 8
Responsible Digital Transformation of Social Welfare Organizations

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8.1 Introduction

In recent years, the debate on digitalization played an increasingly important role in welfare organizations. However, the term digitalization is used to describe a variety of different things (Hess 2019): (1) A narrow use of the term refers to the binary coding of analogue information and thus to make it available for data processing in computer systems, for example, when scanning a paper document. (2) A broader term refers to the processes and procedures that change in the course of using digital technology, for example, in organizations. (3) In a comprehensive sense, digitalization describes a social and societal transformation process described in terms such as the "network society," the "knowledge society," the "information society," the "control and surveillance society," the "digital capitalism" or the "culture of digitality." In the following, we take the second definition of digitalization as a basis. We do not understand digitalization in a narrow technical sense, but rather focus on aspects of social and organizational embedding and contextualization of socio-technical systems.

Digitalization is already an integral element of social welfare organizations: Information systems support professionals during anamneses, planning, accounting, administration and documentation (Gillingham et al. 2020; Ley 2012). Digital technology supports communication in the social sector, communication between professionals, but also between professionals and clients (Döring 2019; Seelmeyer 2018). Some organizations use online counselling, and even the usage of chatbots to support social services is debated (Waag et al. 2020). Another technology strongly

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discussed is the application of decision support systems (Bastian 2017; Schneider and Seelmeyer 2019; Gillingham et al. 2020). Those systems are algorithm-based and make use of big data analysis. In addition, assistive technologies support social services (Klein 2010; Schiffhauer 2020). Using those sorts of technology can have great impact on organizations, professionals and clients (Kutscher et al. 2014) as well as on society.

Digitalization should be handled and reflected by social welfare organizations in respect of four dimensions: risk, chance, responsibility and necessity (Schiffhauer 2019): Digitalization poses multiple social and ethical challenges (like substitution of employees or surveillance), which must be observed and evaluated in terms of the goals of social organizations. Chances of digitalization present themselves in opening up opportunities for the employees and addressing social services (e.g. supportive innovative technology). Social organizations need to take the responsibility of actively monitoring and constructing the effects of digitalization for the benefit of the people and to enhance social compensation, as counteracting discrimination is one of the major tasks for social welfare (BAGFW 2017). Finally, digitalization is a necessity as it is essential to reduce costs or improve services and disruption of traditional social services can already be identified (e.g. offering different kinds of social services through a single platform, Faiß 2018). These four dimensions elucidate the importance for a responsible digital transformation of social welfare organizations understood as a continuous organizational process of change. Thereby, the integration of innovative technologies has to be considered, which transform products, services, business processes and business models.

However, there is no blueprint on how social welfare organizations could go through this digital transformation process. Common innovation and organizational development processes cannot be applied easily as social welfare organizations differ from industrial companies (Eurich et al. 2018, p.3; Parpan-Blaser 2018, p.262). Accordingly, there are hardly any models for social services to initiate, design and implement social innovation processes (Parpan-Blaser 2018, p.262; Schöttler 2018, p.157, Eurich et al. 2018, p.1). Furthermore, there is a lack of systematic concepts for the evaluation of technologies for usage in welfare organizations (Buhr et al. 2016) and for social services (Becka et al. 2017). In this respect, it is necessary to adapt procedures from the context of technology development to the requirements and general conditions of social welfare organizations and at the same time to develop suitable models for introducing and anchoring digital technology as a social innovation in the organizations. How this challenge can be encountered will be illustrated by means of a case study that describes a corresponding procedure at the German social welfare organization Arbeiter-Samariter-Bund; Workers' Samaritan Federation North Rhine-Westphalia registered association (ASB NRW e.V.) Without recapitulating the scientific discourses on organizational change processes, at least a well-founded classification of the case study outlined below should be made. The procedure developed there is based on reflexive approaches of technology development, characterized by a strong emphasis on user-centricity and the inclusion of ethical aspects. These approaches are not limited to the aspect of technology development but are extended by elements of organizational development as well as criti-

cal success factors of change processes. As a basis for this, fundamental aspects for a successful organizational development in social welfare organizations will be worked out in the following in order to link this in a next step with existing frameworks and methods from the context of technology development such as Responsible Research and Innovation (RRI), Design Thinking and Human-Centred Design (HCD) for interactive systems.

8.2 Organizational Development and Innovation in the Context of Social Services

Discussions about and management of transformations in welfare organizations should involve organizational-theoretical considerations. Different disciplinary approaches – from sociology and psychology to business administration and management – differ both in their focus on content and in whether they primarily provide analytical or practical knowledge. Classical organizational models in the tradition of Max Weber assume that organizations are essentially structured by rationality of purpose. However, recent approaches in organizational sociology point out that such rationalities of purpose have a legitimizing rather than an instrumental function in the control of the organization (Grunwald 2018). This leads to a shift towards informal logics and practices in organizations, which can complement, irritate and overlap formal processes and structures (Büchner 2020). These findings can be used as analytical starting points for the processes of organizational learning and organizational development in the context of digital transformation. Out of the broad spectrum of organization-related theories, analyses and concepts, those dealing with organizational change processes are of particular relevance to the following considerations (cf. as an overview, e.g., Schreyögg and Geiger 2016, 357 ff.). There are many findings on barriers to organizational change, as well as on the prerequisites, principles, phase models and methods for successful change. Approaches such as organizational development (Cummings and Worley 2015) – in the diagnostic and dialogical variant – organizational transformation, organizational design, change management (Doppler and Lauterburg 2019) or organizational learning (Huber 1991) can be roughly distinguished and described with their respective focuses and emphases. However, usually, they are not clearly defined and show some overlaps. These more basic approaches are complemented by more limited and focused concepts such as quality development, quality management, knowledge management or – currently popular – innovation management.

Core elements of almost all models of organizational development and at the same time critical success factors of change processes are employee participation and transparency of communication about the process (Frey et al. 2008). Frey and colleagues point out that change processes can lead to uncertainty among employees. They suggest that employees should participate at the change process, so that they can (re)gain control over the situation. This could lead to a stronger identifica-

tion of the employees with the project and further on motivate and encourage their involvement. In addition, there should be a clear goal and vision set up and communicated in a transparent way to everyone involved. A common mutual awareness is seen as a basic principle for a successful change management process. A close connection between technology and organization is also central to concepts such as innovation management (cf. Hauschildt et al. 2016). However, the methods developed there, which are usually designed for the corporate context, cannot be easily transferred to the field of social work and welfare organizations.

There are three types of organization that predominate in the field of social work in Germany: (1) state agencies and administrations, which can act both as funding partner and provider of services, (2) welfare organizations and (3) social economy enterprises, whereby in practice, different hybrid forms of the latter ideal types occur. The organization Arbeiter-Samariter-Bund referred to in the case study can be assigned to organization type "welfare association," but also has elements of the type "social economy enterprise." Social welfare organizations can be determined as "professional organizations" (Klatetzki 2012), which combine bureaucratic structures within team structures based on professional values (Klatetzki 2012, 175 f.). Besides bureaucratic and profession-related rationalities, Schöttler refers to economic, socio-political and association-specific religious or ideological objectives and logics as supplemental rationalities (Schöttler 2019, p. 90). In order to connect these multiple rationalities productively, additional communicative spaces are needed. Those enhance the "discourse capacity" of the organization and lead not only to technical but also systemic innovations (Schöttler 2017, 2019). The characteristic of social welfare organizations as pluralistic or hybrid organizations is important for the design of innovation and transformation processes: In contrast to routine and projects, innovations are characterized by the fact that neither path nor goal is clear and must be developed first. Therefore, the mindset for goal development associated with the term "open innovation" (Chesbrough 2003) is evident in the entrepreneurial context (Schöttler 2019). Nevertheless, innovations are always risky as well as the resources used for them. Hence, Schöttler proposes a "state-gate process" (Cooper 1990) as a multi-stage decision-making process with increasing resource input.

As social work can be defined as "a practice-based profession and an academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people" (IFSW 2014), social welfare organizations base their work on specific norms and values. The importance of specific norms and values lies in the interaction with often vulnerable or marginalized groups and/or individuals. The goal is to help, to empower them and to increase their well-being (Homfeldt 2012, p. 499). Therefore, it can be stated that working with those people implies moral and legal components (Klatetzki 2010, p. 10). Social services in particular have a moral component, since clients are often affected by social problems, which are anchored in the social structure of a society. These can change depending on the current norms and values of a society, so social services also require analytical reflection (Kessl and Otto 2012, p. 1310ff.) For example, in their work, profes-

sional social workers refer to a code of ethics that includes human rights and social justice (DBSH 2016, p. 2; Staub-Bernasconi 2009, p.133ff).

Thus, social welfare organizations have to focus on the social and ethical aspects of digital transformation and innovation processes. Innovations in this field are always to be conceived as social innovations in the sense that they are "innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly diffused through organizations whose primary purposes are social" (Mulgan 2006, p.146). Although systematic concepts for a responsible and reasonable ethical and digital transformation for social welfare organizations are missing "Responsible Research and Innovation" (RRI), Design Thinking and Human Centred Design (HCD) for interactive systems offer frameworks for responsible innovations and therefore are discussed in the following chapter. RRI is a rather open framework for an ethically oriented design of research and development processes and has its roots in the context of European research policy and funding. Design Thinking is a methodological approach that aims at the development of user-oriented, innovative problem solutions by combining different creativity techniques and a high degree of interdisciplinary cooperation. HCD in turn represents a process model especially for development of interactive technical systems, which also includes standards for this. The three approaches thus have a different focus on the levels (1) framework/orientation, (2) process/method and (3) content standards.

8.3 Frameworks for Responsible Development and Implementation of Digital Technologies

The core problem of responsible innovations and digital transformation is that the effects must be anticipated in advance, but the consequences cannot be predicted with certainty until the innovation is developed and used. At the same time, it is difficult to alter the innovation, when it is widely distributed, so-called path dependence (Collingridge 1980). Using the framework of RRI is one way to anticipate the impacts before and during the innovation process. Although there is no widely accepted definition of RRI (Bogner et al. 2015; Lindner et al. 2016), the idea is that "Responsible innovation is a collective commitment of care for the future through responsiveness, stewardship of science and innovation in the present" (Owen et al. 2013, p.36). RRI is an iterative and multi-actor-integrating approach to direct and control research and innovation in a normative way, for example, based on sustainability or social desirability (Lindner et al. 2016, p.10). Thus, the integration of such a process is suitable for social welfare organizations, as they aim "to motivate people to work for the common good and […] to follow the idea of social justice as advocates for people in need of help" (https://www.bagfw.de/ueber-uns/freie-wohl-fahrtspflege-deutschland/selbstverstaendnis). For the implementation of the RRI framework, four dimensions are proposed (Owen et al. 2013; Lindner et al. 2016): reflexivity, deliberation, responsiveness and anticipation. Being reflective means

rethinking one's own activities, goals and motivations and assign to codes of conducts and regularities (Owen et al. 2013; Stilgoe et al. 2013). Deliberation includes an inclusive approach, transparency of the project in the organization as well as in the public, open discussions and debates with stakeholders. Responsiveness refers to a collective and "open process of adaptive learning" (Owen et al. 2013, p. 38) in order to adapt the innovation process iteratively. The dimension anticipation encompasses the description and the analysis of potential (un-)intended impacts, including methods like technology assessment (Owen et al. 2013).

Design Thinking is an approach that can be used for developing and implementing innovations of teams and organizations especially for "wicked" problems (Beckman and Barry 2007). The innovation approach Design Thinking can be applied to any area and any organization in order to increase innovative magnitude; it focuses on the user's point of view and an interdisciplinary co-development with iterative circles to improve the outcome of the project (Carlgren et al. 2016). This approach is therefore also suitable for identifying innovation potential in social welfare organizations. Human-Centred Design for interactive systems (HCD) according to ISO 9241-210 provides a framework for orientation. HCD is a tool for the development of hardware and software to enhance human-machine interaction focusing on human factors. It proposes that the activities for designing human-centred (digital) products are divided into different phases: Impulse & Planning, Specify Context of Use, User Requirements, Design Solution and Evaluation and Testing (DIN EN ISO 9241-210). These two processes can be combined well with each other.

Although Design Thinking and HCD focus on human factors, the ethical evaluation and the focus on responsible innovation is not given enough attention. As it was stated before, ethics and responsibility should be the focus of innovation management in social welfare organization. Thus, Design Thinking and HCD could be combined with methods like RRI for a responsible development and integration of innovations in social welfare states. Therefore, even if there are no specific models of innovation processes for social services, innovative methods such as Design Thinking (Hartmann 2018, p. 144) and HCD together with RRI can be a useful starting point for social service organizations. Based on a project of technology development and implementation, a case study at the "Arbeiter-Samariter-Bund" (ASB) combined these approaches in order to guide the welfare organization through the process of digital transformation.

8.4 Practical Experiences: A Case Study

The social welfare organization Arbeiter-Samariter-Bund (Workers' Samaritan Federation) is a non-profit organization offering services to people's needs like care for the elderly, rescue services, first aid, assistance for children and support for people with disabilities, as well as support for refugees. The organization has more than 1.2 million members and is divided into 16 regional organizations. One of them

is the ASB NRW e.V., where the conducted case study took place. Due to its special responsibility for vulnerable people, the ASB NRW e.V. aimed to innovate and integrate digital technology responsibly. As systematic concepts about the assessment of technology usage and how to integrate technology in social welfare organizations were missing, different concepts like RRI, Design Thinking and HCD were adapted and used to develop a concept for the digital transformation of the ASB NRW e.V. Thereby, important insights of change management processes were included like participation of the team and transparency about the process (Frey et al. 2008). Of course, it has to be mentioned that digital transformation is a process and never is completed. In addition, processes in reality are never conducted as an ideal type.

Participation and transparency are important elements of successful change management processes (Frey et al. 2008; Werther and Jacobs 2014). Therefore, in 2019, the digitalization strategy for ASB NRW e.V. was developed on a participatory, human-centred and scientific basis. First a literature research and a qualitative organizational diagnosis were conducted. The qualitative organizational diagnosis was based on the results of a previous organization development process: all relevant documents were analysed regarding to their importance for digitalization. This was done to ensure that all association-specific religious or ideological objectives and logics were taken into account as suggested by Schöttler (2019, p. 90). Thereof a preliminary digitalization process was conducted.

In accordance with the RRI dimensions "reflexivity" and "deliberation," five workshops were realized. Participants were all associated to the ASB NRW e.V., including volunteers, employees and managers. In all workshops, the preliminary digitalization process and – relating to the RRI dimension "reflexivity" – the goals, motivations and possible consequences were discussed. After each workshop, the digitalization process was adapted following the RRI dimension "responsiveness" and the idea of iteration of the HCD and Design Thinking (for detailed procedure: Schiffhauer 2019). These workshops also opened up additional communicative rooms, as it is needed in social welfare organizations for the development of a discourse (Schöttler 2017/2019). Because of these discussions, the following goal for the ASB NRW e.V. was defined as a *guideline for the digitalization process*: "On the one hand, the ASB aims to further develop its services and establish innovative service areas through digitalization and further technical and medical progress. On the other hand, it is also the aim to maintain and further develop values such as humanity, solidarity and respect as the supporting pillars of our society – in the face of accelerating technological development" (Schiffhauer 2019).

Based on this guideline, two medium-term strategies were developed to achieve the stated goal. The *first medium-term strategy* is "Including the own expertise in the debate on digitalization in society as a whole." It contains the constant and active participation of the ASB NRW e.V. in meetings, workshops and conferences on the topic of digitalization and society to contribute to the guideline. This strategy also includes creating transparency about the digitalization process within the ASB NRW e.V. Therefore, the digitalization process was presented at academic conferences as well as at workshops for professionals and peers. Beneath transparency,

this also enhanced collaboration and communication between academics and society, congruent with the RRI approach (Lindner et al. 2016). Transparency was also created via the website "asb-digitalisierung.de," where information was provided about the process, all talks and participations at conferences, discussions and activities in society.

The *second medium-term strategy* was the deployment and implementation of a process for the "human-centered development of the social services of the ASB NRW e.V. through digitalization" (see Schiffhauer 2019). The HCD approach (DIN EN ISO 9241-210:2010–01) was used as a basis for the process, and methods of Design Thinking, RRI and ethical evaluation of socio-technical arrangements (Manzeschke et al. 2013) were integrated. The testing and application of this strategy are described in the following.

First Phase: Impulse and Planning   Impulses are often an important prerequisite for innovations (Guldin 2004). After a visit to the virtual reality (VR) time travel through the historical Cologne, the idea emerged to use the immersive experience of VR in the first aid training. This approach fulfilled the function of opening up employees to the later process of integrating such technologies and arousing their interest, as described early on by Lewin (1947) as the first phase of Unfreezing for change processes. Afterwards, the planning of the project began. For this purpose, an interdisciplinary project group was formed.

Second Phase: Specify Context of Use   In the second phase, the context of use was determined (DIN EN ISO 9241-210). A scientific research and a market analysis took place to generate an overview of the current state of research in the field of "VR in first aid training." To specify the context of use, it was agreed to develop a "Virtual Reality Learning Environment" (VRLE) as a 360° movie, which is supposed to support the learning of first aid and can be used in the context of first aid training.

Third Phase: User Requirements   The third phase focuses on determining the user requirements of the product. For this purpose, a workshop involving all stakeholders (e.g. experts in first aid training) was conducted, following the recommendations of the HCD approach and the dimension deliberation of RRI. The previously considered context of use was put up for discussion (RRI-dimension: responsiveness) and expanded by the group of experts. The selection of the training units to be implemented in VR was carried out in a participatory manner with Design Thinking methods such as brainwriting, clustering and brainstorming. In order to extract the usage requirements for the VR application, the most important points were collected and written on maps in a brainstorming session. These points were then discussed and clustered in categories "benefit" and "concerns" in the plenum using a metaplan technique and a further category "challenge" was added. In particular, this discussion was accompanied by a lively debate on the goals, motives and consequences (RRI dimension: reflexivity). In addition, an ethical evaluation scheme was developed and sent to the working groups to extract possible negative and positive

effects of the VR application and thus to integrate the RRI dimension "reflexivity" and "anticipation." The evaluation scheme was developed from an adaption of the MEESTAR model (Manzeschke et al. 2013) with reference to the "Challenges of social work through digitalization" (Kutscher et al. 2014). In a joint web conference, the further development of the scenarios including the ethical evaluation scheme was discussed.

Fourth Phase: Design Solution In the fourth phase, the prototype was developed. Working groups (including experts and other stakeholders) wrote the storyboard for the 360° film. The film was shoot in a Kindergarten and the application was programmed.

Fifth Phase: Evaluation and Testing In the fifth phase, the prototype was tested and evaluated. A first usability and user experience (UX) evaluation with the method thinking aloud (Nielsen 1994) was realized with ASB members as participants. Thinking aloud is a method often used in Design Thinking processes and for the evaluation of usability and UX, where the user is thinking aloud when working on the tasks. It has the advantage that possible obstacles or annoyances of the prototype can be identified directly (Nielsen 1994). The aim was to identify the most serious usability problems and first UX aspects in order to report them to the company quickly. In addition, the participants were also asked to fill out the ethical evaluation. Based on the results of the first UX study, the application was adjusted (RRI dimension: responsiveness).

Throughout the whole process, the success factors of change management were kept in mind (Frey et al. 2008). In order to ensure transparency, for example, a high-quality designed mailing was sent to all ASB state associations and to the ASB federal association. The mailing contained a cover letter informing about the digitalization process at the ASB NRW e.V. and inviting further discussions on the opportunities and challenges and encouraging questions, ideas and suggestions.

8.5 Conclusion

This description of the practical example aimed to give an insight into ideas of how social welfare organizations are dealing with digital transformation processes. Just as the visit to the virtual reality time travel through the historical Cologne initiated the unfreezing phase for the VR Project, the VR Project can be understood overall as an unfreezing phase for a broader organizational development process. It has to be evaluated in the future how the developed strategy and the VR Project works into the organization and could transform the organization socially and ethically. Although this is just a beginning, the described strategy and the project enhanced the communication about digitalization. Often it is not clear what people are referring to when speaking of digitalization. The workshops created a common under-

standing about what digitalization is and even more important which goals and values the ASB NRW e.V. is aiming to proceed in a digitalized future. Digitalization was no longer a fuzzy cross-section topic but a tangible project one can refer to as an example for digitalization. At the ASB NRW e.V., the communication about digitalization was enhanced due to the specific reference to the VR Project – like the naming of extreme weather phenomena improves the communication about them among the population (National Weather Service 2014).

The project also served as a lighthouse project to provide a model on how digitalization projects or the development and implementation of innovative technology can be carried out. Because of its high relevance, great importance was given to planning and reflecting the process in detail, involving and motivating people to participate and training the team in evaluation of ethical aspects of innovative projects. This was very time consuming and sometimes, it was difficult to motivate people to participate in a further evaluation as this project was in addition to their regular work. It is questionable whether it is possible for an organization to provide the time resources. Further projects should be able to be implemented more quickly as existing knowledge about the process is already available. Nevertheless, it seems feasible to reduce the workload of the experts. Although participation is needed and appreciated, it was realized that working on the storyboards for the 360° film in the working groups was too much work for the experts in addition to their time-consuming main work. A task force could prepare, for example, the storyboards and then ask the experts for feedback. Participation of experts has to be weighed carefully against the time and financial resources available.

However, this process fulfilled the goal of organization development to be a process of "facilitating change and development in people (e.g. styles, values, skills), in technology (e.g. greater simplicity, complexity), and in organizational processes and structures (e.g. relationships, roles)" (Friedlander and Brown 1974, p. 314). The expertise of the experts in first aid training and broad-based rescue service training was needed in the development of innovative technology, which could be used to improve their teaching. This integration of employees is also a strategy to improve the motivation of participation and to reduce anxieties towards digitalization (Frey et al. 2008). As suggested by Frey and colleagues, this was a way that employees could gain control over the situation. However, uncertainty is immanent in the process of digitalization and its effects cannot be anticipated in advance overall (Collingridge 1980). Nevertheless, this process helped to recognize the expertise of the experts. In addition, it was important that all experts agreed on a mutual procedure of development and integration of the technology. Since the implementation of the VR application in first aid training will be on voluntary basis, the commitment of the experts is important for the success of the project.

With the described project, the essential guidelines that Schöttler (2019, 94f.) developed for innovation processes in welfare organizations could be addressed: (1) By means of the exemplary examination of the possibilities that VR technologies offer for a classic service process such as first aid training, the project was able to establish an overall openness and language ability with regard to aspects of digital transformation in one's own association. (2) Due to the broad composition of the

groups of people involved in the workshops, new communication spaces were created, which promoted the ability to discourse even across different disciplines, professions and company divisions. (3) Through an appropriate design of the development process, these different environments and rationalities could be included at an early stage. (4) The intended fundamental examination of the organization with the chances, risks and challenges of digital transformation was concretized in the form of a practice-relevant project. However, this presupposed that the necessary free space and resources could also be made available for this. It was shown that it is useful for social welfare organization to use, adapt and combine the different methods RRI, Design Thinking and HCD to go through the digital transformation. But they need to be reflected on the needs of the organization and the process has to be adapted after each project, as digital transformation processes are learning processes. Future research should address the needs of social welfare organizations in digital transformation processes in specific regarding the time issue, as negotiation processes and iteratively discussions are very time consuming.

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