Fields of Action to Advance the Digital Transformation of NPOs – Development of a Framework

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Abstract. Technology-based business improvements characterize the so-called digital transformation (DT). For non-profit organizations (NPOs), with their unique value creation structure and specific preconditions in terms of staff and resources, keeping up with the DT is challenging. Still, opportunities for the DT are unknown. Thus far, there are no comprehensive guidelines for DT strategy development in NPOs. Both digital value creation and digitally supported communication with customers can lead to competitive advantages. Therefore, NPO decision-makers must understand the opportunities and the challenges of DT. In our research approach, we aim to answer the research question: *What are the fields of action for the digital transformation in NPOs?* Following a grounded theory approach, we have developed a theoretical framework including fields of action and guidance for the strategic advancement of DT in NPOs. The results show that NPOs need to be aware of their digital communications channels with volunteer staff, customers and donors. A clear DT vision and new roles help NPOs meet this challenge.

Keywords: Non-profit Organization, Digital Transformation, Strategy, Grounded Theory.

1 Introduction

The current technology-driven development in society and business, known as the digital transformation (DT), is a global megatrend [1]. The DT has a significant influence on almost all industries [2]. Companies expect efficiency gains and faster processes [3] through the combination and integration of technologies. DT is already mostly mature in business areas such as the manufacturing and service industries. A high degree of DT maturity implies the use of digital technologies, digitally supported processes and the development of digital products [4].

Nevertheless, some industries still have difficulties exploiting the benefits of DT and applying the technologies, particularly, non-profit organizations (NPOs). NPOs differ from profit-oriented companies in the way they create and capture value. NPOs are characterized by voluntary work, voluntary membership and donations [5].

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Since NPOs address problems that impact the social well-being of society, they have a positive economic impact [6]. NPOs are characterized by demand-driven activities, which are not based on profit considerations. Profits may only be used for organizational purposes and are not distributed to owners.

A DT strategy "serves as a central concept to integrate the entire coordination, prioritization, and implementation of DT within a firm"[7]. There is a wide body of research on the strategic impact of the DT in the industrial sector. However, only a few publications have focused on the DT in NPOs [6, 8]. Thus, strategic guidance to advance the DT in NPOs is missing [9]. At the same time, NPOs, are increasingly confronted with requirements of the market economy [5]. Therefore, NPO decision-makers must understand the opportunities and challenges of the DT [6]. This knowledge allows them to formulate a DT strategy, which can lead to competitive advantages in digital value creation and digital communication with stakeholders.

In our study, we set out to answer the research question: What are the fields of action for the digital transformation in NPOs? In our work, we follow a grounded theory approach [10]. The research focuses on practitioners in the non-profit sector. We present a theoretical framework that shows relevant fields of action to outline the current state of the DT in NPOs. In a further step, we will derive recommendations for strategic action based on existing research approaches and the qualitative database. Our paper contributes to a research field that has been given little attention [11].

2 The Digital Transformation in Non-profit Organizations

DT is a process where digital technologies alter internal routines and lead to new strategic decisions within organizations [12]. When the organizations change their approach to value creation, several structural changes and challenges arise.

The DT presents a number of challenges for NPOs [6]. Results from profit-oriented businesses cannot be directly transferred to NPOs because the operating contexts differ strongly [8]. This is due to the special kind of value creation and value appropriation in NPOs [13]. Those who use an NPO's services are primarily in need of a social service. Access to financial resources depends on donors who often do not use the service but believe the value the service creates is essential.

NPOs serve valuable social functions in society. This is why public awareness of NPOs is increasing. Most NPOs are legitimized welfare institutions. Hence, they use profits only for organizational purposes. A further characteristic of NPOs is the structure of the staff. Volunteer work is a significant pillar of the NPO structure.

NPOs primarily rely on external funding sources (i.e. donations, grants and government aid) and voluntary workforce [8]. NPOs have undergone fundamental changes and are becoming more business-like [14]. Therefore, a task within NPOs is to identify market trends and to secure resources. NPOs need to think and act like for-profit companies. Greater competition and resource scarcity force NPOs to adapt and change their processes. Furthermore, there is a need for innovation in order to remain in the market [9]. To meet these challenges, new (DT) strategies are needed [9].

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NPOs can use technologies for different purposes. Social media technologies enhance the value creation and reach of NPOs [15]. Digitalized structures lead to a competitive advantage by providing quick responses to donor requests and targeted information [16]. Further, NPOs can use IT to improve the internal processes of social services. Efficiency gains and innovative services strengthen the organizations [17].

NPOs already make use of digital presences such as websites or social media. In the U.S., for example, NPOs update content and entry data inhouse. Often, more advanced tasks are outsourced [8]. Technology adoption might be a first step towards DT. To use the full potential of DT, a broader understanding is needed. White papers exist, but little research has been done about the strategic impact of the DT in NPOs [8]. The DT process in the NPO sector is in its early stages. Previous research has been focused on specific technologies in the NPO sector, but not on the DT [9]. The strategic impact of the DT is a topic that is primarily examined in the industrial sector. Strategic DT guidelines in the field of NPOs are still missing [6].

3 Research Method and Sample

Given the research gap, we aim to develop a framework that gives guidance for the strategic advancement in different action fields based on the current state of DT in NPOs. As DT influences the social setting due to the socio-technical implications of technology use, we decided on an Straussian grounded theory approach [18] for our research. This approach offers a deep understanding of a complex social context [19]. Our whole research design is divided into six sequential steps, which are presented below. Figure 1. is giving an overview.

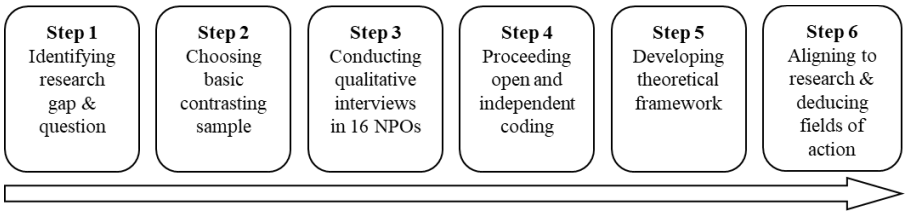

Fig. 1. Research process

Step 1. The first step was creating an overview of the existing research. As seen in the theoretical foundation, the current research in the field of DT has mainly examined technologies and strategy development in profit-oriented settings [12]. Research that captures the DT in NPOs is limited to challenges [6] and the use of single technologies [20]. Research investigating strategy development at the NPO level does not focus on DT [5, 9]. Therefore, it is essential to develop a framework that gives an overview of relevant fields in which DT triggers strategic development in NPOs.

Step 2. To provide a framework with a high degree of significance for a wide range of NPOs, a purposeful sampling method of the interview partners was applied [21]. The selection criteria included that interviewees need to be affiliated with pro-

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jects or departments that are affected by DT in their NPO. The organizations in the sample were already in a DT process or at least in the very beginning.

We chose a sample of sixteen interviewees predominantly from humanitarian charity organizations. All respondents worked in administrative or management positions at NPOs, encompassing different levels and functions. The size of the NPOs ranges from just under 100 employees to 100.000 and above. Even though some NPOs operate globally, we primarily spoke with managers from local groups with a strong regional focus. We assume that this largely corresponds to the character of NPOs in Germany. Table 1 gives a more detailed overview of the sample.

Table 1. Sample

Sector	Code	Function
Social	O_S1-O_S7	Press Officer, Instructor for national work, Administrative Employee, Pedagogical Management, IT Management
Health	O_H1-O_H5	Management, Fundraising Speaker, Press Officer, IT Manager
Education	O_E1-O_E3	Deputy Manager, Managing Director
Culture & Recreation	O_C1	Technical Manager

Step 3. After choosing the sample, we conducted interviews for data generation. We used an interview guideline that consisted of three parts: (1) Introduction and presentation of the context. (2) Report about the current situation and current DT changes. (3) Summary of significant DT barriers, next steps and possible drivers.

To ensure the reliability and transferability of the results, we applied a check for theoretical saturation [21] by coding first nine interviews. Then, we added data from seven more interviews and found a considerable overlap. We assume this early content overlap is due to the consistent welfare orientation of the sample.

All interviews were conducted in German and had an average length of 37 minutes. For research purposes all interviews were recorded, transcribed and translated.

Step 4. We analyzed the transcribed interviews by using open coding techniques to identify statements for the development of the framework. In a team of independent researchers, we coded relevant passages that described the status quo of the DT and gave recommendations for its advancement.

Step 5. By using analytical induction [19] we aggregated similar codes and set up categories. According to the grounded theory approach it is essential to focus on the data and avoid aligning with existing theories [22]. The alignment of codes to the categories is the result of a repetitive, independent coding process. We detected five categories that were mostly free of overlap and used them to determine the dimensions of the framework.

Step 6. In the last step, we aligned the findings from the interviews with further research results taken from the literature. With the help of this synthesis we developed a specific set of strategic guidelines based on current state of DT in NPOs and provide additional insights for practitioners and researchers. The first group may benefit from the practical formulation of a comprehensive to-do list. The second group will benefit from recent research results, which can be extended by further studies.

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4 Development of the Theoretical Framework

For the development of the framework we identified 402 statements in the transcribed interviews about the status quo and future plans. Through this, we set up five categories which should be taken into account to advance the DT. These categories will also be referred to as "fields of action". Table 2 shows the categories and how we have defined them. In the following, we give an overview of the identified fields and describe them in greater detail by outlining the current status of the DT in the NPOs.

Table 2. Categories

Category	Definition
Business Model	The term business model includes all statements that are associated with value creation. This covers the generation of products and services as well as measures to ensure economic viability.
Operational Processes	Statements that refer to internal processes of an organization to carry out the business are summarized under operational processes.
Employees & Volunteers	The individual abilities, demands, values and attitudes of employees and volunteers are defined as the field employees and volunteers.
Culture	Explanations on values, ideals and norms that influence the attitude and thinking of an organization are aggregated under the term culture.
Legislation	Legislation includes the legal framework where the organizations operate. Laws or regulations cannot be influenced directly but must be obeyed. Legislation limits the scope for action or forces actions to meet requirements.

Business Model. The first field of action we have identified based on similar codes is the business model. While the strategy developed from this model should infuse all parts of the organization, interviewee (O_H2) states: "We have no [DT] strategy".

NPO business models are unique in that all profits may only be used for organizational purposes. Because of the different stakeholders involved, value creation and value appropriation in NPOs differ from those processes in profit-oriented enterprises. These processes depend on two different stakeholder groups. "We have one target group, that is, the people affected, who receive help and support from us free of charge and on the other side the donors we want to reach" (O_H2).

The value creation of the NPOs in our sample is mainly based on offering social services. These services are "almost 100% based on contact between people" (O_S1). The DT has had very little impact in this area to date. Many interviewees feel that their services cannot be transformed in a digital manner. "No. I think [online consulting] makes relatively little sense, because our work is really a personal and private thing" (O_H2). Some see the relatively low customer pull as the reason this transformation has not occurred. "This is due to a regional problem. Many older people live there. You can hardly reach them. Not via social media […]" (O_H4). Due to the age structure of service recipients, there is little demand for digital services.

Value appropriation relates to fundraising and the recruitment of volunteers, since NPOs are usually dependent on external funding, such as donors or federal funding. In particular, small and regional organizations complain about the lack of available resources: "We are focused very regionally, so we only have limited resources […]

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and what big NPOs can do is not available to us" (O_H1). The resources needed for increased digitalization or the development of a DT strategy are therefore often lacking. Neither the regional departments nor the parent organizations release additional (financial) resources for the digitalization. However, the digitalization increasingly takes up an ever larger share of the funds: "We realize that this whole IT area needs much more financial support than it did ten years ago" (O_H1).

Financing through donations differs between the NPOs in our sample. The collection of donations ranges from personal contact at the front door and no web presence at all (O_S3) (O_H3) (O_H4) to the use of social media (O_S1) (O_S2) (O_H1) (O_H2) (O_S4) (O_S5) and even VR glasses for photo exhibitions (O_S2). Targeting younger groups ensures the flow of donations over the long term. Historically, donors have mostly come from individuals in older age groups (O_S4).

Nevertheless, efforts in the field value appropriation, e.g. the use of social media, do not always result in a high degree of success. "We still get the most donations because someone knows us personally […]. We actually have a very loyal circle of donors, but of course, they are old" (O_H1). Not every NPO currently sees the benefit in digitalization. "At the moment, we do not see any need to go into the social networks" (O_S3). What is true for all of them is that they have specific employees who deal with fundraising and public relations, because they "live so much from donations" (O_H1), although the approach differs.

In addition to financial support through donations, voluntary work is essential for the NPOs. The recruitment of volunteers is still done using very traditional methods. "The recruiting really comes more from the fact that people hear about it, really in a personal conversation, that volunteers talk about their work" (O_H1). However, others are already relying on apps that help volunteers find vacancies in the non-profit sector (O_S1). Organizations perceive a change in the behavior of the volunteers. "They don't bind themselves through regular appointments anymore. They prefer temporally fixed events with a project character" (O_H4).

Operational Processes. Operational processes include the internal processes, such as administration, accounting, knowledge management and collaboration tools. This is where the impacts of the DT have been most noticeable so far. To support employees in their work, they are now equipped with digital end devices. For example, this helps employees in the field to plan their routes or have mobile access to data: "We have introduced a policy that all employees get a tablet so that they do not have to enter the documentation first by hand and then later into the PC" (O_S1). Many of the interview partners stated that document management is largely digitalized, at least as far as the work in the organization is concerned. Invoices, on the other hand, are often received by mail and then digitized or collected in a file folder. Old stocks of file folders are slowly digitized piece by piece. This currently creates the need for analog and digital structures for data storage in the NPOs.

Team cooperation is also technically supported. As a result, new employees can be trained more quickly, and information is not lost when employees exit (O_S2). Central computers also simplify the implementation of updates and the maintenance of the systems (O_S5).

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Digitalization also reduces the administrative burden. Online booking of training (O_S3), digital work plans (O 13) (O_S7) and software for fleet management (O_H5) have streamlined processes. In NPOs with a large number of employees, there is a tendency to centralize administrative tasks or to offer employees a broad portfolio of software solutions. "There is a specific program for every problem or task we have, where there is also a big database behind it" (O_H3). Nevertheless, in NPOs with many small district associations, the accounting is sometimes organized on a decentralized basis. "The district associations traditionally always have their own personnel and financial accounting" (O_S5).

Moreover, small NPOs often lack efficient software solutions. "Donations are entered by hand from the bank statements into spreadsheets" (O_S3). Nevertheless, external expectations are increasing. Donors expect faster and better service, which requires more efficient processes. "When donors ask for a donation receipt, they expect it to be sent directly by e-mail as a PDF, and they do not accept a processing time of several days" (O_S4). In sum, the digital support in operations is increasing but is not yet fully integrated.

Employees and Volunteers. The third category of the fields of action is employees and volunteers. Since the DT brings changes in the form of new technologies and new processes, employees and volunteers (here called the staff) are particularly affected by this change. Staff members differ considerably in their willingness to change, their attitude towards new technologies and their IT knowledge in the status quo. "Only a minority show a great interest in IT and an affinity for it, the majority are increasingly gaining an affinity for it and then there is a group that is not technology-oriented at all" (O_S4). "Digitalization can be a great challenge, especially for older employees" (O_S4).

A major challenge is ensuring that all employees can keep up with the digital change (O_S5). NPOs focus primarily on internal employee training to make it easier to handle new software or hardware. "We have to make sure that we train our employees again and again" (O_H4).

Since IT competence in the organizations is usually mediocre at best (O_H1) (O_H3) and a higher degree of staff IT competence is lacking, IT support is often handed off to external service providers or temporary staff with a greater degree of IT affinity, especially at small NPOs (O_S2) (O_H1). Building up IT knowledge in small organizations tends to fail due to the tremendous effort involved. Large NPOs tend to develop their own IT competence. IT staff units are currently being set up there (O_S5) or already exist within certain subareas, such as data backup (O_H5). What almost all NPOs lack are employees who are explicitly responsible for the DT.

Culture. The corporate culture in NPOs is characterized by a strong social orientation and contact with people. So far DT often seems to be difficult to reconcile with NPOs. "We are a humanitarian aid organization, which always works with people anyway, you cannot do that digitally" (O_S2). "I believe that we are not directly affected by digital change" (O_S3). Although all NPOs rely on the use of digital devices, the influence on the nature of communication between employees is small.

Even if digitalization offers added value, not all employees can be convinced. "It is also a great help, but many people just don't want to deal with it" (O_C1). However,

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this is not just the attitude of individual employees but can also be a part of the organizational culture. "It is really not that easy when work processes, responsibilities or structures change. We have been in the market for a long time, and there are certain things that have become standard here" (O_S4). Therefore, digital change can put a strain on the climate in organizations, especially when different attitudes meet. As is the case in for-profit organizations, the willingness to keep up with technological developments in NPOs is lower if the average age of employees is higher (O_S4).

In rare cases, digitalization also had severe consequences for the willingness to perform voluntary work. "I don't think I can handle IT. Then I won't volunteer anymore" (O_H3). What is problematic is not always dealing with the technology itself, but resistance to changes in the workflow. "I didn't have to do this before, why now" (O_H4)? DT should not lead to an additional shortage of labor as it is generally difficult to recruit volunteers already. "The number of volunteers has decreased significantly over the last ten years […] in all social institutions" (O_H3). Increased demands on IT skills could increase the pressure.

Culture can have a significant impact on strategies. "We personally never warmed up to it; we never saw the sense in it (O_H4). Especially if fewer young volunteers sign up, it can have an impact on the degree of social media use. "Within social media, we are holding back with appeals for donations, because we don't want it to drift into something like an advertising channel" (O_H2).

NPOs are aware that change will happen in the future as new topics arise. "We have to think much less in terms of hierarchies; we need to think in a much more agile way; we need project groups and we have to pick up impulses from people who are competent and keen to innovate. And that doesn't have a lot to do with where you stand in the organizational hierarchy; it has to do with how well you can bring things together. This is a fundamental cultural change that we are facing" (O_S1).

Legislation. Legal requirements for data protection are a major issue for all NPOs, especially in nursing services or medical services. On the one hand, the requirements limit the choice of suitable software and hardware (O_S6); on the other hand, they require the replacement of outdated devices (O_H1). When data is stored digitally, access rights must be managed, and the system must be protected from unauthorized access (O_S7). This is all linked to investments in IT infrastructure. "That is a lot of money for an organization that lives only from donations" (O_H1). Legislation is a strong driver of digitalization in NPOs. "We are forced to digitalize a lot of things" (O_S7). An example of this includes requirements for documentation. Within rescue services, protocols are generated digitally to create a "better, quickly transferable and legible protocol" (O_H3).

Although many statements referred to technology use, we decided to define no stand-alone field of action for technology. The introduction of new technologies should never be done for the sake of the technology itself, but only if it creates added value, for example by optimizing business models or operational processes or is necessary to meet legal requirements. In a socio-technical approach, employees and organizational culture should always be taken into account when making decisions on the introduction of new technologies. Statements relating technology were therefore assigned to the other categories described above.

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In summary, our interviews have shown that NPOs are affected by digital change in the status quo. The work of these organizations is increasingly supported by IT, but the effects on business models have not yet been notified. "We have to think much further ahead. The digital change is much more comprehensive than the switch to electronic workplaces" (O_S1).

5 Discussion and Deduction of Strategic Guidelines

In the previous chapter, we described the major fields of action where the DT encounters and changes NPOs. The transformation affects products, processes and customer integration. However, it also changes the organization's structures, culture and mindset [6]. As a result, entire business models could be transformed. Due to the far-reaching consequences, DT strategies must be developed. They have to integrate and coordinate the many technological innovations throughout the whole enterprise. DT strategies extend into other business strategies and should be coordinated with these as well [7, 9].

In the following we align the results of the interviews with the current body of literature and synthesize the findings into a framework. The framework outlines both the status quo and a guideline to advance the DT in NPOs, divided into the five identified fields of action.

Business Model. Major strategic changes will occur in the business model. The interviews reveal that NPOs lack clear strategies and staff to deal with the DT in the status quo. NPOs first need to define a clear and cross-divisional DT strategy. The strategy is necessary, "as the organization must be capable of dealing with the challenges of the future" (O_S1). The absence of an IT strategy [23] is often responsible for missing resource allocations [24]. Still, NPOs spent only a small proportion of their returns on IT [8].

Value creation will no longer be limited to (personal) social services. Nevertheless, information services (e.g. for healthcare) and technology-based co-creation will be facilitated in a digitally transformed world [11]. "In the future, we will see that our services will be requested much more via the Internet and less people will call us or come directly to our advice center" (O_S1). Initial attempts have already been made to provide additional online services with digital media as NPOs are starting to offer online advice (O_S1) (O_H1). It is now possible to offer social services online hosted by the NPOs and brought to the profit-oriented sector. "We tried that once with companies, to establish an informative site for their health management" (O_H1). Furthermore, inter-organizational collaborations between different NPOs are effectively supported by digitalized structures [25].

There is already a lot of competition in this field. "There are now major platforms in the care and support sector where you can book support staff. These platforms will change the market so much that they will become a major economic threat for us" (O_H1). NPOs will need to establish digital communication strategies to tackle this challenge. "To meet this competition, we need managers who recognize this challenge in a way like ´Alexa find me a nursing service´, who adjust their marketing strategy

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accordingly" (O_S1). Further, researchers see great potential for NPOs in relatively new fields. NPOs could, for example demonstrate their social value and social responsibility in smart city development [26].

In the field of value appropriation, NPOs are also undergoing a fundamental change. "We notice that [fundraising] doesn't work the way it used to with flyers or the speeches you used to make" (O_H2). In particular younger target groups need different ways of communication. Up-to-date information for donors and potential volunteers can be provided directly using online channels. A comprehensive, integrated communication strategy is needed, one that coordinates the social media channels as well as far-reaching online offers. NPOs should strategically use social media to disseminate information, engage with the community and mobilize activities [27]. Digitalized communication channels make it easier for NPOs to demonstrate their engagement and describe their projects. These channels are becoming increasingly crucial as donors expect a high degree of transparency in project information. "Potential donors increasingly expect a deeper insight into our work" (O_S4). Activity and influence in social networks also ease crowdfunding [28].

Operational Processes. Internal, operational processes can also be digitally supported, leading to gains in efficiency. Defining key roles, such as a central chief digital officer (CDO), will compile future digitalization ideas and possibilities [29]. Professionals dealing with the DT in the field emphasize the importance of integrating this new role [30, 31]. "There are certain people who are closely watching the opportunities digitalization offers in fundraising" (O_S4). NPOs should not be dependent on individual interests.

Providing suitable digital tools to handle administrative tasks such as membership or donation administration more efficiently is very relevant for NPOs [32]. Establishing digitalized administrative processes can simplify standard procedures such as the documentation of services or issuing donation certificates for tax purposes. "The goal is to improve, to make it faster, to make it more comfortable" (O_H3). Knowledge management will play a crucial role in making NPOs more efficient. In this respect, NPOs currently perform at a low level, as was demonstrated in a quantitative study by Rahti and Given [33]. A success factor for the DT is the selection of suitable tools and technologies that meet the specific needs of NPOs [33]. The continuous use of project management tools and customer relationship tools, combined with helper apps for interactions with service recipients, could lead to more efficient processes [32].

To note the gains of the digitalization of processes, tools for measuring the impact of campaigns and innovations should be integrated [32]. Being able to visualize outcomes of the digitalization of processes is an important step in understanding the gains DT offers. DT does not only mean digitalizing processes, it is also about tracing them sustainably.

Employees & Volunteers. With the DT, the management of employees will also change. A major concern that dominates the literature concerning the DT is that it will lead to unsocial working conditions and the threat of job replacement [34]. The social-service background of the NPOs does not eliminate all of these individual concerns and NPOs need to establish secure employee structures. Literature shows that

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human resource management practices can address employees' fears and significantly increase job satisfaction in NPOs, resulting in a lower turnover rate.[35]

NPOs are dependent on volunteer work. The interviewees recognize the fact that the volunteering structure has changed, and volunteers are more likely to change organizations. The statement "I will come as long as you need me, but for the next two years at the most, then I will look for something else" (O_S1) mirrors the current attitude of volunteers. NPOs need to note fluctuation and can use the DT to develop new forms of volunteering to increase attractiveness. The literature describes the first attempts to integrate online volunteering, e.g. through sharing posts, hosting online content or writing legal documents [36]. These approaches correspond more closely to current attitudes. Tasks can be allocated using online platforms and can also be made available to short-term volunteers in the form of gigs, much like the gig-economy. The first platforms have already been built, where volunteers with IT skills help NPOs in a targeted manner and carry out tasks for the organizations [32]. The organizations can compensate for missing resources and IT skills through these platforms. Defining these structures leads to increasing levels of micro-engagement [32]. In the long term, NPOs may be able to use these network effects by outsourcing campaign activities or the hosting of data [32].

Outsourcing to gain access to digital skills seems to be a good solution for many purposes, especially in smaller NPO units. "We have outsourced the whole thing and have an external provider for support for all our user applications here" (O_S4).

Not all processes can be outsourced, and the majority of IT activities are still completed in-house. [8]. Hence, the development of new skills is the most significant challenge in the DT of NPOs [6]. Researchers propose that NPOs should increasingly provide digital training courses for services as well as for dealing with digital media, software products and data protection. [32]. Here, it is important to offer low-threshold, simple training. It is better to offer smaller demand-oriented units that are offered more frequently than those that cover larger, more complex topics.

Culture. A well-established change management process can help the organizational culture cope the challenges associated with DT. NPOs have an open communication culture, especially when they provide services to users. This culture needs to be reflected in the internal operations as well. Researchers often propose skills management and training to alleviate anxiety [31]. In addition to technical training through third parties or software providers, it is important to have an eye on internal processes and process development. Despite the merits of digitally-driven traceability and transparency, defining rules for direct communication is important to maintain trust. "They say: We don't want to have our work checked. We now address things that we notice in our ongoing training courses, […] because otherwise the acceptance of the systems would of course disappear" (O_H5).

Researchers have already highlighted the importance of volunteer satisfaction [37] and organizational inclusion. This could also be supported by social media use. "We have a platform where every member is registered. They can use newsgroups and mailing lists" (O_C1). Integrating platforms can help inform the volunteers and staff and strengthen the social structure.

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Table 3. Framework

Category	Status quo	Guideline
Business Model	– Value creation still traditional – Fundraising and recruitment of volunteers increasingly supported by social media	– Define a clear and integrated DT strategy – Establish an digital communication strategy – Provide additional online services – Integrate services to third-party platforms – Note required resources for DT
Operational Processes	– Increasingly IT supported – Lack of efficient software solutions, especially in small NPOs – Large NPOs benefit from centralization	– Define key roles (CDO) – Establish digital processes – Provide suitable tools for process support – Integrate tools to an architecture – Note gains in software use
Employees & Volunteers	– Employees succeed in handling end devices through training. – Deeper IT competence is lacking – Competencies are usually bought in	– Define structures for micro-engagement – Establish secure employee structures – Provide demand-oriented training – Integrate online volunteering – Note fluctuation of volunteers
Culture	– Characterized by a strong social orientation – Structures are entrenched, making change difficult. – DT Concerns are extensive.	– Define rules for direct communications – Establish a change management process – Provide services for staff – Integrate social media for staff information – Note requirements from the social context
Legislation	– Legal requirements demand investments in secure IT. – Data protection laws restrict the choice of software and hardware.	– Define NPO-specific legal guidelines – Establish a monitoring process for changes – Provide legal training – Integrate specific software providers – Note specific laws for the digital world

Legislation. The field NPOs are least able to shape is legislation. Here, NPOs need to provide legal training for the staff and note country-specific legal treatments for the development of the DT strategy [38]. When digitalizing processes and forms, it is important to harmonize the data integration (O_H1). Legislation has a high degree of influence on decision processes [6] and establishing a monitoring process is important to comply with changing legal requirements. This is increasingly difficult in the digital age. "With the data protection regulations, it's not all that easy anymore." (O_H3). Although data ownership rights in the digital world are still partly unresolved [39], defining NPO-specific legal guidelines can reduce uncertainties. NPOs need software providers that offer secure cloud solutions. NPOs with a focus on health services can gravitate towards relevant software providers in this sector. Here, mutual information and shared services can help. Table 3 summarizes the main findings of our research.

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6 Conclusions

Our work has resulted in a theoretical framework that summarizes the status quo and fields of action for the DT in NPOs. The framework is based on a grounded theory approach. We collected data from 16 interviewees working in different NPOs. This paper aims to contribute in closing the research gap regarding DT strategies in the non-profit sector. We found that little attention has been paid thus far to the formulation of strategic guidelines for NPOs.

Our major findings are: a strategic DT guideline must include five fields of action. NPOs differ from profit-oriented enterprises in their mode of value creation and value appropriation. Thus, their technology-based communication structures must be adjusted to the very specific target groups. The customer pull for digitally-enabled services in the non-profit sector is still weak due to the customer structure. Hence, NPOs encounter major problems in terms of acceptance of the DT. This is also due to the specific volunteer-based staff structure. Therefore, as a first step, we propose that IT management and support can be outsourced. As new perceptions about volunteering emerge, NPOs should also develop a strategy for micro-engagement of online volunteers. Here, agile cultures have the potential to blossom and lead to distributed services for information and donor management.

Though we followed a grounded theory guideline and carefully proceeded with this approach in our research, our results are not free of limitations. A sample size of 16 gives provides room for further improvement and the framework needs to be evaluated with a bigger sample. We also suggest further investigations that stronger consider the structure, background and reach of the NPOs. For future research the findings should be discussed in the context of existing frameworks from other research streams, e.g. the for-profit sector. A siloed focus on NPOs can hinder the exchange of best practices.

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