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How digital solutions for the integration of refugees persist long-term: The interplay of a social cause and platform architecture

Research Paper

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ABSTRACT

Digital solutions are considered to be an important component in efforts to support the integration of refugees. Given that refugees rely on digital technology to an unprecedented degree, many digital solutions that support refugees have been developed in Europe following the high influx of refugees in 2015. However, only a few of these solutions are still active today—even though there would still be a need for them. Despite several studies concerning the use of digital solutions, it remains unclear what the success factors of those solutions that succeed in the long term are. In this paper, we explore the case of Integreat, an information platform for refugees that was founded in Germany in 2015 and is still expanding today. To identify obstacles along Integreat's path of long-term success and to understand how they were overcome, we applied a translation process lens grounded in actor–network theory, following actors through the stages of problematization, interessement, enrolment, and mobilization during the implementation and roll-out of the digital platform. Our findings show that the long-term persistence of the Integreat platform builds on the formation of a network consisting of distinct groups of actors (core team, developer community, municipalities) that begin to act jointly as if they were a single actor. The social cause as a joint vision and the platform architecture as a facilitator strengthened the establishment and support of relationships in the network that enabled the Integreat platform. The study contributes to research on the long-term success of non-profit initiatives for the integration of refugees by emphasizing the role of social good and platform architecture.

Keywords: social initiative; persistence; refugees; Integreat; digital platform, translation process

INTRODUCTION

During the 'long summer of migration' 2015-2016 (Römhild et al., 2018) Germany received around 1.5 million asylum applications from people coming mostly from Syria, Afghanistan, and Iraq (BAMF, 2016). Along the journey and after arrival, refugees have seen their smartphones become a 'crucial resource akin to food' to address information instability and precarity (Wall et al., 2017). Many social initiatives emerged that addressed the need to access information relevant to the integration of newcomers. Drawing on Penninx & Garcés-Mascareñas (2016), integration is understood as a "process of becoming an accepted part of society". It can be understood as a dynamic, two-way process of social interaction to overcome different forms of marginalization between refugees and the society that receives them. In this paper, we concentrate on the digital initiative Integreat, which we interpret as a socio-technological assemblage designed to provide helpful information to refugees in Germany.

Integreat was created in 2015 as a volunteer initiative and later transformed into a social enterprise to address the need for information access of refugees arriving in Germany. Integreat offers a digital platform and a mobile application that brings together all necessary information regarding the asylum procedure and general orientation in Germany for newly arrived refugees. As of early 2021, Integreat was used by 65 German municipalities that provide both general and local information to refugees residing in their area. Although initially, many other initiatives have been developed in the aftermath of 2015's high influx of refugees, such as Bureaucrazy[1] and Ankommen[2], we observe that only a few of them are still active today—despite the continued arrival of refugees in Germany. This raises the question of why Integreat had persisted since 2015.

Research on the intersection of digital technology and refugees' integration has been focused on the importance of digital technology for the actors involved in migration management and refugees themselves. In the case of the integration of refugees, attention has been directed toward the use of a smartphone (Chib & Aricat, 2017; Kaufmann, 2018) and social media in particular (Alencar, 2018; Dekker et al., 2018; Marlowe, 2019). While the potentially positive effect of digital solutions for refugees in Germany has been shown (Ngan et al., 2016; Walter et al., 2017), little is known

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[1] Bureaucrazy – a mobile application, which was developed in Berlin by Syrian refugees and aimed to ease the access to bureaucratic procedures, such as a translation service of official documents into Arabic and English. https://www.theguardian.com/world/2016/aug/05/syrian-refugees-app-navigating-german-bureacracy-bureaucrazy

[2] Ankommen – a mobile application, which was jointly developed by the Goethe-Institut, the Federal Office for Migration and Refugees, the Bavarian Broadcasting company, and the Federal Employment Agency in Germany. https://ankommenapp.de/APP/EN/Startseite/startseite-node.html

about how such digital solutions can be successfully established. In this paper, we examine the persistence of the social initiative Integreat as a complex socio-technological assemblage by bringing in the perspective of science and technology studies (Rosenbaum et al. 2018a; Rosenbaum et al. 2018b). We argue that understanding the persistence of the initiative is crucial for reflecting on how digital solutions can produce more benefits for refugees. The core process of development and implementation of this initiative showcases how the translation and mediation of the different perspectives of the actors, such as the core team, developer community, and municipalities enhanced the long-term operation of Integreat.

To address the question of how digital social initiatives such as Integreat can persist long-term, we employ the 'sociology of translation' proposed by Michel Callon (1984) together with Bruno Latour (1996) which is rooted in the actor–network theory (Callon, 1990, 1999; Latour, 1999). We examine how the effective translation process supports the long-term persistence of the Integreat initiative. Following the key concept of 'translation' enables us to demonstrate how the social cause as joint vision and the platform architecture as facilitator contributes to the long-term persistence of the social initiative.

This paper is structured as follows. In the next section, we address the theoretical foundations of the persistence of social initiatives, followed by a background on the translation process as part of actor–network theory. Then, we describe our methodology and the context for the case study on the initiative Integreat. In the following section, we present the details of each focal area in connection to the persistence of Integreat in every phase of the translation process. We conclude with implications for further research and practice.

THEORETICAL BACKGROUND

Persistence of social initiatives

Representatives of non-profit initiatives aim to create potential solutions to social problems with social innovation. The topic of social innovation has attracted the attention of scholars from different disciplines (Nine & Chen, 2016; Sarkki et al., 2021). The presence of social value is considered to be an important component as many 'new technology entrepreneurs want to balance generating profits with addressing social […] concerns' (WEF, 2019, p. 7).

As a background to our study, we look at social initiatives and social enterprises to show the interplay of the different actors[3] involved in long-term collaboration and their impact on the persistence of these initiatives.

In literature, the term 'social initiative' is often used interchangeably with 'social enterprise'. Westley and Antadze (2010) note that social innovation 'does not necessarily involve a commercial interest, though it does not preclude such interest'. Thus, scholars (Battilana & Lee, 2014; Bonomi et al., 2021; Santos et al., 2015; Smith & Besharov, 2019) define social enterprises as hybrid organizations, as they have a double nature, namely social and commercial. The desired social impact is seen as the key prerogative for such enterprises.

In terms of the persistence of social initiatives and social enterprises, scholars used the term 'resilience' (Bonomi et al., 2021; Young & Kim, 2015), as well as 'survival' (Chell, 2007; Haugh et al., 2021). Survival often relates to 'considerable issues facing individual social enterprise entities, including, but not limited to, maintenance of social purpose and financial survival, size, management tensions and assessing the impact of social change' (Kay et al., 2016, p. 225). For example, Chell (2007) argues that social enterprises have to overcome grant dependency and become financially independent.

Based on the review of the existing literature, we draw particular attention to the phases of social initiative development to see what roles different resources play in the continuous growth of innovative ideas in a social context. Moreover, such an examination will advance the knowledge of resource allocation and planning for the development of social initiatives for refugees.

In this paper, we propose to study the relations between different actors involved in the development of such an initiative by analyzing different stages of its development. We apply the translation process to see how—through the process of translation—the persistence of the social initiative has been constantly re-negotiated in every stage of its development.

Increasingly, social initiatives leverage digital technologies to achieve their goals (Marzano, 2021). However, it remains unclear if digital technologies can also contribute to the long-term persistence of social initiatives.

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[3] The term 'actor' will be used in this paper taking into account the translation process, explained in the next section.

Translation process as a scaffolding

Digital initiatives for refugees' integration have been portrayed as "promising solutions" in a framework of digital humanitarianism and entrepreneurship (McCosker et al., 2021). Social initiatives such as Integreat can be conceptualized as a socio-technical system with strong links between human and non-human actors across physical and digital spaces. Following the actor–network theory (ANT) (Callon, 1984; Callon & Latour, 1981; Latour, 2005; Law, 1992) both types of actors can influence the process of development of the initiative. They are considered to be a network of actors who "translate" their actions by making associations with others to experiment with artifacts (Akrich et al., 2002; Latour, 2005) without differentiation of their type: humans, objects, and platform architecture are explored in the same way. Moreover, the translation process is "never a completed accomplishment" (Callon, 1984, p. 196). This means that the preferences and choices of the actors in the network are not stable and can be subject to change.

We propose to analyze the phases of the social initiative development by investigating the actor-network relations relying on the translation process as a scaffolding. Based on the studies of "messy networks" (Bijker & Law, 1992, p. 12) of technology, society, and economic elements, particularly actions of those who have been called "heterogeneous engineers", Callon and Latour (1981) suggest that any social phenomena can be studied with the lens of the translation process. It allows the voices of actors to be heard by paying attention to all the fluctuations in the evolution of networks of relationships for a better understanding of the process (Callon, 1984, p. 201).

The process of translation consists of four stages: (1) problematization, (2) interessement, (3) enrolment, and (4) mobilization. During problematization, a focal actor[4] works to understand the problem and creates an obligatory passage point (OPP) that makes other actors converge regarding specific issues. Interessement is characterized by activities to engage others to accept a problematization. The enrolment phase takes place if the previous interessement phase was successful. In this way, a more defined position is established. In the mobilization phase, actors—mobilized and represented by the intermediary or spokesperson—provide the definitive proposition.

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[4] By focal actor in the sociology of translation understood the key actor who gathers other actors to support the change of the action.

The translation process makes actors define and redefine their positions while forming an actor network. Stability is reached by the passage of the four stages of the translation process according to Callon (1984) (see Table 1).

Table 1. Stages of the translation process, according to Callon (1984)

Problematisation	- Framing of needs or a problem, involving the different actors who are forming the problem-solving network (Linde et al., 2003). - Identification and definition of the roles of all actors involved in the process - Distribution of the power within the network of social relations contributes to how the structure of the network builds - The focal actor is responsible to configure the actor network and identify the Obligatory Passage Point (OPP) defined as a necessary node that has to be included in the network to give it stability - To pass OPPs actors have to modify their interests as suggested by focal actors to establish assemblage during the next phases.
Interessement	- The focal actor is trying to interest others with their position - It takes place through the establishment of what Callon calls 'devices' which can be used to strengthen associations between actors (Callon, 1984) - Actors are taking a determined position and the influence of the focal actor is becoming less visible but still crucial as it has to develop strategies and ways to win the support of other actors
Enrolment	- The negotiations have to take place not only with the actors who are directly involved in the project but also with ones who are influencing the stability of the network - Negotiations are not obligatory requirements, as some of the actors might not need them, as they enroll without any doubts
Mobilization	- The focal actor needs to 'accumulate enough allies in one place to modify the belief and behavior of all others' (Latour, 1990, p. 59), so the agency of the focal actor is rising again as he takes the power to represent the enrolled actors and speak on their behalf (Law, 1984). - If problems in the communication between represented actors and their representatives occurred, the process of translation has to start from the beginning

Relying on this scaffolding, we can observe the process of translation as a process of alignment of actors in parallel to the construction of a joint purpose. During this process, an actor attains an alignment with other actors who follow their purpose. But such a translation process might not always be successful. In case the focal actor is unable to act in accordance with the wish or requirements of other actors, the translation process fails.

METHODOLOGY

To answer our research question on the persistence of the Integreat initiative, we adapted the case study methodology (Yin, 2018) to follow the persistence strategy through the stages of the

translation process. We thereby draw on the case of Integreat, a digital platform that aims to facilitate access to local migration information for refugees. We chose this case because it demonstrates the persistent development and engagement of the developer community, municipalities and users.[5]

The data collection comprised semi-structured interviews and participant observation with the core team of Integreat and representatives of municipalities that adopted the Integreat platform. While the interview material was the primary data source, we collected a significant amount of secondary data which allowed us to situate Integreat in a broad spectrum of social initiatives for refugees in Germany and retrospectively reflect on the process of its development and implementation.

In total, we conducted 40 interviews with 24 refugees, 14 representatives of municipalities, and 2 with representatives of the core team of Integreat. A non-representative sample was used to conduct interviews in the municipalities that implemented Integreat. The interviews were conducted in blended mode (online and face-to-face) from November 2019 to November 2020 and were ranging from 60 to 90 minutes. All interviews were gathered by the lead author in the English language. In total, 38 interviews were audio-recorded and transcribed. In the other two cases, an interview memo was produced directly after the interview to capture as much of the content as possible. The interviews with refugees covered navigation practices, needs, and motivations for using Integreat. The interviews with developers and municipalities were focused on the experience of collaboration with various actors, as well as the challenges of the development, advertisement, and implementation of the digital platform.

During the participant observation phase, we performed multiple visits to the local associations and cultural centers in Munich and Augsburg, working with the migrant population, and we visited the quarterly developers' conference 2020 of Integreat. This allowed us to identify key informants and understand the information needs of refugees and how these needs were incorporated into the further development and improvement of the Integreat platform.

Taking into account that interviews were conducted with a vulnerable group of refugees, we explained the purpose of the data collection in detail to our interview partners and we highlighted the anonymization of the data. Thereby, the position of the interviewer was twofold—a white

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[5] The co-authors Maximilian Schreieck and Helmut Krcmar are co-founders of the non-profit initiative "Tür an Tür Digitalfabrik gGmbH". They act as mentors to the project team which allowed us to get in-depth insights into the project. They do not receive compensation for their role in the project.

European person with migration experience. The migration experience helped to find a common ground with interview partners faster and to be more empathic to the personal trajectories the interview partner shared.

As an interpretative framework, we adopted social constructivism. The individuals seek to understand their world and develop meanings that correspond to their experience (Creswell, 2014). These meanings are not intrinsic to each individual but are formed through interaction with others. It allowed the research participants to describe their experiences in a free and unstructured way. The task of the researcher was to listen and document the participants' narration and later interpret the findings. During the interpretation of the interviewees' experiences, we were able to uncover the reasons behind the persistence of the Integreat initiative.

We used the software ATLAS.ti to analyze the transcribed interview data and selected field notes from the observations. The phenomenon of persistence emerged during the initial data analysis that was done by re-reading the interview transcripts and juxtaposing the observational data. We used the grounded theory methodology for data coding (Glaser & Strauss, 2006). Our analysis was inductive, thus, categories evolved from the collected data and not from prior theory. We coded the data in two stages: (1) initial coding and (2) second stage coding. We started with an open coding strategy during which the individual nodes emerged from the data. As coding progressed, we iteratively grouped and re-grouped the codes to parent nodes. During the second stage, we selected "the core category, systematically relating it to other categories, validating those relationships and filling in categories that need further refinement and development" (Strauss & Corbin, 1990, p. 116). Several themes emerged that we later integrated into stages of the development of Integreat as a social initiative. For example, the identification of the needs to be addressed and reconstruction of the Integreat establishment process has been translated to the phase of problematization.

As a methodological limitation, we acknowledge that interviews were conducted in English, potentially excluding respondents with limited English language skills. Also, the interviewer's identity—European, white, female—might influence the interaction with interlocutors.

CASE DESCRIPTION

Following the increased migration to Europe in 2015-2016, Germany received around 1.5 million asylum applications predominantly from people from Syria, Afghanistan, and Iraq (BAMF, 2016).

In Germany, refugees are proportionally distributed between regions based on the regions' tax revenues and population size. After being recognized as a refugee, a person is eligible for financial aid provided by the state. To be able to work or study, refugees are required to attend an integration course composed of a language course and historical, cultural, and legal classes. Considering different socioeconomic, cultural, and language backgrounds, refugees in Germany faced a challenge to find reliable information on integration matters. Typically, information material would be handed out in print, often getting outdated quickly, and being available in few languages. As such, the digital format became favorable.

The Integreat initiative was founded in 2015, under the impression of the influx of refugees in Germany and the challenges of integrating refugees into the German society (Rosenbaum et al. 2018a; Rosenbaum et al. 2018b). The Integreat platform provided information about different services for migrants and refugees, for example, local counseling centers and initiatives, translation support services, German language learning, and the healthcare system (Schreieck et al. 2017b). The platform content is subdivided according to the cities and towns which implemented it, providing localized information maintained by the respective municipalities.

Based on their personal experience, the initial team members of Integreat, who, at the time, were all student volunteers, aimed to tackle the issue of newly arrived refugees' poor access to important information. As they had volunteered in a long-established local association for asylum counseling (Tür an Tür e.V.[6]) in Augsburg, Germany, the students-volunteers could interact directly with refugees and asylum counselors working with them. This interaction led to the understanding that information precarity and unreliability had to be addressed differently than before—namely through digital technologies that enabled a more scalable distribution and quick and simple updates. Thus, Integreat was established as a digital solution through two channels—a web and a mobile application to serve different audiences of users. In 2015, the Integreat team saw refugees who newly arrived in Germany as the main user group. But during the last five years of the existence of Integreat, the user group broadened and included all interested newcomers, as well as social workers, representatives of non-profit organizations, and representatives of governmental agencies involved in migration governance. Figure 1 summarizes the actors who formed the network of social relationships.
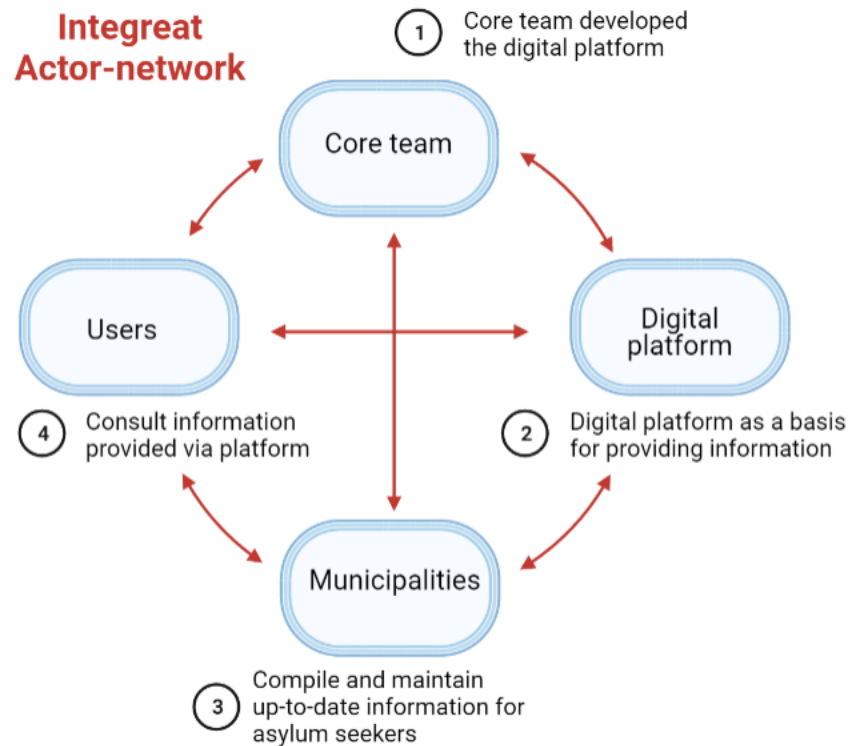
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[6] https://tuerantuer.de/

Figure 1: The Integreat actor network

The information displayed in the Integreat web and mobile application was compiled and maintained by municipalities in a content management system that they could access via web browsers. Every municipality was responsible to organize relevant information and provide the translation of the material into a set of languages they wanted to support. In technical terms, the municipality representatives had to interact with the WordPress content management system for entering information and keeping it up-to-date. Moreover, some content considered to be important and relevant for every municipality was offered by the Integreat team, for example, information about general COVID-19 rules and restrictions. Integreat provided information for newly arrived refugees concerning services such as access to German language courses, healthcare, education and job market, and information about local events.

After its implementation in more than 65 municipalities across Germany, Integreat had been featured as one of the best-practice digital initiatives in the integration efforts for newcomers (Bamberg et al., 2020). Already in 2018 Integreat had been granted the Google Impact Challenge

Award[7], which significantly supported its development, followed by Future Prize 2020[8] and the Transformational Finance Award[9]. By covering the evolution of Integreat over time, we were able to derive insights into its success and persistence.

FINDINGS

The findings are structured based on the stages of the translation process (Callon, 1984) and presented with a detailed explanation below (see Table 2).

Table 2. Stages of the translation process applied to the case of Integreat (own elaboration)

Stage	What actors do	Consequences for the Integreat network
Problematisation	**Core project team** ▪ Understanding of the challenge based on personal experience by participating in solidarity organizations and campaigns ▪ Wide-spread media report of the so-called 'refugee crisis' underscored the relevance **Municipalities** ▪ Identify the need to provide fast and reliable information to newly arrived refugees **Digital platform** ▪ Form technical support for reacting to the emergent need ▪ Characterized as time and cost-efficient support with a high level of availability	The core project team identified a problem that resonated with the societal need in a particular period of time. Addressing this problem in a new, digital way (which is seen as an obligatory passage point) helped them to arrive at the next phase.
Interessement	**Core project team** ▪ The team tried to convince the key partners (including academic partners) that this solution was important to solve the societal need ▪ After forming a coalition with key partners, the team tried to expand their interest in potential municipalities by presenting Integreat during meetings and conferences. **Municipalities** ▪ Expressed preliminary interest to support the Integreat initiative ▪ Identified internal responsible to follow up on the project **Digital platform** ▪ The basic platform was ready to be demonstrated during the meeting with interested actors	The core project team identified 'right' stakeholders who would be interested in supporting this initiative from professional software development, as well as municipalities, as implementors of this idea later on.
Enrolment	**Core project team** ▪ By continuing the negotiations with potential partners and municipalities which expressed interest to be part of the project, the team decided to provide bonuses for engaged municipalities **Municipalities** ▪ Accepted their role by defining their position	Through the process of negotiation between interested municipalities and providing benefits in terms of 'prototyping cities' that were able to use Integreat for free, developers could advance the

[7] Google Impact Challenge Award: https://impactchallenge.withgoogle.com/deutschland2018
[8] Future Prize 2020: https://www.nachhaltigkeit.augsburg.de/zukunftspreis/projektdetails/app-integreat-augsburg
[9] Transformational Finance award from the Financial Times and IFC-International Finance Corporation:
https://www.in.tum.de/i17/krcmar/news/article/integreat-receives-two-awards-from-the-financial-times-and-the-ifc-international-finance-corporation/

	▪ An internally responsible person identified the plan to follow toward implementation **Digital platform** ▪ The prototype is ready to be implemented ▪ Iterative improvement suggestions based on the feedback	technical part by receiving constant feedback on improvement.
Mobilization	**Core project team** ▪ Constant support with the implementation of the platform ▪ Training of the personnel involved in content creation in municipalities ▪ Establishing the network of the implemented Integreat municipalities ▪ Establishing a community of developers of the Integreat **Municipalities** ▪ Engaging in the training for content creation and updating information ▪ Organizing translation services to the supported languages **Digital platform** ▪ A full version of the platform released	The Integreat team provided not only technical solutions but full support for implementors, e.g. training for a network of involved partners, and printed advertisement materials. As well, a network of municipalities that implemented Integreat was established.

Problematisation

In terms of Callon's phases of translation, the development of the Integreat platform started with *problematization*. This phase is characterized by the process when actors provide problem statements and at the same time seek to convince others about the correctness of their approach to implementing a solution. In this stage, the core team of Integreat induced the importance of approaching the problem differently, namely in a digital form. Such an approach is seen as an obligatory passage point (OPP) to address shared interests and needs.

In the case of Integreat, the initiators were actively taking part in various volunteer initiatives to support refugees:

> *In 2014, I started to get involved with the association Tür an Tür in Augsburg. [..] their latest project in 2014, was to build the Café Tür an Tür, and they wanted to create a space for people from the neighborhood and migrants who would visit the Counselling Center in the front just to meet, mingle, get into a conversation. [...] I was one of the students who was volunteering at the Café.*

Based on their experience, the initiators identified the problem of scarce information for migrants and a lack of adequate digital information resources. Information for refugees in Germany was often distributed in the form of printed material. However, considering the influx of people to

different cities in Germany in 2015 and 2016, the number of available information brochures and flyers was insufficient. Moreover, *"as early as 1999, the Association Tür an Tür published a brochure for refugees. But as soon as the work on the guide was finished, many details were already outdated"* (Integreat, 2015). Also, the information in the booklets was mostly in German, with some exceptions in English or French.

The major problem for the welcoming municipalities, as well as volunteers working with migrants, was to make arrival information available in a short period, in different languages, and keep it up to date. Hence, the initiators identified the critical issues as a scarcity of information, the need for new ways to improve information provision, and new ways to engage the main stakeholders. Such insights informed the establishment of the primary actor network with actors who could address the issue.

In terms of the persistence of the platform, this phase was a crucial passage as the identified problem resonated with the societal need which was constantly under the attention of media and society. However, the understanding of the issue of persistence was problematized by the initiators' team:

> *probably [this] is the same problem, [that] other similar projects like Integreat are facing right now: What happens when funding runs out, who is providing the content, and things like that.*

Furthermore, the ability to tackle the issue by applying a new digital approach, compared with the established approach of printed information provision and face-to-face migration counseling, played a significant role in the recognition of the initiative by potential stakeholders. The argument supporting the digital form of information was presented as follows:

> *[…] you would have the problem that you needed to update information already printed. Inconsistent versions [of printed material] were coming. And when we saw refugees, just like each one of us, they would have a smartphone. Thus, we needed just a medium to present information digitally.*

At the same time, the personal involvement of the initiators in voluntary asylum counseling not only allowed individuating of the stakeholders but also have a glimpse of how digital platforms were embedded in the everyday life of the refugees.

Interessement

For the consolidation of the links between the interests of different actors, during the phase of *interessement*, the core team of Integreat got in touch with potential stakeholders and key partners: The academic community, representatives of municipalities, volunteers, refugees, and developers. The goal was to delineate the importance of addressing the issues defined in the first phase.

Each group of stakeholders designated a representative or spokesperson who would speak for the group's interests. This phase concluded with the establishment of the Integreat team. Moreover, the idea of addressing the problem digitally was supported by the Chair of Information systems, at the Technical University of Munich (TUM). In this way, the establishment of the links between different actors was in part facilitated by TUM due to an increased legitimacy of the project. In other words, we can trace the transformation of the idea led by the group of volunteers to the team of Integreat. Thus, thanks to the personal involvement of the spokesperson, who

> *at that time was doing research at the Chair of Information System, TUM with Prof. Krcmar and told him about [the Integreat project]. And then he had an appointment with Prof. Krcmar and […] two […] good software developers. And so it all came together and then they had the idea: 'Alright, instead of the brochure, we're building an app'.*

The important passage in this phase was concentration from the side of the initiators, not only on the partners who will be in charge of the development of the solution but also on the ones who will implement it later on. Thus, the involvement of the municipalities and other social organizations in the early stages of the platform development helped to guarantee the support of the initiative:

> *[…] in Tür an Tür you will meet people from Diakonie, the Red Cross, [and] Caritas[10]. […] And in the summer of 2015, the city of Augsburg was establishing a new*

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[10] The major humanitarian aid organizations actively involved in refugee support in Germany.

department called Task Force Asylum, because they had to provide housing for 80 refugees per week. So, because at that time they had a big, big language barrier, they were really interested in the idea. And we had everything in place.

Moreover, the accessibility of the network of professional software developers who were voluntarily offering their skills to support the idea, as well as the endorsement of the leading academic institution gave the initiators the chance to form a resilient Integreat team.

Enrolment

The phase of *enrolment* is characterized by the active participation of the actors through acceptance of their role in prioritizing a particular problematization. In this phase, engaged actors, such as representatives of the municipalities, willing to support and implement the Integreat solution, academic institutions, supporting the development of the technical part and management, and non-profit organizations involved in migration governance, accepted their role by defining their position towards the problem.

Such support of the initiative was documented in different ways. For example, during the first Integreat developer conference (Integreat, 2016a) an agreement was reached regarding the platform user interface and how it can best meet the needs of the users. At the same time, the municipality of Augsburg agreed to be the first municipality to implement the Integreat platform, and the non-profit organization Tür an Tür provided a meeting space for the Integreat team (Integreat, 2016b).

Thereby, the Integreat core team was aware that the scalability across different municipalities was important for the project:

Integreat can adapt to the [language selection] preferences of municipalities so that you leave out [a certain] language and maybe select another one. And each city decides for itself, which languages they need. But those were the ideas from the beginning because one of the team members was coming from another project in a smaller city in the south of Munich. So, we knew that there might be interest from other municipalities. The whole idea and technical solution had to work for other cities and counties as well.

The formalization of the relations with municipalities was facilitated by the establishment of Tür an Tür Digitalfabrik gGmbH. During the constant negotiation process between the Integreat team and the municipalities interested in implementing the Integreat platform, the special offer of non-paid use of the platform was provided for so-called 'prototyping municipalities'. This was a crucial point for the whole development of the platform and its persistence. Thus, the representative of one municipality reflected on the experience as an early adopter of Integreat as follows:

> *At the time in 2017 when I started, nothing like [the Integreat platform] existed. So, since the Integreat [team] was involving mostly volunteers during that time, they didn't [...] 'force' us to pay, so since then, we haven't paid a cent to Integreat. I know that this is not working anymore.*

Thanks to the prototyping municipalities, the Integreat team got the opportunity to advance the technical part of the platform by receiving constant feedback on improvement.

Mobilization

The *mobilization* phase corresponded to the transformation of the enrolment agreements to practice, namely, the launch of the digital platform and its implementation by the municipalities. In this phase, the actors in the network are assembled by the Integreat team as spokespersons and reassembled in "a certain place at a particular time" (Callon, 1984, p. 217). The process of re-assemblage can be seen in particular during the presentation of the Integreat initiative in different competitions where Integreat is described as a heterogeneous socio-technical system based on the actor network.

During this phase, the Integreat initiative formed a network that span the municipalities which had already implemented the platform. The representative of one municipality described the importance of this network as follows:

> *I think if you're starting such a project, it is not feasible that you are the only person who is bringing all the content together. But you have to address many people—which is good, so it's networking. If you don't do the networking, it's actually not going to work in the long run.*

Moreover, to consolidate the exchange of the experience and spread the word about the difference it can make to adopt a digital solution, the Integreat team began to organize an annual forum for the representatives of municipalities. Such maintenance of the Integreat municipality network, as well as always management and technical support of the platform, played an important role in keeping the engagement with the municipalities at a high level.

Together with technical support and overall management of the platform, trust between the Integreat team and municipalities was a crucial part of the collaboration. This was sustained by the recommendation of the Integreat to other municipalities as a good practice.

DISCUSSION

By following the development of the Integreat platform in every stage of the translation process, we were able to analyze how the constant re-negotiation of the roles and establishment of new links and bonds with different stakeholders was consolidating the position of the social initiative. In this way, the fact that the Integreat platform is non-profit that serves a social cause (Schreieck et al., 2017a) gave the advantage in spreading the word about the initiative starting from the interessement phase among different actors such as professional IT volunteers, public authorities, social organizations and associations working in migration governance.

The social cause has often been seen as a crucial stimulus for the decision to support the Integreat initiative—financially or by volunteering in different domains, such as marketing, research, and user relations. However, from the perspective of municipalities, the Integreat platform was a crucial element in responding to their need to welcome and accommodate a large number of newly arrived refugees in a short period. In other words, the Integreat initiative was right on time to problematize the situation of newly arriving refugees and propose alternative ways to tackle it, namely in a digital form.

For the persistence of the Integreat initiative, it was important to identify the stakeholders who had power and were able to make decisions and to interest them in the initiative. In this way, the municipalities—by facilitating the implementation of the Integreat platform—provided constant feedback from the users. This dialogue with the users allowed the Integreat initiative to adjust the services and understand better what had to be improved.

Another important factor for Integreat in the successful enrolment of the other municipalities was the fact that the platform could be adjusted to the needs of large and small cities and towns. This feature of Integreat was enabled by the underlying platform architecture. For each municipality, a dedicated instance of the content management system could be set up within a matter of hours. The mobile application automatically retrieved the correct information through the platforms' application programming interfaces (APIs) once the users selected their location. Compared with other initiatives, the locality of the information represented by municipalities made this platform attractive to the users. In this way, the Integreat platform presented a unique decentralized information retrieval opportunity based on the local content from every municipality.

Finally, the implementation of the Integreat platform was giving the possibility to municipalities to be in contact with other implementors. In other words, mobilization led to the creation of a network of municipalities through which they were able to exchange the experience and consult with colleagues from other municipalities in case of uncertainty.

In summary, the persistence of the Integreat initiative can be explained by the following factors: (1) the social cause of the initiative directly matching the societal need at that time; (2) 'in the making' pattern and constant dialogue with interested municipalities allowed *in-vivo* improvement of the platform architecture, and (3) the assemblage of the network of relevant stakeholders.

With this paper, we contribute to the academic literature regarding the persistence of social initiatives by bringing to focus the different stages of its development, as well as the factors negotiated in every stage of the translation process that supported the persistence of the Integreat platform. We demonstrate that, in part, factors for the persistence of the Integreat initiative were in line with the ones identified for social enterprise survival (Chell, 2007; Haugh et al., 2021; Kay et al., 2016). However, we also unveiled the notion of the social cause and related factors for the persistence of such an initiative. We contribute to the literature on what makes digital social initiatives persistent from the science and technology studies perspective, where technology is seen as an equal actor in the network of relations.

At the same time, this paper unveils the socio-technological assemblage designed to produce more benefits for refugees in Germany by demonstrating the persistence of Integreat over time. Through the different stages of the development, we observe how the core team of Integreat managed to create and maintain the Integreat platform and how this process generated a network of

relationships among different actors. Such input can be especially interesting for the non-profit sector, which, due to the pandemic, relies on different types of digital technology support, as well as for founders of similar digital initiatives aimed to provide alternative support for migrants and refugees.

CONCLUSION

In this paper, we demonstrated how a social initiative has persisted over time. We navigated the main phases of the establishment and development of the social initiative in terms of the translation process. At the same time, we explored the existing academic literature concerning factors for social initiative persistence. Through these discussions, we brought the science and technology study perspective as an analytical lens to the persistence of social initiatives for refugees and drew on actor–network theory as an overarching theoretical framework. Thanks to this approach, we were able to show how every stage of the translation process contributed to the overall persistence strategy of Integreat. Our findings contribute to the academic literature on the persistence of social initiatives and open another way to demonstrate how the sociology of translation can be applied to investigate the factors that influence the long-term presence and operation of social initiatives. Concerning the limitations of this study, we analyzed only one digital social initiative to describe its persistent development. Even though it is a well-developed initiative, it is still mostly focused on Germany with limited plans for internationalization. Therefore, the network of the relationships and connections between different actors has been analyzed following the German migration governance realities. Further studies on different digital social initiatives for refugees in Europe, but not only, could significantly enrich and further validate our findings.

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