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Digital Technologies and Refugees' Social Inclusion: The Use of ICTs by NGOs

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Abstract

Numerous studies highlight the direct impact of digital technologies on migrants, shaping their decisions to migrate, their migration trajectories, and their experiences in their destination countries. This article contributes to this emerging literature by exploring the influence of digital technologies on the inclusion of migrants, specifically by examining how non-governmental organizations (NGOs) use information and communication technologies (ICTs) to support refugees—an area that has received limited attention in the existing literature. In particular, the article focuses on NGOs in Türkiye and the Netherlands. We conducted interviews with representatives of 23 NGOs across the two countries to understand how and why they use digital technologies. The findings show that NGOs in both countries use ICTs extensively for (direct and indirect) communication, advocacy, and service provision, with clear benefits but also challenges. ICTs enhance visibility and reach, support multilingual and remote service delivery, and help NGOs raise funds and build an institutional identity. Challenges include unequal access to digital tools and insufficient digital literacy by both NGO staff and their clients, lower engagement in online formats, and the risk of losing personal connection due to standardized digital processes.

Keywords

digital technologies; ICTs; NGOs; refugees; social inclusion; The Netherlands; Türkiye

1. Introduction

Contemporary societies are becoming increasingly digitalized, with the use of digital technologies spreading across all sectors (European Commission, 2022). This shift influences various aspects of social life. Numerous

studies highlight the direct impact of digital technologies on migrants, shaping their decisions to migrate, their migration trajectories, and their experiences in their destination countries (Alencar, 2020; Dekker & Engbersen, 2014; Komito, 2011). Digitalization is therefore implicated in migrants' overall social inclusion, defined as "the process of improving the terms on which individuals and groups take part in society—improving the ability, opportunity, and dignity of those disadvantaged on the basis of their identity" (World Bank, n.d.).

This article contributes to this emerging literature by exploring the influence of digital technologies on the social inclusion of migrants, specifically examining how non-governmental organizations (NGOs) use information and communication technologies (ICTs) to support refugees—a particularly vulnerable population in terms of social inclusion, due to increased digitalization in society (Alencar, 2020).

In 2023, the number of internationally displaced persons reached a record high of over 36 million, including more than 8 million asylum seekers (UNHCR, 2023). The number of refugees under UNHCR's mandate more than doubled between 2013 and 2020. This increase is linked to long-standing conflict dynamics in certain countries (e.g., Afghanistan, Congo, Myanmar, Syria, and Sudan) and the refugee-protection crises in Europe (2014–2015) and other regions (e.g., the Venezuelan crisis in South America).

Research has highlighted the crucial role of ICTs in facilitating migration and reshaping social inclusion (Alencar, 2020; Dekker & Engbersen, 2014; Godin et al., 2025; Komito, 2011). First, ICTs enable migrants to stay connected with family and friends in their country of origin, while fostering new social connections globally. Second, they play a key role in the migration and settlement process by providing access to valuable information that might otherwise be difficult to obtain.

In addition, the process of social inclusion involves adapting to a new society and its increasing levels of digitalization. In Europe and beyond, ICTs have become powerful tools for managing bureaucratic work and everyday life needs (European Commission, 2022). Governments and NGOs can capitalize on ICTs to enhance the delivery of services and support to migrant populations, but they may also entail significant challenges. For instance, increasingly complicated digital bureaucracies, especially if paired with limited digital skills, may hinder migrants' access to essential online services related to their settlement. Indeed, they increasingly undergo ICT-mediated interactions in accessing information and services from national and local governments. A lack of familiarity with the digital environment might therefore create an additional layer of exclusion (Martin-Shields et al., 2022).

NGOs act as a bridge between refugees and increasingly digitalized state systems (Diaz Andrade & Doolin, 2019; Schreieck et al., 2017), helping individuals navigate both online services and broader inclusion processes. Despite the increase in ICT use for refugee support and its potential challenges, there is a notable gap in the literature. While many studies explore the use of ICTs by refugees (and migrants in general), the use of ICTs by support providers, especially NGOs, is largely disregarded (Ślęzak-Belowska et al., 2026).

To provide new insights on the topic and contribute to filling this gap in the research, we focus on how NGOs use ICTs to support refugees. This article shifts the analytical lens from migrants' own use of ICTs—an area that has already received substantial scholarly attention—to the practices of NGOs as key intermediaries in the inclusion process. We are particularly interested in how and why they use digital technologies, as well as the associated benefits and challenges. In particular, we propose the following main research question: What are the reasons for and implications of NGOs' use of ICTs in the support they provide to refugees?

To answer this research question, we conducted interviews with representatives from 23 NGOs across the Netherlands and Türkiye. We selected these two countries because they both encounter challenges in managing the inclusion of migrants, though they differ in scale: As Türkiye hosts a larger refugee population, government agencies and NGOs face significant pressure, potentially affecting the quality and availability of services that foster inclusion. Moreover, the Netherlands benefits from a well-developed digital infrastructure, whereas Türkiye experiences disparities in digital accessibility (e.g., regional disparities in internet access and the limited adoption of digital systems). These differences may impact how support is delivered, including the extent to which digital tools are utilized to provide assistance.

In what follows, we first present the background to the research, focusing on ICTs and the role of ICTs for refugees' inclusion (Section 2). We then present the methodology (Section 3) and the main results of our comparative research on the purpose of ICT use, its benefits, and challenges (Section 4). We conclude by reflecting on the broader implications of these findings and discuss the study's limitations, which may pave the way for future research (Section 5).

2. Background

2.1. ICTs for Refugee Inclusion

The concept of "information and communication technologies" (ICTs) encompasses all technical tools and systems designed to manage information and facilitate communication. This includes both hardware—such as computers and networking devices—and software applications that enable data processing and connectivity (Eurostat, n.d.). Digital communication technologies can be categorized into asynchronous and synchronous forms (Cormode & Krishnamurthy, 2008; Walther et al., 2011). Asynchronous communication does not require users to be online simultaneously and includes tools such as forums, newsletters, and emails. In other words, they enable interaction without requiring real-time engagement. These tools are particularly useful for refugees who live in remote locations or have inconsistent internet access. Synchronous communication, on the other hand, allows for real-time discussions and information exchange, allowing for immediate communication and support. Examples of synchronous communication tools include social media platforms (e.g., Facebook, Twitter, Instagram) and messaging applications (e.g., WhatsApp and Telegram). Understanding these distinctions is essential for evaluating how different forms of communication serve the purpose of support providers (e.g., NGOs) and the needs of specific groups (e.g., refugees).

As digital transformation progresses, we see a growing digitalization of public services and citizen–state interaction, particularly in relation to accessing support and essential services. The evolution of ICTs has therefore profoundly impacted how refugees communicate, access support services, and develop their lives in their new societies (Alencar, 2020; Leurs & Smets, 2018).

Leveraging these technologies effectively will be crucial for ensuring that refugees receive the help they need, regardless of their location. Digital platforms can provide refugees with better access to fundamental services such as healthcare, education, and job opportunities. Electronic government (e-government) services can simplify administrative procedures such as visa processing, work permit applications, and registration for social services, ensuring that migrants can more easily access essential resources (Diaz

Andrade & Doolin, 2019; Martin-Shields et al., 2022). All together, these create a (digital) arrival infrastructure shaping the experiences and thus the lives of migrants (Leurs, 2019).

A growing body of research examines the connection between migration and ICTs (Alencar, 2020; Dekker & Engbersen, 2014; Godin et al., 2025; Komito, 2011; Leurs & Smets, 2018; Masiero & von Deden, 2022). Scholars in this field have analysed how digital tools influence both migration governance and the daily lives of migrants. When it comes to the role of ICTs in fostering social inclusion, existing studies focus on migrants' perspectives and explore how they use ICTs (such as social media) to communicate and access information (Alencar, 2020; Latonero & Kift, 2018). Most of the existing literature points to the fact that ICTs play a crucial role in sustaining social relationships, enabling migrants to maintain ties with friends and family in their countries of origin while also forming new connections with locals, fellow migrants, and support organizations (Alencar, 2018; Gillespie et al., 2018; Komito, 2011; Kutscher & Kreß, 2018). Many migrants engage in online communities and discussion forums where they exchange experiences and practical advice, creating a collective knowledge-sharing space (Alencar, 2018). For example, online resources help migrants secure housing, connect with assistance networks, and take part in local cultural and community events.

Nonetheless, research also highlights notable challenges. A key concern is the "digital divide," which reflects inequalities in access to the internet and digital tools. Barriers such as financial constraints, language difficulties, and limited digital skills can prevent migrants from fully utilizing these resources (Alam & Imran, 2015). In their work, Lintner and Zadra (2025) identified three main challenges for asylum seekers: access to digital infrastructure (i.e., the material and digital instruments); lack of digital literacy (i.e., the skills needed to navigate digital environments); and a lack of digital capital (i.e., the ability to convert digital engagement into other forms of capital and tangible life improvements).

Migrants' (including refugees') use of ICTs has been extensively analysed, but there is almost no literature on how support organizations use digital platforms or services, with three notable exceptions (Ślęzak-Belowska et al., 2026). First, Schreieck et al. (2017) conducted an action research study, within the context of a non-profit initiative, to assess the application of governance mechanisms informed by existing research on platform and community governance. Second, Turkay and Turkay (2019) conducted interviews with representatives from eight Turkish NGOs to investigate the use of ICTs in providing support to Syrian refugees. They found that these organizations utilize digital tools in three key ways: for operational purposes (e.g., keeping track of the refugees and storing private and sensitive information); mediation between local and refugee communities (e.g., using social media to spread positive messages, images, and videos regarding refugees to amplify their voices); and to disseminate information (e.g., inform refugees about services). Third, Martin-Shields et al. (2022) investigated the use of e-government services among Venezuelan migrants in Colombia, comparing their access and usage patterns with those of short- and long-term Bogotá residents. This study found that, despite having internet access, migrants were significantly less likely to use e-government services than locals, leading the authors to conclude that access to ICTs alone is insufficient and that other barriers might play a crucial role. Overall, however, there is a paucity of literature on the types of ICTs used, and their advantages and challenges (Ślęzak-Belowska et al., 2026). In addition, only Turkay and Turkay (2019) have taken the perspective of service providers that, we argue, is essential for understanding how ICTs are used for service provision.

In sum, ICTs hold significant potential to support migrant and refugee inclusion by facilitating communication, access to services, and community engagement. While digital services have the potential to

enhance migrants' access to information and support, and to reduce instances of discrimination or inappropriate treatment—as may occur in interactions with human officers—digitalization may also reinforce structural exclusion by presuming familiarity with, and access to, ICTs. Such challenges have not been fully explored. A deeper understanding of how governmental and non-governmental service providers utilize these technologies, and the barriers migrants face in accessing them, is essential for designing inclusive digital strategies. To contribute to closing this gap, this article shifts the analytical focus from individual migrants' use of ICTs to the practices of service providers.

2.2. Comparing the Netherlands and Türkiye: Migration and Digitalization

Migration has been a defining issue in both the Netherlands and Türkiye, as both countries host a sizeable number of refugees, but there are significant differences between the two countries.

First, according to UNHCR (2023), the total number of asylum seekers in the Netherlands was around 44,000, with approximately 230,000 refugees under the UNHCR mandate (approximately 1.3% of the entire Dutch population). Türkiye, on the other hand, hosts one of the largest refugee populations in the world. As of 2023, Türkiye was home to approximately 3.2 million registered refugees (approximately 4% of the population) and 222,000 asylum seekers. Given its geographic location, Türkiye has been a primary destination for those fleeing war and economic hardship in Middle Eastern countries. Managing such a large influx of refugees has placed immense pressure on Türkiye's infrastructure, economy, and social services (Benner et al., 2015).

Second, Türkiye and the Netherlands have different levels of digitalization. In Europe, the use of digital tools is spreading across all sectors, with the Netherlands at the forefront of the digitalization of the economy (European Commission, 2022). With widespread internet access, a high degree of automation, and a well-integrated e-government system, Dutch society leverages digital tools for various services, including immigration management and the social inclusion of refugees (European Commission, 2022). Online portals, services, and digital identity verification systems have been incorporated into asylum application processes, social service access, and civic integration programmes. Türkiye has made significant progress in digitalization over the past decade, but its digital infrastructure and integration of digital tools into public services remain uneven. According to several international reports (ITU, 2023; OECD, 2023), Türkiye has broadened internet access and increased the availability of e-government services, particularly through platforms such as e-Devlet (the national e-government portal), through which citizens and residents, including refugees with legal status, access a variety of administrative services. However, challenges persist in terms of user friendliness, digital literacy, regional disparities in internet provision, and the limited adaptation of digital systems to refugees' needs.

3. Methodology

For the present research, we conducted qualitative interviews with NGO representatives from the Netherlands (10 interviewees) and Türkiye (13 interviewees). To identify potential interviewees, the research team compiled a list of NGOs using a combination of online sources, such as published reports, organizational websites, and the field researchers' existing professional knowledge and networks. Representatives were contacted by email and/or telephone, with approximately 40% agreeing to an

interview. Acceptance or rejection of our interview request was not associated with any specific type of NGO.

Face-to-face interviews were conducted, focusing on refugee support in each country. The NGOs we interviewed focus on different aspects of refugee support, such as humanitarian relief, social inclusion, housing and accommodation, language support, legal assistance, advocacy, and education and training. Table 1 provides more details of the representatives and their respective NGOs.

The interviews were conducted in 2023 and 2024, with each lasting approximately 30 minutes on average. They were conducted in English in the Netherlands and in Turkish in Türkiye (and subsequently translated into English by the interviewer). During the interview, the following main topics were addressed: the activities of the NGO; the role of the interviewee within the organization; and their use of digital technologies to support refugees. Respondents were asked to reflect on the importance of ICTs in their operations, which specific tools or platforms they use (e.g., WhatsApp, Google Translate, client management systems), and how these technologies facilitate communication and service delivery. Further questions explored the benefits of digital solutions—such as speed, efficiency, and accessibility—and the barriers

Table 1. Overview of the interviewed NGOs.

	NGO activities	Country
1	Housing, accommodation, and other administrative support	NL
2	Organize temporary housing	NL
3	Build refugees' social network through Dutch language learning	NL
4	Social inclusion	NL
5	Legal assistance to undocumented refugees	NL
6	Support for LGBT+ refugees	NL
7	Social inclusion	NL
8	Education	NL
9	Social inclusion	NL
10	Advocacy	NL
11	Advocacy	TR
12	Communication and legal support	TR
13	Communication and legal support	TR
14	Provision of educational and psychosocial support	TR
15	Provision of material support	TR
16	Provision of material support	TR
17	Humanitarian relief	TR
18	Humanitarian relief	TR
19	Psychological support	TR
20	Legal support	TR
21	Provision of material support	TR
22	Provision of material support	TR
23	Psychological and mental health support	TR

encountered—including language difficulties, limited digital literacy among refugees, and infrastructural constraints such as poor internet connectivity. Respondents were then asked to provide concrete examples of both successful and problematic experiences of digital tools in their work with refugees. This open-ended, semi-structured approach enabled the research team to gain detailed insights into the operational realities, challenges, and opportunities surrounding the digital support of refugees across different organizational contexts.

The interviews were then transcribed by the interviewers and analysed using coding in ATLAS.ti. This allowed us to systematically identify recurring themes and insights.

To protect the anonymity of our respondents and their organizations, we will not include any identifying details about the NGOs or their representatives in the presentation of the findings (Section 4). This is particularly necessary in light of the increasingly hostile socio-political climate and broader global discourse around migrants and NGOs. Quotes will be attributed only in general terms (e.g., "a Turkish NGO" or "a Dutch NGO"), without linking them to specific individuals or respondent numbers. This approach is essential to ensure the safety and confidentiality of those involved.

4. Findings

In this section, we present the findings of our research. We first address the purpose of ICT use by NGOs, before moving to the associated benefits and challenges.

4.1. Type of Use and Kind of ICTs

When it comes to the ICT use, three main purposes emerged from our interviews: (indirect and direct) communication; advocacy; and support provision. In general, NGO representatives we spoke with underscored the critical importance of digital technology to facilitate or enhance their NGOs' communication, support provision, and advocacy activities. The specific digital tools NGOs employ mostly depend on the purpose of their use.

4.1.1. Communication

ICTs play a pivotal role in enabling NGOs to maintain both direct and indirect communication with beneficiaries and other stakeholders, including partner organizations, donors, and the general public. Our interviews highlighted three key types of communication.

First, NGOs have to reach out to (potential) beneficiaries to promote their services and events. A Dutch NGO representative states that "ICTs bridge the gap between people who otherwise would have never met in real life, now we have a way of meeting them…without actually having to be face to face." Many NGOs use both synchronous and asynchronous ICTs, mostly in an asynchronous way (i.e., their website and social media channels) to inform their potential beneficiaries about their services and events. For example, one Turkish NGO actively employs Facebook, Instagram, and WhatsApp to disseminate information:

> Social media is a very important tool for us to meet with beneficiaries. We organize educational programs, workshops. So we definitely announce them with posters on social media…we announce them in WhatsApp groups, and…in Facebook groups where Syrians are highly present.

Similarly, a Dutch NGO maintains both a dedicated website and a Telegram channel to reach out to potential beneficiaries. Beyond one-way dissemination, ICTs can also facilitate more interactive forms of engagement. A notable case is a nationwide Dutch NGO that organizes Zoom sessions with supported refugees, enabling remote participation in workshops, Q&A sessions, and community-building activities.

Second, ICTs are used for direct communication between beneficiaries and NGOs. This runs through a variety of more direct channels, often allowing for both synchronous (e.g., WhatsApp and Telegram) and asynchronous (e.g., email) communications. Channels are chosen to cater to the specific needs of the target group. For example, a representative from a Dutch NGO told us:

> We use WhatsApp a lot because when we use it, refugees that don't understand English or the Dutch language can easily use the translator app to translate messages sent to them from the WhatsApp app and understand better compared to when you talk to them.

Another Dutch NGO uses Telegram when assisting Ukrainians, as the app has particularly strong uptake among this community. In another example, an NGO in the Netherlands supporting refugees from the LGBT+ community commented:

> I use Instagram rather than Facebook, because Instagram is a safe place for members of the LGBT community, and you can meet real people there, compared to Facebook, where there are many fake people. When we have events, I won't post [about] it on Facebook because of the safety of refugees in my community.

In addition, these channels can be tailored to specific services. For instance, WhatsApp is used to communicate between clients and legal advisors, as underlined by this Dutch NGO:

> So, normally, if you only do it by phone, then you must keep remembering it, the message you gave, and if we can write it down, they don't have to remember, they can just read. So, it can be quite important for them to read what exactly, because it's sometimes from a legal point of view, it's sometimes very important to have the right message.

Third, NGOs use their websites to showcase their work, attract donations, and build their institutional identity. It is important for NGOs to publish articles, reports, and press releases on their websites, and then increase their exposure by linking to them through social media platforms. The importance of a website is explicitly underscored by the representative of a Turkish NGO:

> Posts can disappear on social media…but the website is not like that….Now, if you share a press release with the link and images of our website, people will also be able to access our website and see what you have done before, who you are and your corporate movie….They will see your corporate identity, they will see your depth.

4.1.2. Advocacy Activities

ICTs are also central to NGOs' advocacy activities, enabling them to influence public discourse, challenge misinformation, and mobilize support for migrants' rights. While both synchronous and asynchronous ICTs are employed for such purposes, asynchronous communication remains the predominant mode. The most intuitive and widespread application of ICTs in advocacy is the strategic use of social media. Platforms such as Instagram, Twitter/X, Facebook, YouTube, and TikTok are leveraged to directly address prevailing misconceptions about migration by disseminating counter-narratives and sharing factual information. For example, one Turkish NGO produces and distributes press releases, videos, and other multimedia content across multiple platforms with the explicit aim of combating disinformation and hate speech. As one representative explained:

> Social media is generally one of our main areas of focus. This is because misinformation, racism, and increasing hate speech were particularly influential in our starting point....We produce content that addresses disinformation, generates more confirmed information, and counteracts hate speech.

Similarly, several Dutch and Turkish NGOs emphasized that Instagram functions as a powerful advocacy platform for reaching and engaging global audiences and for increasing organizational visibility. These organizations noted that sustained activity on Instagram allows them to gain followers, enhance recognition, and attract potential partners or donors.

However, the advocacy potential of ICTs extends far beyond traditional social media posting. For instance, a Turkish NGO representative noted that other pro-migrant advocacy organizations use digital petition tools, such as Google Forms or Microsoft Forms, to conduct e-signature campaigns in support of specific policy changes or community initiatives. Such tools allow NGOs to mobilize supporters quickly and efficiently, enabling direct civic participation even from geographically dispersed populations. Synchronous ICT applications also play a role in advocacy, particularly when NGOs seek to create interactive, dialogical spaces for public engagement. Several interviewees described using live webinars to advocate for their objectives and interact with their audience in real time. For example, a Turkish NGO has a "programme called the Migration Path; 20 minutes each [episode], [with] people interested in migration, experts, or migrants. We invite them, we talk on YouTube." As the NGO representative explained, these sessions aim to humanize migration debates, foster informed discussion, and connect diverse audiences with credible voices on the subject.

4.1.3. Support Provision

NGOs also employ ICTs to provide tangible and non-tangible support, beyond mere communication. The specific digital tools depend on the nature of the services provided, and whether a service requires real-time or delayed interaction, or a mix of both.

NGOs that provide practical aid use digital technologies to manage their aid distribution and to reach their beneficiaries. For instance, one Dutch NGO that provides housing with host families uses a database created with Google Forms filled out by both host families and guests, and a client management system with "matching software" to connect guests to suitable families. A Turkish NGO that provides financial aid shared:

"In 2019…we distributed something called 'cash cards.' Managing contact with six thousand people individually would have taken a tremendous amount of time." However, with "a small programmatic equation and a simple schedule," the organization refilled the accounts monthly and sent programmed messages to the financial aid recipients. Finally, a small Dutch NGO set up a Facebook "helpdesk" to run a bike collection project, and used a WhatsApp group to share pictures of items—such as beds or cooking equipment—available for people living in a Dutch camp.

NGOs also rely on ICTs to provide non-tangible support (e.g., education, health and psychosocial support, or legal services). One NGO developed its own app that functions as a centralized information source for people living without documents in the Netherlands. The app was created to help people find the information they need in their location, and holds a database of organizations and community places, organized by category, such as (night) shelters and safe spaces. Similarly, a representative of a Turkish NGO explained that they developed a "platform that includes materials about mental health. You can start by taking a mental health test through the platform. You can also receive textual or face-to-face consultations."

Other organizations provide online consultations (e.g., through platforms such as Free Convenes and Zoom). Organizations that offer legal aid use online applications and websites to provide basic guidance and information on rights and procedures. For example, one Dutch NGO's website lists legal information and uses WhatsApp for direct contact with people in an asylum facility, in addition to email for legal aid questions. This allows for quick, written communication with refugees, regardless of their location.

Finally, NGOs involved in education and training programmes strongly rely on ICTs. One organization, for instance, provides online education programmes for Syrian children in Turkish primary schools through Zoom. Another organization offers traineeships through online platforms to strengthen the career prospects of newcomers in the Netherlands. Another Dutch NGO uses Slack as its main communication channel, where participants, trainers, and mentors can all communicate and collaborate on their training programme.

4.2. Benefits and Challenges

Having examined the primary ways in which ICTs are used, let us now turn to the key benefits and challenges they present.

4.2.1. Benefits

The use of ICTs undoubtedly comes with benefits, evident in the previous section. This section illustrates these benefits in more detail.

First, digital technologies help to increase NGOs' reach, allowing them (and the information and content they produce) to become more visible to potential beneficiaries. Enhanced information access also benefits beneficiaries, as they can independently access vital information about rights and services. The representative of the Dutch NGO that developed its own multilingual app to support people living without documents in the Netherlands explained that the app made "people…more independent in finding the information they need."

Second, ICTs also increase the reach of services and support provision. Through remote services, digital technologies facilitate the maximization of NGOs' support, allowing people to take part in NGO programmes regardless of their location or personal schedule:

> Refugees are literally everywhere in the Netherlands, in places which don't even have a train station or a bus stop, and the only way those people can be reached is through digital means. I can give an example, a place like Luttelgeest in Flevoland, it's a village. There's no bus, there's no train station. So, one person found me on Instagram, and then he referred three more people, and so now I've reached out to four people without even lifting a finger.

This increased reach is also linked to the fact that online services allow for multilingual communication, making it easier to overcome language barriers. One interviewee explained that service providers and beneficiaries may easily use translator apps for their digital communication, and that digital applications allow both audio and written communication, which is an advantage as compared to paper correspondence:

> I think [digital tools] are perfect because you can speak and write with them. Some people can't write but they speak perfect. So, I think also it's the best.

Third, ICTs may help accelerate NGOs' work and make them more efficient. ICTs help NGOs respond quickly when the demand for a service suddenly increases, as digital tools streamline and accelerate the assessment and administration of recipients' needs and personal data. For instance, when thousands of Ukrainians arrived in the Netherlands in early 2022, a Dutch NGO that connects host families with newcomers transitioned from physical paperwork to digital administration processes. As a Turkish NGO noted:

> I believe it is almost impossible to work without using these technologies….We have a huge amount of data related to families,…and processing this data through technology accelerates the assessment process and facilitates timely access to people's needs.

Lastly, NGOs themselves benefit from the enhanced visibility, especially in terms of fundraising. Digital technologies promote NGOs online and thus help raise awareness and attract donors and volunteers from all over the world. A representative of a Turkish NGO explained:

> The more visible content we produced on social media, the more our general donations increased….They didn't know us before. So, it really made a nice difference for us. Our donations kept increasing….Our general volunteer applications also increased a lot.

4.2.2. Challenges

Despite its benefits, the use of ICTs is not without challenges. NGO representatives identified three main types.

First, people with limited access to the internet or digital tools, and those with limited digital skills, may be hampered by the digitalization of NGO (and governmental) services. This applies to both beneficiaries and staff. Some NGOs mentioned that unstable internet access makes their work impossible at times:

> When the system is not working, when we have no Wi-Fi here, it's terrible as nobody can work. In a digital world [like] today, if there is a network failure, you cannot do anything. Clients must wait or come back another day resulting in delays in getting work done.

This also applies to clients' internet access:

> They only have free Wi-Fi in the asylum center where they live. They don't have free internet on their phone. When they are out of the center, they have to subscribe to a personal internet plan and most of the refugees are unable to do this due to financial constraints or some other reason best known to them. Some of them see it as an additional expense. This made it difficult for us to communicate with refugees when there is a matter of urgency, when we need urgent information from them, there may be a delay in response as they might be outside the asylum center.

Where digital literacy is concerned, staff members may also struggle to adapt to their NGOs' digital operations. One NGO representative shared that "teaching someone who is not familiar with digital tools can be difficult," and another stressed that the "main obstacle is technological illiteracy among volunteers." In particular, the operation of complex software and rapid digital developments may give staff a sense of "falling behind." This may create a need for more specialized staff, such as social media experts or promotional content creators with specific expertise in Adobe Photoshop, for example. NGOs with client management systems need to operate them "consistently and accurately" to ensure streamlined collaborations among colleagues.

This also applies to NGOs' clientele. Some beneficiaries may struggle with the specific digital infrastructure in their new institutional and bureaucratic context, or they may have limited experience with operating (particular kinds of) digital devices. One representative of a Dutch NGO gave their view on the matter:

> A lot of refugees don't have a computer in the country where they come from, and they cannot operate digital tools. This can be frustrating for the refugees and frustrating for us too and becomes time-consuming.

Limited familiarity with digital tools, for instance due to age or limited exposure, is a complicating factor for both NGO employees and their beneficiaries, especially when paired with a digitally demanding bureaucratic system, as exists in the Netherlands.

Second, sustaining online engagement remains a significant challenge for NGOs working with refugees. While digital tools offer flexibility and broad accessibility, they often fall short of fostering active participation, collaboration, and a sense of connection among participants. A Dutch NGO emphasized that certain training projects are intentionally conducted in person, as face-to-face interaction leads to greater involvement and more meaningful group dynamics. As one representative explained:

> We have a few project groups, so they are. It means that they are building a project together in a group of four people. When we do this in person…we get a lot of positive [things out of it], much [more] positive feedback than doing it online, because then you sit around with your, with your, with your mates and with the mentors and they have this, you know this big board and they draw the tasks on the board, they do the planning for the project. And this was more effective than doing it online. I wouldn't say that [it was] a barrier [doing] it online, but it is more effective [doing it in person].

A Turkish NGO shared a similar experience:

> Especially after the Covid-19 period, we conducted some of our training programmes online for both refugees and Turkish citizens. Unfortunately, it seems that this digital media does not provide the same interaction as face-to-face interaction. Attendance can be a problem, as people don't want to participate by looking at a phone screen. They may not regularly attend classes and could be absent. Even if they attend, they may not get much out of the lesson.

This underlines how online settings can be challenging for the quality of interaction and the overall learning experience, especially in activities that rely on collaboration, hands-on guidance, and peer-to-peer engagement. Naturally, such engagement may further be thwarted when digital literacy is lower.

Third, the use of digital technology may lead to rather standardized practices, putting complex cases beyond their scope. They also fail in situations where the "human touch" is critical. A representative from a Turkish NGO states that assessing a person's needs after a disaster using a tablet "turns the person in front of me into a robot. This leads to the loss of the gentle human feeling that I understand what you are going through." A lack of in-person contact prevents a holistic view of the NGO's clients, as stressed by this representative of a Dutch NGO:

> You cannot consider the whole person whom you're facing. When you see a person in real life, then you can see, of course, if the person has, for example, psychological problems, or is maybe somebody who does not understand English that well, or has not had lots of education….If you're answering an email or WhatsApp…you don't know if they understand it and if you have helped them in the right way.

5. Conclusion

This article has examined how NGOs in the Netherlands and Türkiye use ICTs to support refugee populations. By focusing on NGOs rather than refugees themselves, this study addresses an important gap in the literature, which has predominantly centered on migrants' own use of digital tools (Alencar, 2020; Dekker & Engbersen, 2014; Komito, 2011), while largely overlooking how ICTs are operationalized by support providers (Ślęzak-Belowska et al., 2026). This article shifts the analytical focus away from migrants' individual use of ICTs, an area extensively studied, and instead examines how NGOs themselves use digital tools to support inclusion efforts. We conducted interviews with representatives of 23 NGOs across the two countries to understand how and why they use digital technologies, as well as their associated benefits and challenges.

Our findings highlight that, despite differing levels of digitalization, NGOs in both countries make extensive use of ICTs. In fact, we observed no substantial differences in the ICTs they can or cannot use; any cross-country differences were more related to infrastructure (e.g., lack of a stable internet connection). Choices about how (and how much) technology is used appear to be influenced more by the NGO's area of work or specific objectives than by national context.

NGOs' ICT use spans three main domains: (direct and indirect) communication; advocacy; and service provision (both tangible and non-tangible support). These categories align with and expand on the typology

identified by Turkay and Turkay (2019), who found that ICTs are used for operational purposes, disseminating crucial information about services, and mediating relationships between local and refugee communities (e.g., through positive storytelling on social media). We confirmed these purposes, underlining the importance of ICTs in communicating with refugees to promote or provide services, as well as raising an NGO's institutional presence. Table 2 presents a synthesis of our findings, organized around the three key domains identified.

Table 2. Usage, advantages, and challenges (by domain).

Domain	ICTs used	Benefits	Challenges
Communication (direct and indirect, institutional presence)	WhatsApp, social media (e.g., Facebook, Instagram), email, video calls	Fast, real-time contact; wide reach; accessible communication with refugees across locations	Limited digital literacy; unstable internet access; refugees lacking devices
Advocacy	Social media platforms, websites, digital campaigns	Raising awareness; mobilizing support; low-cost outreach	No particular challenges
Support/service provision (tangible and non-tangible support)	Online platforms; WhatsApp, apps	Efficient service delivery; centralized data; scalable outreach; flexible access to services	Lower engagement of beneficiaries; Standardization of support/relationship

As this table shows, our research reveals the fragmented and sometimes ad-hoc ways in which NGOs engage with digital tools. In addition, the benefits and challenges associated with ICT use often overlap and cross the boundaries between communication, advocacy, and support.

A key insight from this study is the critical distinction between synchronous and asynchronous ICTs (Cormode & Krishnamurthy, 2008; Walther et al., 2011) in shaping NGOs' digital practices. Synchronous tools (e.g., WhatsApp, Zoom, or live chats) are indispensable for real-time interactions, enabling NGOs to provide immediate support through psychological consultations, legal advice, or live educational sessions. In contrast, asynchronous tools, including websites, online forms, and social media posts, allow NGOs to establish a continuous institutional presence, disseminate information broadly, and facilitate service access at the refugees' own pace. This dual approach reflects a strategic balance: NGOs tailor their digital engagement to the demands of each service, ensuring immediacy where necessary, while maximizing accessibility for refugees who may face irregular connectivity or limited availability. By leveraging synchronous ICTs for direct, real-time support and asynchronous channels for needs assessments, service coordination, and information sharing, NGOs optimize both responsiveness and reach.

The study also revealed various benefits and challenges associated with the use of ICTs. In doing so, the study highlights a paradox: While ICTs hold considerable potential for improving service delivery and communication, their efficacy is constrained by structural barriers such as digital literacy gaps and uneven access to technology. On the one hand, ICTs offer significant benefits for NGOs, including greater visibility, broader outreach, and more efficient service delivery. Digital tools not only enable beneficiaries to access vital information independently and across language barriers, but also allow NGOs to scale up their support, respond quickly to emerging needs, and attract donors and volunteers more effectively. On the other hand, ICTs present several challenges for NGOs. In their study, Lintner and Zadra (2025) identified limited access

to digital infrastructure, low levels of digital literacy, and a lack of digital capital as the three key challenges faced by asylum seekers in the digital realm. Our research confirms that limited digital access and skills among both beneficiaries and staff can hinder participation and reduce the effectiveness of online services. In addition, it expands Lintner and Zadra's (2025) analysis by showing that engagement in digital activities is often weaker compared to in-person formats, particularly for collaborative or hands-on learning. Moreover, the use of standardized digital procedures can reduce flexibility and empathy in service delivery, making it harder to respond to complex individual needs and maintain a human connection. Overall, despite their advantages, digital tools risk perpetuating structural exclusion by assuming that all migrants can be reached in this way. These challenges are consistent with broader concerns in the literature about the digital divide and the risk of exclusion from increasingly digitalized societies more generally (Lythreatis et al., 2022).

The study also has its limitations, however. The sample is limited to 23 NGO representatives, and while it includes a diverse range of organizational types and missions, it does not capture the full spectrum of civil society actors operating in either country. This is also why we refrained from making strong comparative statements about the two countries. Additionally, the fast-changing nature of digital technologies and migration dynamics means that findings may quickly become outdated. Longitudinal or follow-up research would be valuable in tracking how NGOs' digital strategies evolve in response to shifting technological, social, and political landscapes. Despite these limitations, this research contributes to the growing literature on ICTs and migration (Alencar, 2020; Godin et al., 2025; Leurs & Smets, 2018; Masiero & von Deden, 2022), offering empirical insights and conceptual distinctions—such as synchronous versus asynchronous ICT use—that can inform both academic debates and practical interventions. It highlights the importance of equipping NGOs and refugees alike with the skills, tools, and infrastructure required to ensure that digitalization contributes meaningfully to social inclusion rather than deepening marginalization.

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Conflict of Interests

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Data Availability

Due to the nature of the research, data sharing is not applicable to this article.

LLMs Disclosure

ChatGPT has been used to proofread some parts of the manuscript.

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