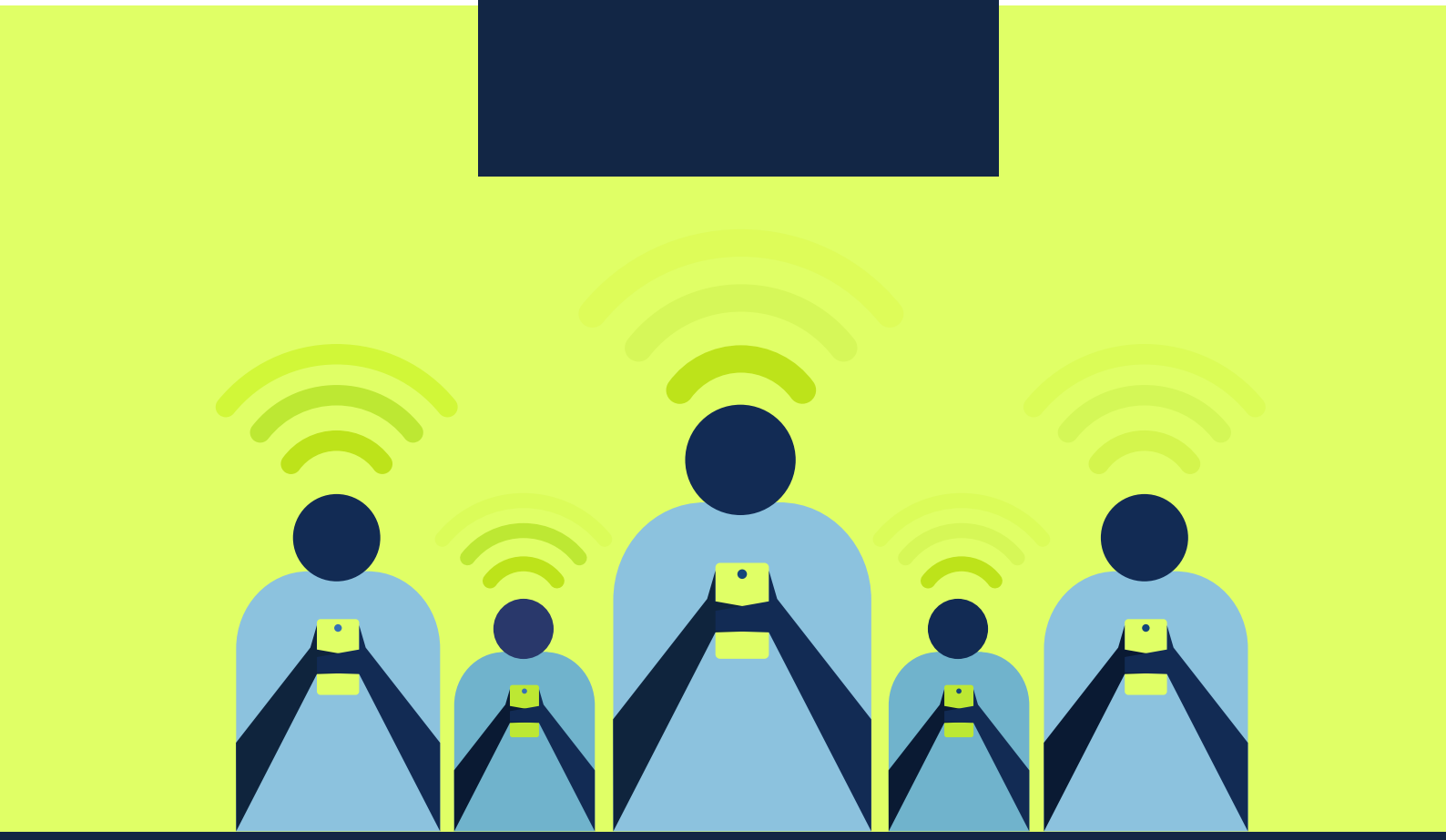
CONNECTIVITY FOR REFUGEES



Access and barriers to digital connectivity for refugees and host communities in Ethiopia

A Connectivity for Refugees initiative: Results of a Connectivity Needs and Usage Assessment (CoNUA) across refugee camps and hosting communities in Ethiopia.

November 2025

"[With a phone] the world is becoming closer to us, and we can access information from any corner of it" - Refugee, Dabat Camp, Man, 25-59.

Contents

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Forewords

Teyiba Hassen,

Director General, Refugees and Returnees Service

Ethiopia continues to demonstrate its commitment to inclusive and sustainable solutions for refugees and the communities that host them. In an era where connectivity defines opportunity, access to digital tools and networks is not a luxury but a lifeline. It enables communication with loved ones, access to education, participation in the economy, and the exercise of basic rights in an increasingly digital world.

The Connectivity Needs and Usage Assessment (CoNUA) for refugee and host communities represents an important milestone in understanding the realities of digital access across Ethiopia's refugee-hosting regions. It provides critical evidence to guide our collective efforts to close the digital divide and ensure that refugees are included in the country's digital transformation journey.

Conducted under the Connectivity for Refugees (CfR) initiative, this assessment is the result of strong collaboration between the Refugees and Returnees Service (RRS), UNHCR, and key partners. I commend the technical teams at the national and global levels who worked tirelessly to produce such a comprehensive analysis, combining quantitative data with qualitative insights from across fifteen refugee camps and settlements and host communities.

The findings remind us that while Ethiopia has made significant progress in expanding its digital infrastructure and opening its telecommunications sector, challenges still remain. Addressing these requires multi-sectoral partnerships that leverage public, private, development and humanitarian expertise to bring inclusive connectivity solutions to scale.

For RRS, this report reaffirms our dedication to ensuring that refugees benefit from the same opportunities as the communities that welcome them. The data and recommendations will inform our ongoing work to enhance connectivity infrastructure in camps and settlements, strengthen digital skills, and promote policies that enable refugees' full participation in Ethiopia's digital economy aligned with the goals of Digital Ethiopia 2025 and the Government of Ethiopia's pledges at the Global Refugee Forum.

I invite all partners including governmental, private sector, and development actors to join us in translating the insights of this assessment into concrete action. Together, we can ensure that no one is left behind in Ethiopia's digital transformation journey.

Aissatou Ndiaye,

Representative to Ethiopia, UNHCR

Connectivity has become an essential enabler of protection, inclusion, and resilience. For refugees and the communities that host them, being connected means access to information, education, financial services, and livelihoods which means the ability to participate fully in society. Yet for many, connectivity remains beyond reach due to cost, coverage, and digital literacy barriers.

The Connectivity Needs and Usage Assessment (CoNUA) in Ethiopia provides an unprecedented evidence base to address this challenge. It shines a light on how refugees and host communities are using digital technologies, where gaps persist, and what actions are needed to close them. This work builds on the strong partnership between the Refugees and Returnees Service (RRS), UNHCR, and partners under the Connectivity for Refugees (CfR) initiative, with technical contributions from GSMA, ITU, and REACH Initiative.

Ethiopia's progressive refugee policies including the 2019 Refugee Proclamation and the country's Digital Ethiopia 2025 Strategy have laid a strong foundation for inclusive digital transformation. By investing in connectivity, we are not only expanding access to services but also empowering refugees and host communities to build self-reliance and contribute to national development.

This report will serve as a vital tool for government, humanitarian and development actors, and private sector partners to design interventions that bridge the digital divide and ensure that everyone regardless of their legal status or location can benefit from the opportunities of the digital era.

On behalf of UNHCR, I would like to extend my appreciation to all who contributed to this assessment. Together, we reaffirm our shared commitment to advancing digital inclusion as a cornerstone of protection and solutions for refugees in Ethiopia.

Executive Summary

Ethiopia hosts 1.1 million refugees and asylum seekers, the third-highest number in Africa. The Government of the Federal Democratic Republic of Ethiopia recognizes the value and potential of digital inclusion in the country and has made significant strides in connecting the population, including refugees and host communities. Whilst a recent liberalization of the telecommunications market has opened the door to greater connectivity and growth of the sector, data on refugee connectivity is scarce. To meet this gap, this report outlines the results of an assessment specifically aimed at understanding the access to and use of internet services by refugees across 15 camps and settlements in Ethiopia, and the surrounding host communities.

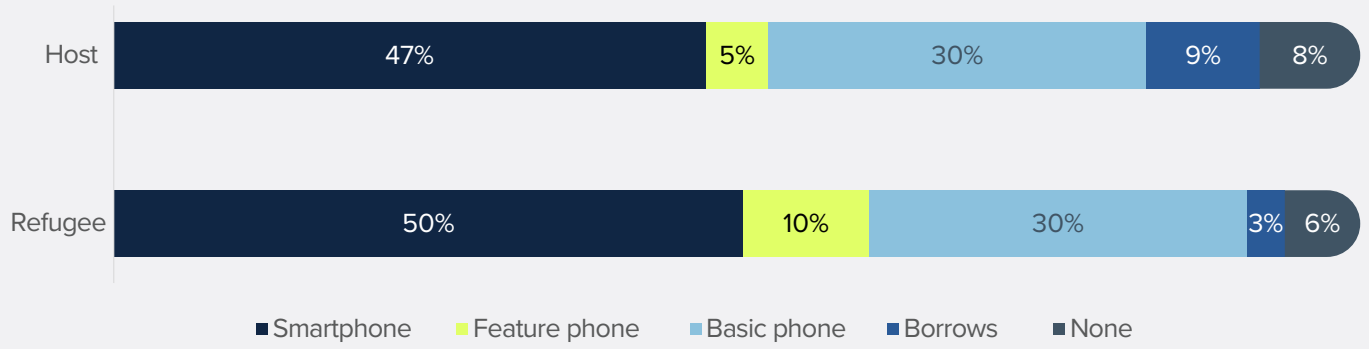
Note: It should be noted that whilst the sample is representative by gender, region and country of origin, it heavily overrepresents people aged 25–49 (67% vs. 8% of the population) and underrepresents younger people (23% vs. 45%) and older people (11% vs. 46%). Findings influenced by age should therefore be interpreted with caution – this has been flagged throughout the report.

Device access and ownership

Access to a phone was found to be high, with nine-in-ten reporting at least some access to any handset, and half saying that they personally own a smartphone. However these figures mask notable divides for certain groups such as women (23% less likely to own a smartphone), people aged over 55 (6 times more likely to have no access to a phone than those aged 18-24) and people who cannot read in any language (71% less likely to have any internet enabled phone). For those who do not own a phone, barriers were primarily related to cost (especially for refugees) and skills. Just 16% of refugees and 24% of the host community use an internet-enabled device (other than a phone) at least once every 3 months.

> ***"I don't use a phone because I can't afford to buy one."*** - Refugee, Afar Camp, 18-30.

Figure 1: **Individual phone ownership, by status**



Q: "What kind of phone do you personally own?" (None, Basic, Feature, Smart) and "Do you have access to someone else's mobile phone?" Base: All respondents; n: Refugees=2,407, Host=520

Roughly two thirds of phone owners reported that their SIM Card was registered in their own name (62% of refugees and 69% of host community members), however a sizeable minority are using a SIM card registered in the name of another household member, friend or neighbor. This was again, masking disparities within communities, with women, for example, being twice as likely to have their SIM registered in the name of a friend or family member. The key barriers reported to correct SIM registration were linked to ID documents and access to merchants able to register a SIM.

> ***"It's very difficult to obtain a SIM card without an ID. As newcomers, we face challenges getting a SIM card in our own name "*** – Refugee, Tsore Camp, Woman, 25-59.

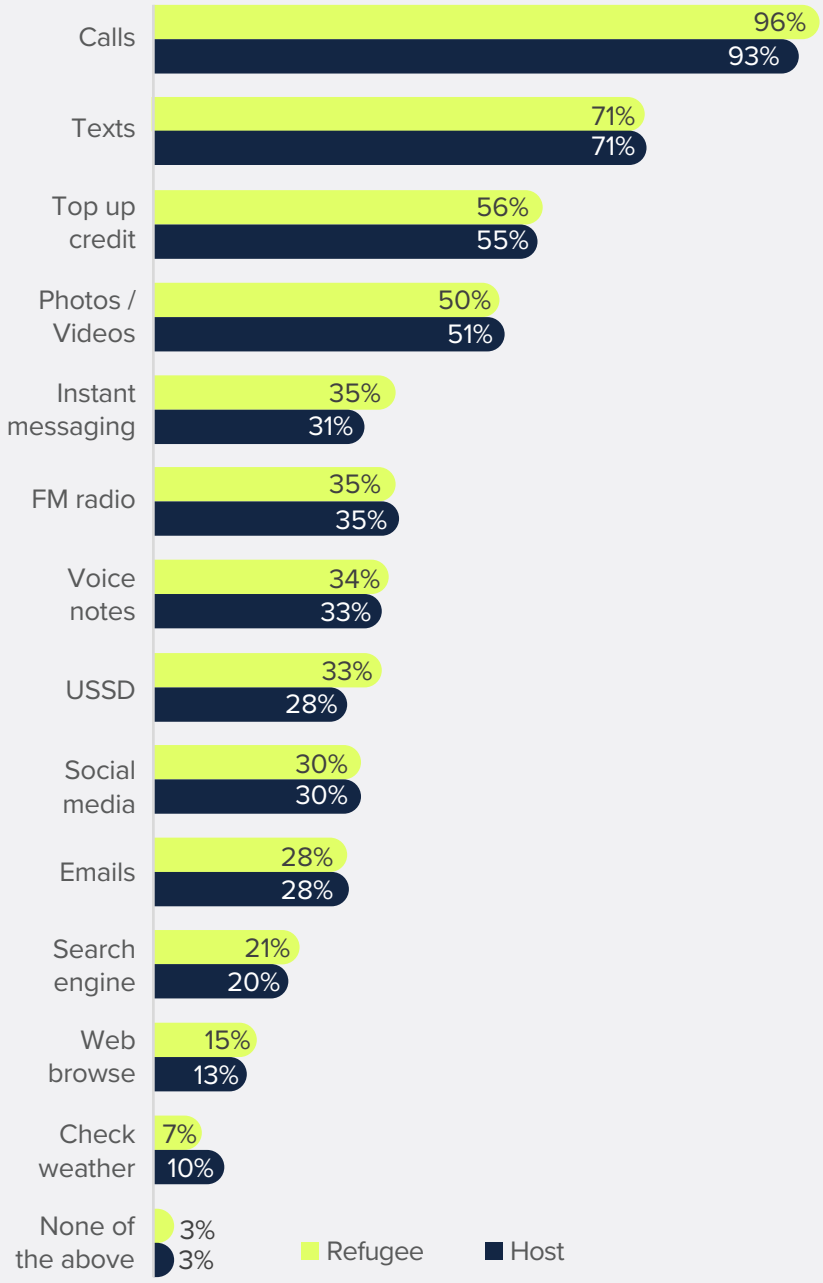
Phone use and digital skills

Through qualitative discussions it emerged that people are using their phones for a variety of reasons, including to communicate with friends and family, to stay aware of ongoing developments within Ethiopia and back in their home country, to access content they can learn from, and to find work to make an income.

> ***"We can get an online education service, sell online and grow ourselves online."*** - Refugee, Alemwach Camp, Person with disability.

Knowledge of the functions of a phone was high among all respondents, though very closely correlated to phone ownership (with smartphone owners being more confident in their skills than basic phone owners or those without a phone at all). This was a pattern mirrored when asking about the specific apps and services people know how to use – and in general the more basic functions - such as calling and texting – were very widely known, compared to more advanced (largely internet enabled) services such as checking the weather.

Figure 2 - **Phone use case knowledge, by status**



Q: Do you know how to? Base: All respondents; n: Refugees=2,407, Host=520

Whilst most people were aware of the internet, 12% of refugees and 21% of the host community said that they were not. And even more people reported barriers to using the internet as much as they would like, with only 13% of refugees and 21% of the host community saying they were able to. Unsurprisingly these figures were worse for potentially marginalized groups, with women – for example - more than 47% less likely to use or have heard of internet.

Barriers to the use of internet services were more nuanced than for those related to phone ownership. The key ones coming through in this assessment are the cost of buying an internet-enabled handset, a lack of relevant digital skills, lack of network coverage, and poor quality of available networks.

Figure 3: **Internet usage, by status.**

	Refugee	Host
Do not use the internet / Have not heard of it	46%	47%
Use the internet, but not as much as would like	41%	32%
Use the internet as much as would like	13%	21%

Have you ever heard of the Internet (apps, services, and websites like Facebook, WhatsApp, Messenger, Telegram)? Which of the following statements best describe your current use of Internet (social media, apps, and websites like WhatsApp, Messenger, Facebook, Telegram, etc)? Base: Respondents; n: Refugee=2,407, Host= 520

Access to networks, services and charging

Little to no access

Hilaweyn
Kobe
Melkadida

Low access

Alemwach
Mirqaan

Medium access

Aw-barre
Jewi
Nguenyyiel
Tsore
Ura

High access

Aysaita
Kebribeyah
Pinyodo 1
Pinyodo 2
Sheder

The assessments used a triangulation of the data collected through the various research tools to make a qualified assessment on the availability of internet (cellular, Wi-Fi or through shared spaces such as a connected community center) across the 15 camps and settlements included in the research – which is broken down below. At a high level, whilst access to basic cellular services was relatively common, access to internet specifically was rarer – especially non-cellular where only 30% of refugees had access to a Wi-Fi network and 18% access to a dedicated space to use the internet on a shared device.

> ***"I think there are two network satellite towers within the refugee camp, but both are not functioning."*** – Refugee, Melkadida, Man, 31-59, Smartphone

> ***"I can't use my phone most of the time because there is no network."*** - Refugee, Hilaweyn Camp, Woman, 31-59.

Access to charging was also very variable. One third (35%) of refugees said they were able to charge their phones at home, whilst 73% said that they had access to a commercial charging option – such as by paying to use a generator in the local market (prices range from 10 birrs to 50 birrs ($0.07-$0.35). Only 9 people across the whole study said they struggled to charge their phone at all. There were some notable differences across individual camps and settlements, with residents of camps such as Sheder and Kebribeyeh being almost universally able to charge a device at home, whilst in others such as Mirqaan and Ura being almost universally reliant on paying at commercial charging stations.

In several locations, it was not possible to conduct interviews with people providing agent services, as they could not be found by the research team. For several of these, this was reinforced by participants in the focus groups, who told researchers that they could not access merchant services – especially those who can sell/register SIM cards. This largely meant that people either had to walk into the nearest town or were reliant on unofficial channels – referred to in discussions as 'the black market'.

Conclusions and recommendations

Smartphones: Many community members lack access to smart devices, and digital divides on gender and disability exacerbate this

- Programming to support more refugees and host communities to own good quality smartphones would likely improve levels of digital inclusion and use of connectivity services in all research locations.
- Such programming needs to ensure issues related to age, gender and diversity (AGD) are effectively considered. This should include both targeted access interventions, but also work to support development of adequate digital literacy and skills.

Coverage: While many refugee-hosting areas have cell coverage, significant gaps remain

- Further analysis of coverage would be useful, making use of either/both data from providers on infrastructure and detailed mapping across all camps and settlements. This should be done across all refugee hosting locations in the country.
- Plans for infrastructure installation and upgrade should prioritize refugee hosting sites with the lowest levels of current access. Of the camps and settlements included in this assessment, based on this snapshot, the first priorities should be Hilaweyn, Kobe and Melkadida.

Barriers to adoption: Factors contributing to lack of digital adoption are complex and affect refugees and host communities similarly

- Stakeholders with the capacity to address various barriers to digital inclusion should collaborate on multifaceted interventions. Where programming considers a full range of potential barriers it is more likely to lead to improvements.
- Interventions seeking to overcome barriers to digital inclusion in refugee-hosting areas should ensure that they include both refugees and their host communities.

Connected Centres: Private spaces to get online are limited and hampering digital learning and digital employment opportunities

- As resources allow, it would be beneficial to consider how communal spaces might be provided which facilitate access to internet-enabled devices such as laptops or computers. These spaces should provide not only connectivity, but tailored support to help people use the internet safely and confidently.
- Exploring models of community ownership and management of such spaces will be important in supporting their long-term success and sustainability.
- Alongside centres, the provision of Wi-Fi which communities can use to connect their own devices to the internet – free or paid-for – will provide people with reliable access and potentially a choice between providers.

SIM Registration: While legal people don't register SIM cards in their own name in part due to a lack of agents where they are

- Mobile network operators should ensure that they have adequately resourced agent networks across refugee hosting locations. Agents in these areas should prioritize SIM registration as a service, reducing barriers to initial entry to being a customer.

Digital Skills: Levels of digital skills present a barrier for two distinct groups of people, likely needing addressed in different ways.

- Digital skills interventions will likely benefit from disaggregating between basic, entry-level skills support for groups struggling to get online at all, and people already connected who might benefit with support to increase the diversity of the services they use.
- Support for entry-level skills should prioritize women, older people and people with a disability, whilst support for improving uptake should focus on people who own an internet enabled device but make limited use of it.

Introduction

Ethiopia hosts the third largest number of refugees and asylum seekers in Africa. Overlapping crises, such as climatic shocks, conflict, and political insecurity have, has resulted in over 1.1 million people seeking refuge as of October 2025.[1]

The Government of the Federal Democratic Republic of Ethiopia recognizes the value and potential of digital inclusion in the country and has made significant strides in connecting the population. This extends to refugees and those who host them, for whom connectivity can play a role in addressing a diverse set of needs, including communication and information needs, access to education and livelihood opportunities, and social well- being. Whilst a recent liberalization of the telecommunications market has opened the door to greater connectivity and growth of the sector, data on refugee connectivity is scarce.

This report shares the findings of an assessment based on a version of the GSMA's Connectivity Needs and Usage Assessment (CoNUA) toolkit, tailored to the specific context within Ethiopia. Under the auspices of the multi-stakeholder Connectivity for Refugees initiative, this assessment aims to build the evidence base to better understand the connectivity landscape, including digital skills, for refugees and their host communities in Ethiopia.

Box 1 **Connectivity for Refugees Initiative (www.refugeeconnectivity.org)**

Connectivity for Refugees is a multi-stakeholder initiative launched at the 2023 Global Refugee Forum by UNHCR, GSMA, ITU, and the Government of Luxembourg that aims to advance the availability and affordability of connectivity for 20 million forcibly displaced people and their host communities by 2030. The initiative takes a market-focused approach, tailored to each country and involves partners across sectors, industries, and geographies. The initiative aims to advance both individual connectivity (through a personal device) and collective connectivity (via a shared or communal device), as well as combinations of the two.

1 UNHCR Ethiopia Operational Data Portal (accessed 26th September 2025)

General view of Alemwach refugee settlement in Ethiopia's Dabat, Amhara region. © UNHCR/Samuel Otieno

Context - Refugees in Ethiopia

In 2025, 10 million people are targeted for humanitarian assistance in Ethiopia, with a funding requirement of USD 2 billion.[2] Ethiopia's geographic position, bordering six countries, has made it a major destination for refugees fleeing conflict and insecurity in the region. As such, Ethiopia is one of the largest refugee-hosting countries in the world and the third largest in Africa, with over 1.1 million refugees and asylum seekers across 24 camps and settlements, and urban locations such as Addis Ababa.[3] The majority of refugees residing in Ethiopia are from South Sudan (43%), Somalia (32%) and Eritrea (15%). Refugee movements in the Horn of Africa have been driven by conflict in South Sudan, the political environment in Eritrea, and the conflict and drought in Somalia. The remaining 9% are primarily refugees from Sudan (fleeing civil war which broke out in April 2023), Yemen, and other nations.[4]

Ethiopia has adopted progressive refugee measures that set it apart from many other countries. It maintains an open-door policy for new arrivals and allows humanitarian access and protection to those seeking asylum in its territory. In January 2019, Ethiopia's parliament updated its national refugee proclomation to, inter alia, refugees to obtain work permits, live outside camps, access financial services, and register life events, including births and marriages, making it one of the most progressive refugee policies in Africa.[5]

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2 Ethiopia | Global Humanitarian Overview 2025 | Humanitarian Action (accessed 22nd August 2025)
3 https://www.unocha.org/ethiopia
4 UNHCR Ethiopia Operational Data Portal (accessed 22nd August 2025)
5 https://www.unhcr.org/news/news-releases/unhcr-welcomes-ethiopia-law-granting-more-rights-refugees

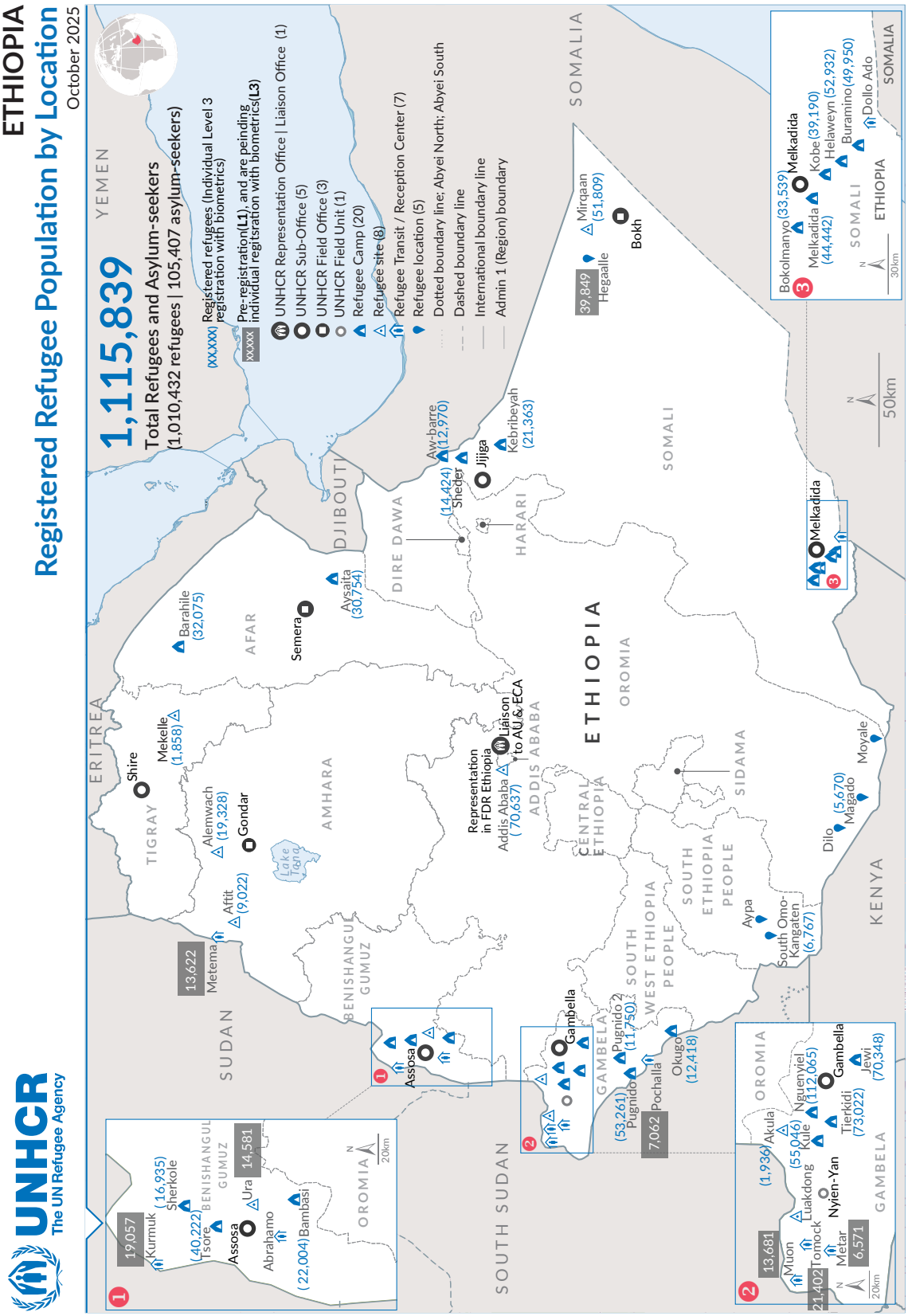


Figure 4: Refugees in Ethiopia, July 2025[6]

6 Document - Registered Refugees Population by Location | July 2025

Digital ecosystem in Ethiopia

Mobile is the primary, and in many cases, the only way most people access the internet in Ethiopia. Since the launch of the Digital Ethiopia 2025 strategy (Box 2) and the inception of the telecommunication reform programme six years ago, coverage of 3G and 4G networks has substantially increased.[7] However, gaps do remain.[8] Fixed line broadband penetration is significantly lower, with penetration less than 1%.[9]

Box 2 Digital Ethiopia 2025

In 2020, the Government of Ethiopia launched Digital Ethiopia 2025, a national digital transformation strategy aiming to transform Ethiopia into a digital society.[10] It aims to be a catalyst for Ethiopia's socio-economic transformation, paving the way for inclusive and sustainable growth.[11] It seeks to build an enabling environment for digital services through infrastructure development, supportive regulative framework, collaboration between the government and the private sector, and investing in education and training. In December 2024, the Government of Ethiopia reported that the Strategy has resulted in an uptick of internet users from 17 million to 42 million, whilst improving accessibility of electricity, and increasing the number of data centers by both the government and the private sector.[12]

Complementing this strategy are several other national initiatives and World Bank-funded investment projects, that reinforce Ethiopia's digital ecosystem. The telecommunications liberalization program has opened the market to new entrants, notably Safaricom, driving competition and infrastructure investment. The Homegrown Economic Reform Agenda prioritizes digital inclusion as a driver of economic resilience and job creation. Additionally, the National Digital ID program aims to streamline access to services, including mobile connectivity, especially for marginalized populations such as refugees. Ethiopia's pledges at the 2023 Global Refugee Forum, including commitments to enhance digital connectivity and access to documentation for refugees, further align with the goals of the Connectivity for Refugees initiative. Together, these

7 World Bank. 2025. Ethiopia Telecom Market Assessment. https://documents1.worldbank.org/curated/en/099821508252526233/pdf/IDU-a026d983-6657-497a-8b99-5b873649b929.pdf
8 https://www.gsma.com/about-us/regions/sub-saharan-africa/wp-content/uploads/2024/10/GSMA_Ethiopia-Report_Oct-2024_v2-1.pdf
9 "Digital Development Dashboard", Published in 2023, (accessed 1 May 2024)
10 https://dig.watch/updates/digital-ethiopia-2025-advances-with-major-government-partnership
11 https://resilient.digital-africa.co/en/blog/2024/04/11/digital-ethiopia-2025-empowering-the-nation-in-the-digital-economy/
12 https://www.fanabc.com/english/digital-ethiopia-2025-strategy-increases-internet-users-by-over-42-million-mint/#:~:text=Accordingly%2C%20she%20said%20the%20implementation,government%20and%20the%20private%20sector.

strategies provide a robust policy foundation to scale inclusive digital services, improve access to livelihoods and education, and bridge the digital divide for displaced populations.
Both mobile network operators in Ethiopia, Ethio Telecom and Safaricom, are investing in expanding and upgrading their infrastructure. For example, in their 2024/25 Business Plan, Ethio Telecom committed to building 1,298 towers and to proactively reducing the rural digital divide.[13] Safaricom also revealed plans to invest USD 1.5 billion in building 5,000 towers, between 2024 and 2027.[14]

Ethiopia continues to face significant gaps in mobile usage.[15] Although mobile internet usage has grown from 4 million 3G internet users in 2014, to 40 million users with at least a 3G+ connection by 2023,[16] most people are still not using mobile internet.[17] Even among mobile internet users, only half use mobile internet services daily (53%), resulting in Ethiopia experiencing some of the lowest rates of daily usage.[18] Digital adoption levels are lower in rural versus urban areas, with digital exclusion disproportionately impacting poorer, rural, people with disabilities, and women.[19] GSMA's 2024 State of the Mobile Internet Connectivity Report revealed that the most significant barrier to mobile internet adoption in Ethiopia is affordability, followed by literacy and digital skills.

Box 3 **2023 Global Refugee Forum - Government of Ethiopia Pledges on Connectivity**

The Government of Ethiopia made six pledges at the 2023 Global Refugee Forum. One of these was specifically aligned to the Connectivity for Refugees initiative. The Government committed to enhancing digital connectivity and access to documentation for refugees. Under this pledge, the Government aims to enhance digital infrastructure in refugee hosting areas to facilitate refugee inclusion in the digital economy, and enhancing access to digitally-enabled livelihood opportunities, information, and social-economic e-services.[20]

13 https://www.ethiotelecom.et/ethio-telecom-2024-25-annual-business-plan/
14 Safaricom Ethiopia Plans to Invest 1.5 Billion USD
15 https://www.gsma.com/about-us/regions/sub-saharan-africa/wp-content/uploads/2024/10/GSMA_Ethiopia-Report_Oct-2024_v2-1.pdf
16 "Internet users" refers to active SIM cards that connect to the mobile internet. Source: MNOs and GSMA Intelligence. https://www.gsma.com/about-us/regions/sub-saharan-africa/wp-content/uploads/2024/10/GSMA_Ethiopia-Report_Oct-2024_v2-1.pdf
17 https://www.gsma.com/newsroom/press-release/ethiopias-digital-economy-to-contribute-etb-1-3-trillion-to-gdp-by-2028-unlocking-jobs-and-growth-through-telecom-and-policy-reforms/#:~:text=However%2C%20a%20substantial%20usage%20gap,crucial%20for%20Ethiopia's%20digital%20future.
18 https://www.gsma.com/r/wp-content/uploads/2024/10/The-State-of-Mobile-Internet-Connectivity-Report-2024.pdf?utm_source=website&utm_medium=button&utm_campaign=somic24
19 https://www.gsma.com/about-us/regions/sub-saharan-africa/wp-content/uploads/2024/10/GSMA_Ethiopia-Report_Oct-2024_v2-1.pdf
20 https://rrs.et/wp-content/uploads/2024/02/Final_Ethiopia_2023_GRF_Pledges_06.11.23.pdf

Methodology

A full methodology note is available in Annex 1.

The assessment was conducted under the auspices of the Connectivity for Refugees initiative and designed jointly by UNHCR, GSMA, ITU and REACH. It used a version of the GSMA's CoNUA toolkit, tailored to the specific context in Ethiopia and to aligned specifically to the goals and approaches of the global CfR initiative.

Data was collected by a team from Zerihun Associates across 15 refugee-hosting locations, in June and July 2025. Whilst 16 sites were initially planned, security concerns prevented data collection in Asita. The tools used were:

1. **End user survey instrument** to collect representative quantitative data from refugee and host communities at the individual level.
2. **End user focus group discussion (FGD) guide** to collect qualitative data from refugee and host communities.
3. **Merchant survey instrument** to collect data from agents about the services provided in the research locations.
4. **Signal strength mapping tool** to collect data on network availability in each research location.

Box 4 **Caveat on survey findings**

Effort was made to ensure that the refugee end-user survey was representative of the broader refugee population in Ethiopia. However, verification showed significant over- and under-sampling of age groups. While the sample is representative by gender, region and country of origin, it heavily overrepresents people aged 25–49 (67% vs. 8% of the population) and underrepresents younger people (23% vs. 45%) and older people (11% vs. 46%). Findings influenced by age should therefore be interpreted with caution – this has been flagged throughout the report. The host community sample is demographically comparable to the refugee sample, allowing for direct comparison.

Table 1: **Assessment sample by location**

UNHCR office	Region	Location	User survey (refugees)	User survey (host)	Merchant survey	FGD	Signal mapping
Semera	Afar	Aysaita	180	40	4	2	3
Assosa	Benishangul-Gumuz	Ura	102	101	0	2	4
		Tsore	202		1		2
Gambella	Gambela	Jewi	179	40	9	3	1
		Pinyudo 1	218		4		2
		Pinyudo 2	134		4		1
		Nguenyyiel	229		0		3
Jijiga	Somali	Aw-barre	109	149	2	6	3
		Sheder	101		1		2
		Bokh	148		1		4
		Kebribeyah	156		3		3
Melkadida	Somali	Kobe	168	143	0	6	4
		Melkadida	181		0		2
		Hilaweyn	150		0		4
Gondar	Amhara	Alemwach	150	21	3	2	4
Total			**2,407**	**520**	**32**	**15**	**42**

Box 5 Digital divides

Throughout this report, attention is frequently given to the divides of digital access and usage between certain demographic groups – often referred to as a digital divide or gap. Where a finding presents something as "less likely" this is given proportionally, calculated as per the below figure.

$$\text{Gender Gap in ownership/use (\%)} = \frac{\text{Male owner/users (\% of male population)} - \text{Female owner/users (\% of female population)}}{\text{Male owner/users (\% of male population)}}$$

Findings

The following sections present the main findings of the assessment, beginning with patterns of device access and ownership.

Device Access and Ownership

To understand use of connectivity services, it is essential to unpack the access that people have to devices and SIM cards. This chapter outlines trends in access, ownership and regularity of use of mobile phones and other internet enabled devices. It also explores trends in SIM card access.

Access to a phone

Most people surveyed in both the refugee and host communities reported using a phone at least once a week (92%), with just 5% of refugees and 7% of host communities saying that they never use a phone at all.

There were notable differences within demographic groups. For example:

- Nine-in-ten (89%) of refugees aged 18-24 use a phone daily, compared to 59% of those aged 55+.
- Half (48%) of refugees with disabilities use a phone daily, compared to 86% of those without.
- Refugees from Sudan (73%) or South Sudan (79%) were less likely to use a phone daily than those from Somalia (86%) or Eritrea (93%).

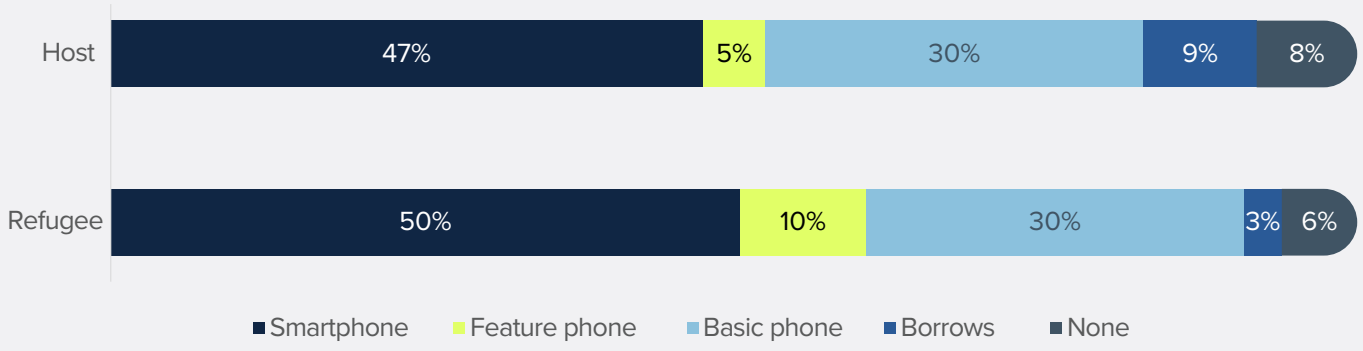
The average number of phones in a refugee household was 2.4, compared to 2.7 in host community households. However, the presence of a phone in the household does not guarantee ease of use; 4% of refugees with at least one phone in the household still said that they never use one.

Personal Phone and Device Ownership

Note on figures: *Given that phone ownership is closely linked to age (see 'Digital divides' below) and that there is a significant skew in the sample towards those aged 25-49 in the sample compared to the actual refugee population in Ethiopia, we expect that figures presented in this section overstate phone ownership. We believe the magnitude of overstatement is in the region of 5-10% based on calculation.*

Nine-in-ten refugees and 82% of the host community reported owning their own phone, with half of both groups reporting that they personally own a smartphone. When accounting also for those who can borrow somebody else's phone, only 8% of refugees and 6% of the host community are unable to access a mobile device (Figure 5) at all.

Figure 5: **Individual phone ownership, by status**



Q: "What kind of phone do you personally own?" (None, Basic, Feature, Smart) and "Do you have access to someone else's mobile phone?" Base: All respondents; n: Refugees=2,407, Host=520

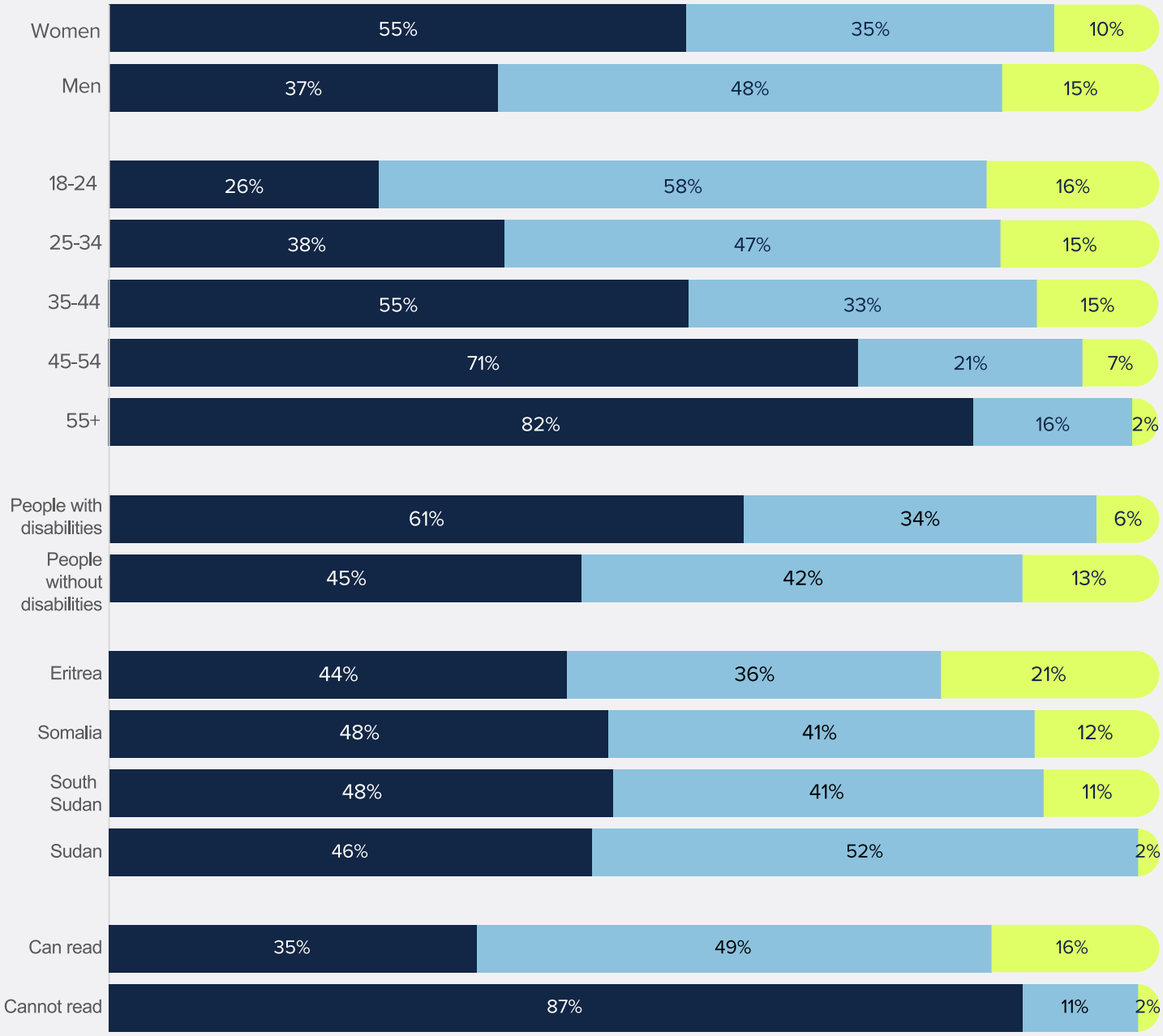
Digital divides

Within the refugee community, there were significant differences in personal phone ownership (Figure 6). For example, women were 23% less likely to own a smartphone than men, people aged over 55 are more than 6 times more likely to have no access to a phone than those aged 18-24 and those who cannot read in any language are 71% less likely to own an internet enabled phone (smartphone or feature phone) than those who can.

These trends also came through in the focus group discussions, with younger male participants most likely to own smartphones and women and persons with disabilities talking more about the barriers that they face.

> ***"We don't have smartphones now, but we know they all are useful."*** – Refugee, Alemwach Settlement, Person with disabilities.

Figure 6: **Refugee phone ownership, by gender, age, disability status, country of origin and literacy.**



Q: What kind of phone do you personally own? (None, Basic, Feature, Smart) and Do you have access to someone else's mobile phone? Base: All refugee respondents; n: Women=1,188, Men=1,219, 18-24=542, 25-34=819, 35-44=650, 45-54=277, 55+=119, Persons with disabilities=89, Persons without disabilities=2,318, Eritrean=329, Somalian=931, South Sudanese=614, Sudanese=212, Can read=1,899, Cannot read=508.

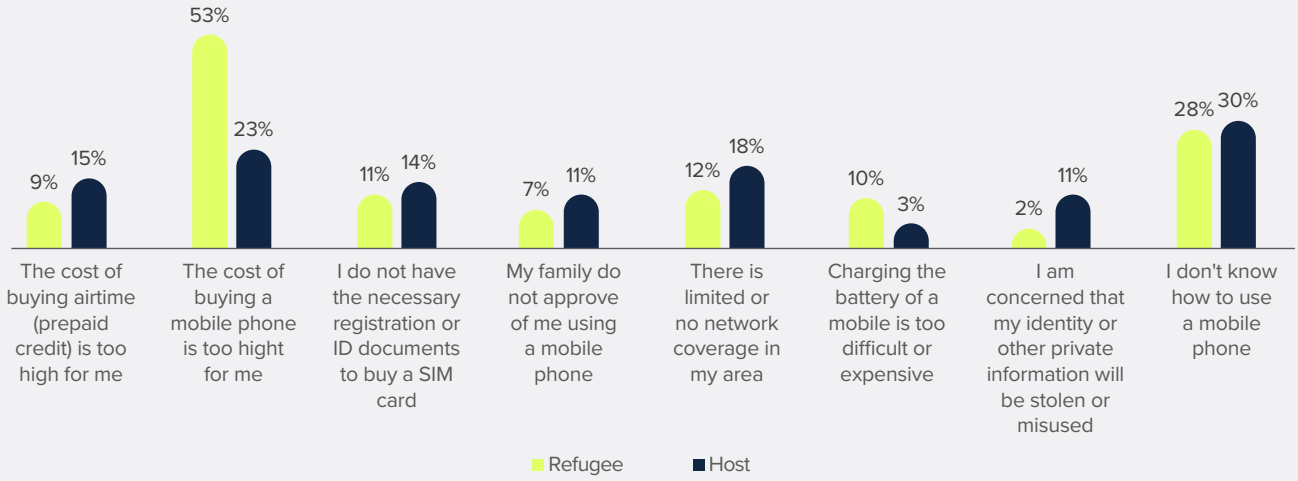
Barriers to phone ownership

All respondents who do not own a phone were asked what was preventing them from doing so. They were presented with 11 barriers to pick from, including other (see Annex 3). Figure 7 shows the barriers which were selected by at least 10% of either group.

For refugee respondents it was clear that the cost of buying a phone was the main barrier to phone ownership, followed by a lack of skills. There was a similar story for host community members, though slightly more nuanced.

> ***I don't use a phone because I can't afford to buy one.*** - Refugee, Afar Camp, Male, 18-30.

Figure 7: **Barriers to phone ownership, by status**.



Which of the following reasons prevent you from owning a mobile phone? Base: Respondents who do not own a phone; n: Refugee=229, Host=92.

Access to SIM Cards

In February 2019, Ethiopia enacted a new law affording greater rights to both recognized refugees and asylum-seekers. Refugees Proclamation No. 1110/2019 grants refugees and asylum access to banking services and telecommunications services with the identification document issued by Ethiopia's Agency for Refugees and Returnees Affairs (ARRA) – now known as the Refugees and Returnees Service (RRS)[21]. The law covers the following documents issued by RRS: "identity paper, travel document, pass permit, proof of registration, birth certificate, or similar documents that attest as to the identity of the bearer."

21 Ethiopia, Proclamation No. 1110/2019, 27 Feb. 2019, available at: https://www.refworld.org/docid/44e04ed14.html. The Proclamation repeals the Refugee Proclamation of 2004.

In this research, roughly two thirds of phone owners reported that their SIM Card was registered in their own name (see Table 2), however a sizeable minority are using a SIM card registered in the name of another household member, friend or neighbor. It is likely that actual figure for those with a SIM in their own name is slightly lower, given that there is a close relation to age (see below). The discussions in focus groups suggest that being able to access a merchant able to register a SIM card was a barrier alongside access to the correct ID documents.

> ***"It's very difficult to obtain a SIM card without an ID. As newcomers, we face challenges getting a SIM card in our own name. "*** - Refugee, Tsore Camp, Woman, 25-59.

> ***" If you lose the SIM card, it's very difficult to recover. They might even say that you can't get your old SIM card back and will provide you with a new number instead."*** - Refugee, Ura Settlement, Woman, 25-59.

Table 2: **SIM registration, by status**

	Refugee	Host
Mine	62%	69%
Other household member	23%	20%
Friend of neighbor	8%	3%
Mobile agent	3%	4%
Not registered	1%	3%
Don't know	2%	0%

Which person is registered with your main phone number? Base: Respondents who own a phone; n: Refugee=2,178, Host=428.

Looking at trends amongst groups within the refugee sample, some key areas of disparity emerged:

- Women are twice as likely to have a SIM in the name of a household member (31% v. 16%)
- People aged 18-24 are 85% more likely to have a SIM in the name of a household member than those aged 45-54 (33% v. 18%)
- People with disabilities are 16% less likely to have a SIM in their own name (53% v. 63%).

Mobile network operators

Perhaps unsurprisingly, given that liberalization of the Ethiopian mobile industry is relatively nascent, 99% of all phone owners reported using an Ethio Telecom SIM card. However, given that 13% of refugees and 20% of the host community are using more than one SIM card, there is still some diversity of use; 5% of refugees and 10% of host community members reported having a Safaricom SIM card. This was higher in certain locations, where Safaricom coverage is stronger, such as in Kebribeyeh and Sheder Camps where 29% and 24% of refugee phone owners respectively reported using a Safaricom SIM.

Interestingly, in Ayasita Camp where Safaricom coverage is strong (see later in this report), only 10% of refugee phone owners own a Safaricom SIM. In the focus groups discussions, it emerged that this was because people found it very difficult to access an agent able to sell them one.

> ***"[In Aysaita] Safaricom SIM cards are not easily available, [but they] provide very good internet speed and user satisfaction."*** - Refugee, male, 18-30, Ayasita Camp, Smartphone owner

Roughly one in ten refugee (9%) and host community (12%) phone owners reported also using at least one SIM card from a foreign mobile network operator (MNO). This was highest among younger people in the Somali region – for example, 27% of Somali refugees aged 18-24 had a SIM card from a Somali MNO.

Access to other internet-enabled devices

Just 16% of refugees and 24% of the host community use an internet-enabled device (other than a phone) at least once every 3 months, with 80% and 74% respectively never using one at all (or not being aware of the internet). Only 7% of refugees and 13% of host community members had an internet enabled device in the household - unanimously laptops and tablets.

Digital skills

Most refugee and host community respondents reported they knew how to do all functions of a mobile phone that they were prompted with (Figure 8a). Knowledge of these phone functions is correlated to the type of phone people own; Figure X shows how for refugees specifically, the more advanced a phone a person owns, the more likely they know how to do each function – the trend was mirrored in the host community sample.

Figure 8a - **Knowledge of device use, by status**

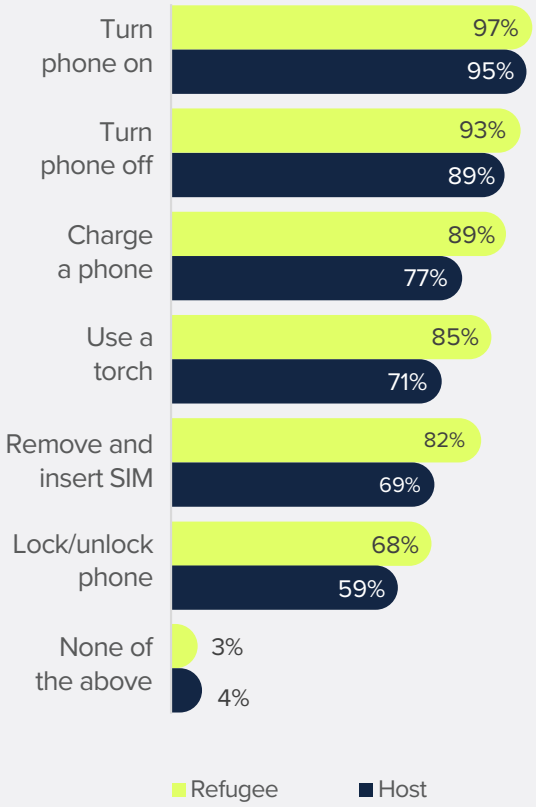
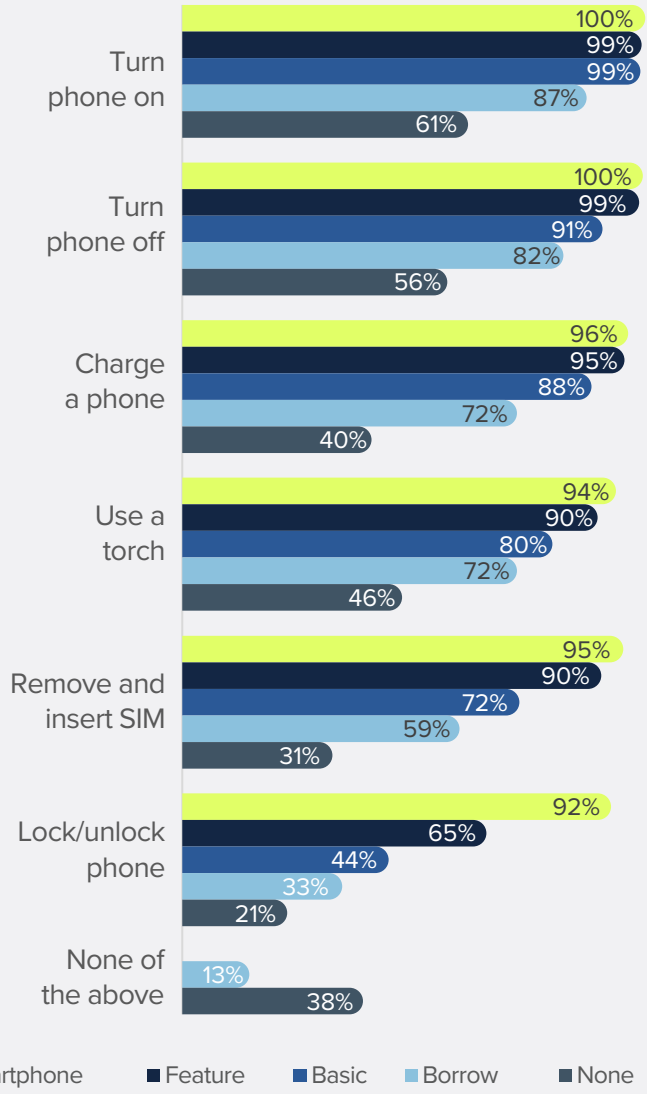


Figure 8b - **Knowledge of device use, refugees by phone type**



Q: Do you know how to? Base: All respondents; n: Refugees=2,407, Host=520
Base: Refugees; n: Smartphone=1,204, Feature phone=240, Basic phone=734, Borrow=78, None=151

Similarly, respondents were asked which mobile apps and services they knew how to use (Figure 9). The more basic functions - such as calling and texting – were very widely known, compared to more advanced (largely internet enabled) services such as checking the weather being less well known.

As with the physical functions of a handset, knowledge of these services was closely linked to phone ownership, for example with smartphone owners much more likely to say that they know how to use all of the services asked about. Given that phone ownership is also tightly correlated with key characteristics such as gender, age, disability status, this also means that groups such as women and persons with disabilities being less able to use all these services.

> ***"I do not use the internet at all. I can receive calls but not make them, and as an old woman I lack the knowledge."*** - Host, Afar, Woman, 60+, Feature phone

Figure 9a – **Phone use case knowledge, by status**

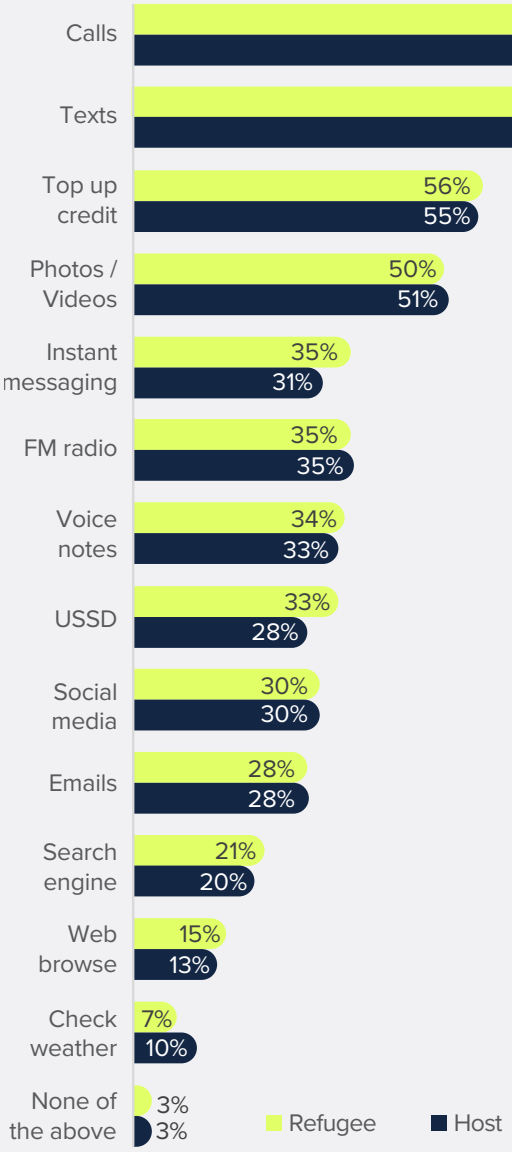
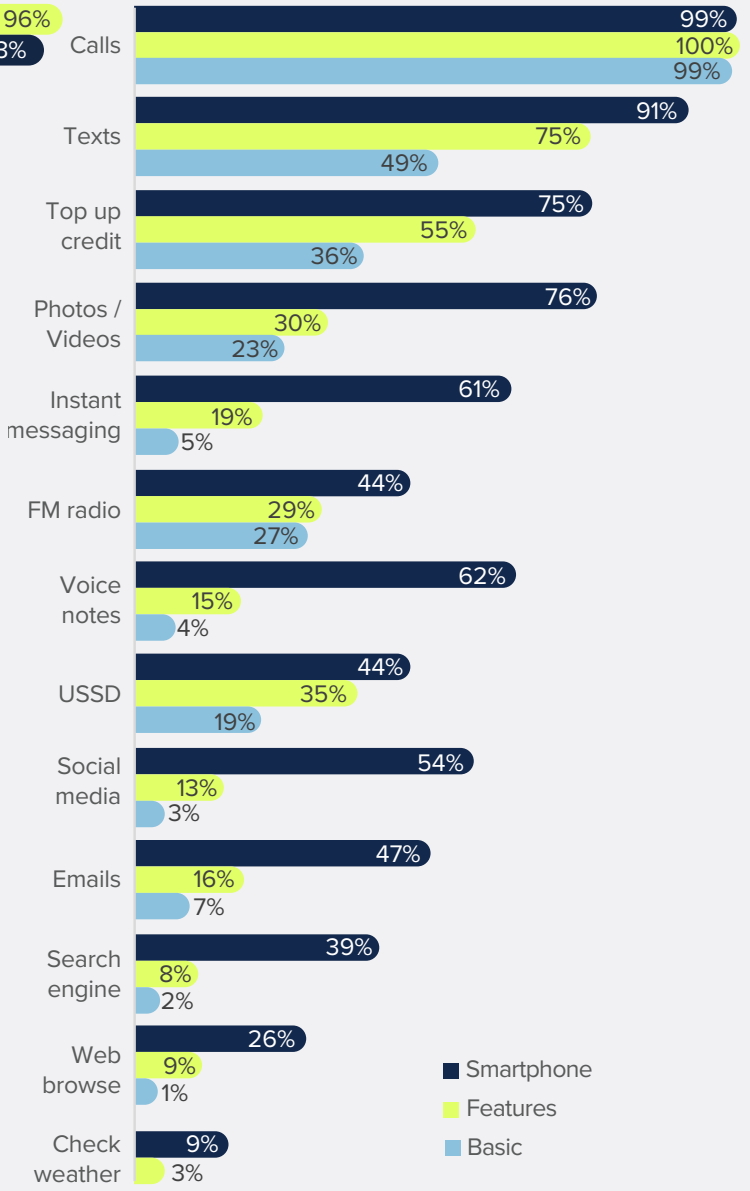


Figure 9b – **Phone use case knowledge, refugees by phone type**



Q: Do you know how to? Base: All respondents; n: Refugees=2,407, Host=520
Base: Refugee phone owners: Smartphone=1,204, Feature phone=240, Basic phone=734, Borrow=78,

Phone use

Access to devices is only one component of using digital connectivity and being digitally included. It is equally important to understand the level of digital literacy and knowledge that people have and the ways in which they use specific services. This chapter looks at knowledge of mobile functions and services, why people use their phones and the ways in which they use them – including the use of mobile internet. It also briefly unpacks some concerns people have about using the internet.

It is important to caveat that analysis on digital skills is based purely on a self-reported basis from research participants. Researchers did not validate reported digital skills, and so it may be that some participants said that they are able to do certain things with a phone which they cannot in reality do – as well as the inverse.

Reasons for phone use

However, survey data[22] and focus group respondents aligned on four major use cases of phones, unpacked below:

- People are primarily using their phones to communicate with friends and family, with particular interest in keeping in touch with those outside of Ethiopia.

> ***"We face many problems, and there is still no reliable network to help us find out about our parents living outside the country. This makes it very hard to know their status."*** - Refugee, Mirqaan Settlement, Women, 60+, Basic phone

> ***"I [would] use [the internet] to check on my family and relatives. And to check the current condition of the country"*** - Refugee, Alemwach Settlement, Person with disabilities, No phone

> ***"There is no Wi-Fi in our area, so we can't connect with our relatives living outside Ethiopia. [Humanitarian] allows us only three minutes to contact our relatives."***– Refugee, Tsore Camp, Woman, 25-59, Feature phone

22 Due to a survey design error, this question was not asked to the full intended sample, which limits the representativeness of the findings. As such, they are presented here only qualitatively.

- Similarly, people use their phones to stay aware of ongoing developments within Ethiopia and back in their home country, including details on the security situation.

> ***"To get information about the current situation of the country, I use YouTube."***. – Refugee, Dabat Camp, Male, 25-59, Smartphone

- In the focus groups, many people discussed how they use their phone – or would like to be able to – to access content they can learn from. This was often through platforms such as WhatsApp, Telegram, YouTube and TikTok. There were also discussions about how internet access might support their children to learn better.

> ***"We can get an online education service, sell online and grow ourselves online."*** – Refugee, Alemwach Settlement, Person with disabilities, Basic phone.

> ***"I hope our children can learn better with internet access."*** – Refugee, Kobe Camp, Woman, 60+, Basic phone

- A notable subset of people talked about using connectivity to **find work to make an income**. For many people who did not have a good internet connection, this was something they hoped to be able to achieve if and when networks were improved in their area.

> ***"I have a vision problem, so I work from home. I buy and sell items using my phone, and I also listen to the radio on it."*** – Refugee, Ura Settlement, Woman, 25-59, Unknown phone type

> ***"If the internet improves in the future, we can connect with the world and engage in many types of online work and related activities"*** – Refugee, Kebribeyah Camp, Woman, 18-30, Smartphone

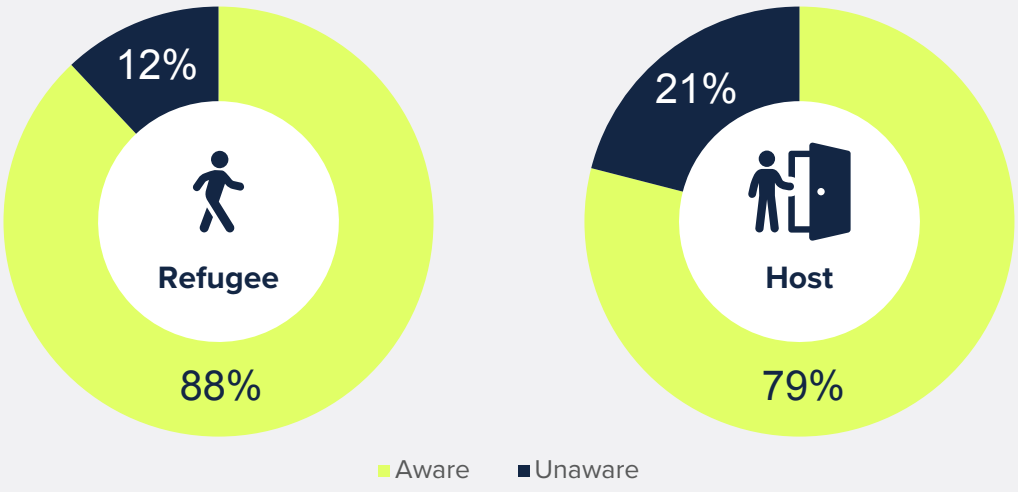
Use of specific products and services

Mobile internet

Most refugee and host community respondents had heard of the internet, though a sizeable minority of each group had not (Figure 10), with Host community members less likely to have heard of it.

Amongst the refugee sample, women are more likely to be unaware (17% v. 7%), as were older people (for example 35% of those aged 55+ are unaware of the internet compared to 7% of those aged 18-24), and persons with disabilities (27% v 12%). Refugees from Sudan were the least likely to have heard of the internet (79%) compared to those from Eritrea being the most likely (93%).

Figure 10: **Awareness of the internet**



Have you ever heard of the Internet (apps, services, and websites like Facebook, WhatsApp, Messenger, Telegram)?
Base: All respondents; n: Refugee=2,407, Host= 520

Refugees who had heard of the internet were asked about their usage of it. Including those who have never heard of it as non-users, roughly half of both refugees and the host community reported using the internet. Only 13% of refugees reported being able to use it as much as they would like (Figure 11).

Figure 11: **Internet usage, by status.**

	Refugee	Host
Do not use the internet / Have not heard of it	46%	47%
Use the internet, but not as much as would like	41%	32%
Use the internet as much as would like	13%	21%

Have you ever heard of the Internet (apps, services, and websites like Facebook, WhatsApp, Messenger, Telegram)? Which of the following statements best describe your current use of Internet (social media, apps, and websites like WhatsApp, Messenger, Facebook, Telegram, etc)?
Base: Respondents ; n: Refugee=2,407, Host= 520

Barriers to internet use

People who owned a phone but did not use the internet as much as they would like (or at all), were asked what was preventing them from doing so. They were presented with 20 possible barriers, including 'other', to choose from (see Annex 3 for full list). The two charts below (Figures 12 and 13) show responses which were selected by at least 10% of either refugee or host community respondents. Across both sets of barriers, we did not see notable differences by gender, and looking at age factors, only those linked to digital skills showed difference (specifically older people lacking skills).

However, readers should continue to note that women, older people, persons with disabilities and other potentially marginalized groups are overrepresented in groups not owning or using a phone.

Barriers preventing internet use

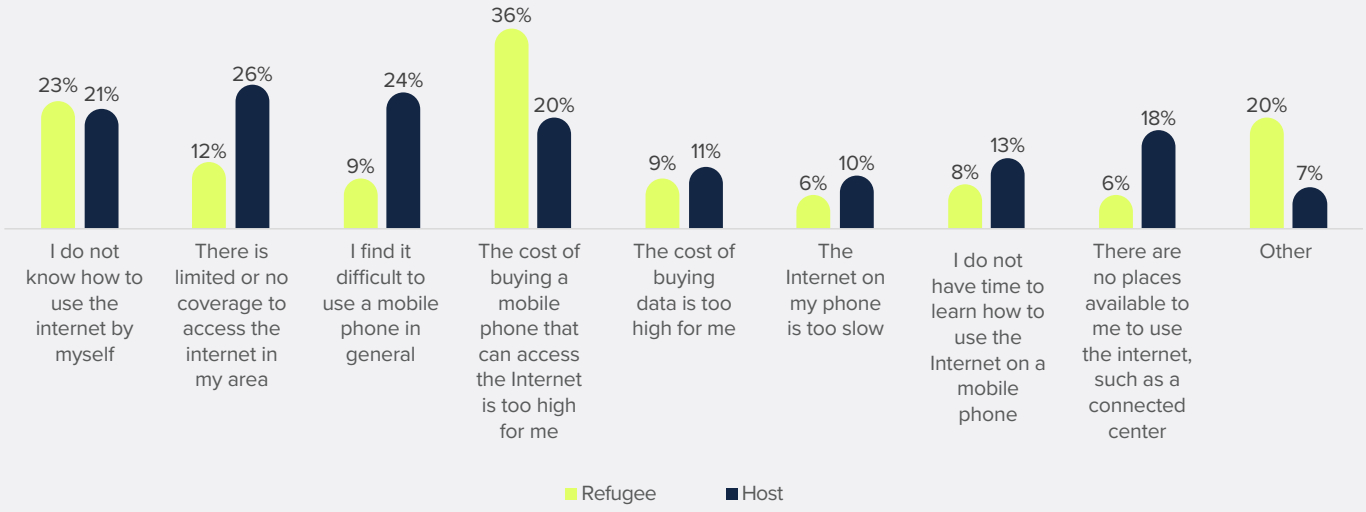
For people who own any phone but are not using the internet, The cost of buying an internet enabled phone is the main barrier to internet use for refugees, followed by a lack of skills. For the host community, network/internet availability, skills and cost were key but more mixed. This was largely also reflected in the focus groups. The pattern of refugee respondents being more sensitive to the cost of a phone reflects the barriers to general phone ownership.

> ***"I do not use internet due to lack of digital literacy —I only make calls and my children help me with that."*** - Host, Afar, Woman, 60+.

> ***"I do not use the internet because my phone isn't a smartphone, and a smartphone is also expensive to buy."*** – Host, Gambella, Person with disabilities

> ***"No, I cannot access the internet today, which means my life is not improving because there is no network coverage within the camp."*** – Refugee, Hilaweyn Camp, Woman, 31-59.

Figure 12: **Barriers preventing internet use, by status.**[23]



Which of the following reasons prevent you using the internet?
Base: Respondents who do not own a phone; n: Refugee=809, Host=135.

Barriers limiting internet use

For people who own any phone but are using the internet less than they would like, the key limiting factors were availability, cost, quality of service and access to agents (Figure 13). Importantly, digital skills were not cited as a limiting factor. This very closely aligned with the discussions that happened in focus groups:

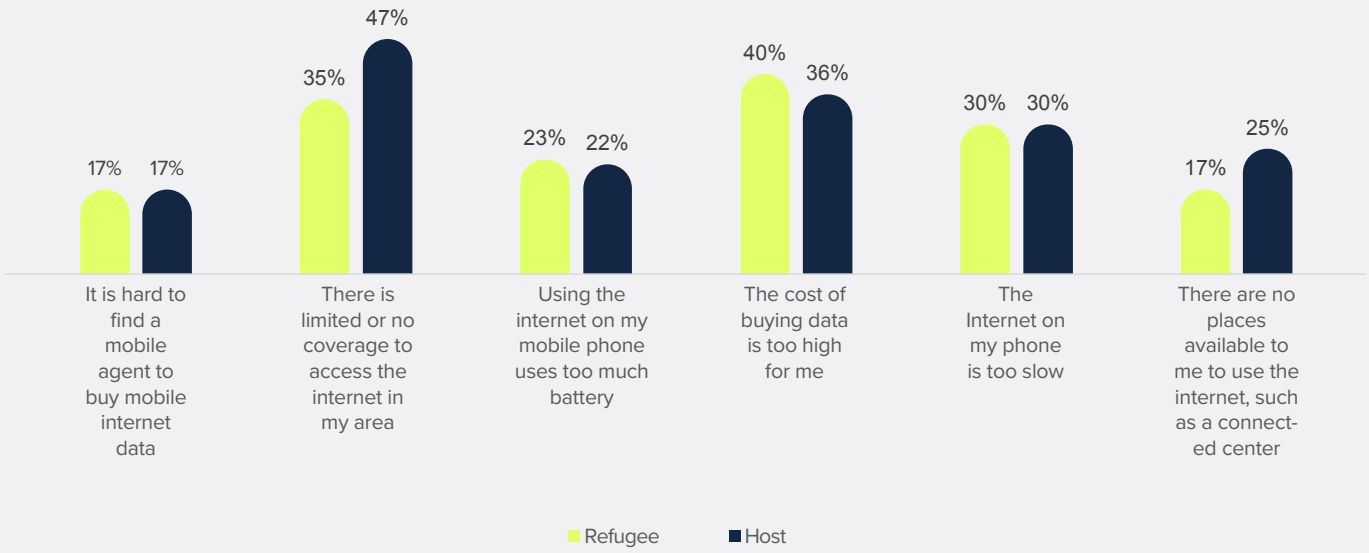
> ***"It's expensive; we only use the internet when we have money."*** – Refugee, Tsore Camp, Women, 25-59.

> ***"There is mainly a problem of network interruption. Most of the time, the network is interrupted when the power goes out."*** – Refugee, Pinyodo 1 Camp, Man, 60+.

> ***"We would have no problem using the internet if there were just network coverage; we are familiar with internet usage"*** – Refugee, Hilaweyn Camp, Woman, 31-59.

23 The 'other' response to this question was not further s, so we do not know that was being considered b the 20% of refugee respondents who selected that answer to this question.

Figure 13: **Barriers preventing internet use as much as would like, by status.**



Which of the following reasons limit your use of the internet?
Base: Respondents who do not own a phone; n: Refugee=995, Host=166.

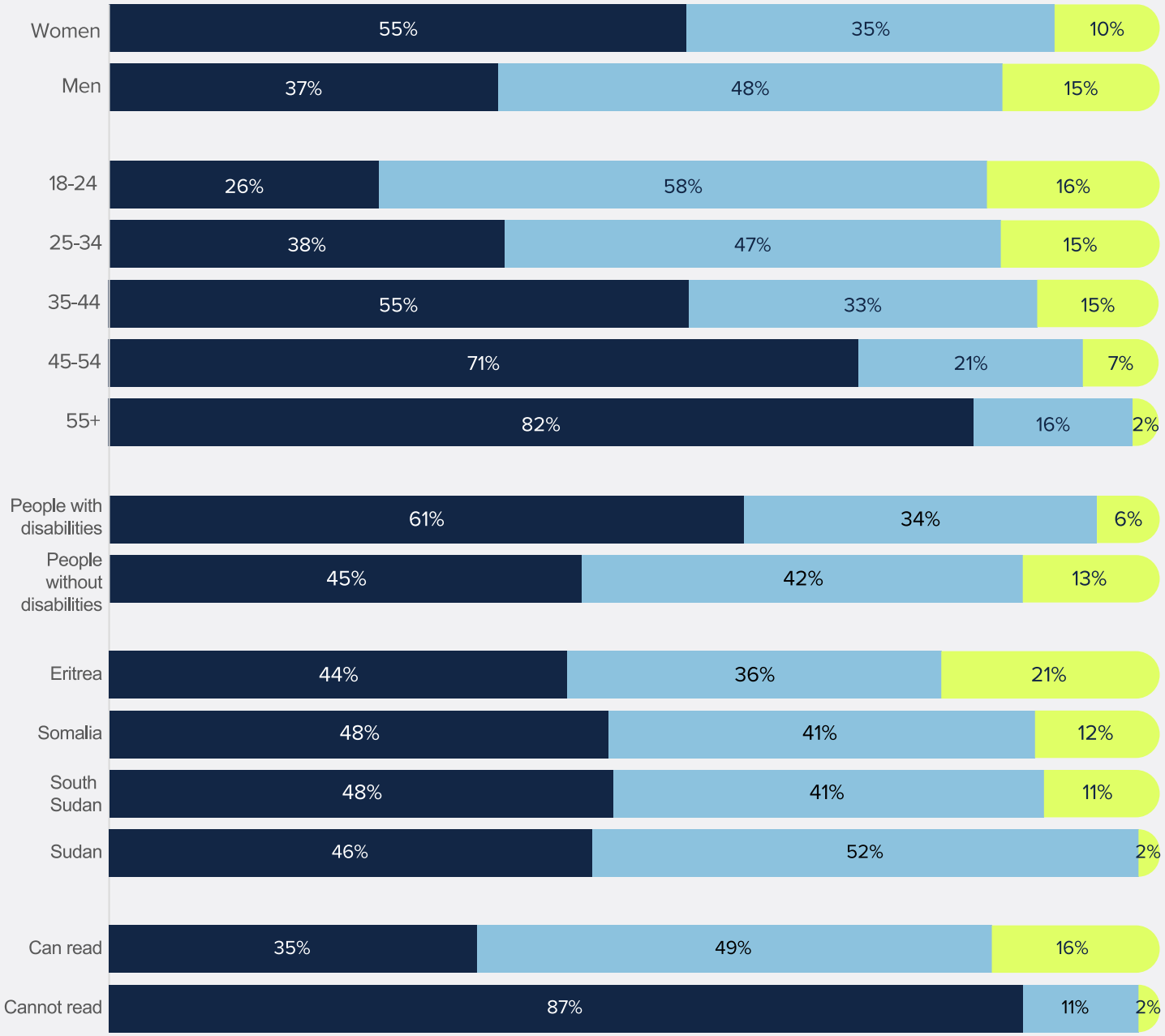
Digital divides

Within the refugee sample, there were significant disparities in internet usage between different demographics (Figure 14).

For example, women were 47% less likely to use the internet than men and 33% less likely to say they used it as much as they would like to. If this gap in internet use was closed, it would equate to an additional 61,000 women using the internet than now.

Additionally, 82% of those aged over 55, 61% of persons with disabilities, and 87% of people who cannot read reported that they do not use the internet. This has significant implications on the potential inclusivity of any internet enabled services which may be used.

Figure 14: **Refugee internet usage, by gender, age, disability status, country of origin and literacy.**



Have you ever heard of the Internet (apps, services, and websites like Facebook, WhatsApp, Messenger, Telegram)? Which of the following statements best describe your current use of Internet (social media, apps, and websites like WhatsApp, Messenger, Facebook, Telegram, etc)?
Base: Respondents; n: Refugee=2,407, Host= 520

Specific use cases and services

Phone users were asked which apps and services they use (Table 3), based on a standard list updated to include apps popular for download in Ethiopia. The results between groups were very similar, so only refugee figures are presented here. The survey results were reinforced by focus group discussions, across which the key apps and services which came up as popular and important were calling, WhatsApp, Telegram, TikTok, IMO, Facebook and YouTube.

Table 3: **Refugee use of mobile apps and services.**

Communication		**Social media**		**Financial services**	
Phone calls	99%	Facebook	46%	Mobile money	27%
SMS	71%	TikTok	43%	Mobile banking	12%
WhatsApp	38%	YouTube	31%	Mobile vouchers	6%
Facebook Messenger	37%	Google	30%	Contactless payment	3%
Telegram	36%	Snapchat	20%	Oher financial services	2%
IMO	18%	Instagram	12%		
Email	15%	X (formerly Twitter)	7%		

What do you do with your phone? Base: Refugee phone users; n=2,219

Concerns about internet use

People who had heard of the internet were asked about concerns they might have about it. Whilst no individual concern was held by a majority of either community, and more than half of both refugee and host community members reported having at least one of the listed concerns (Figure 15).

Looking specifically at refugee respondents, there were also some notable differences:

- Refugees from Sudan were more concerned that they won't be able to access timely or reliable information that they need (72%); that they could receive false information (60%); that false or threatening information could cause them or their family (63%); and that person or group in their community is intentionally spreading false information online (40%).
- Younger people were more concerned about all of the issues provided, especially those aged 18-24.

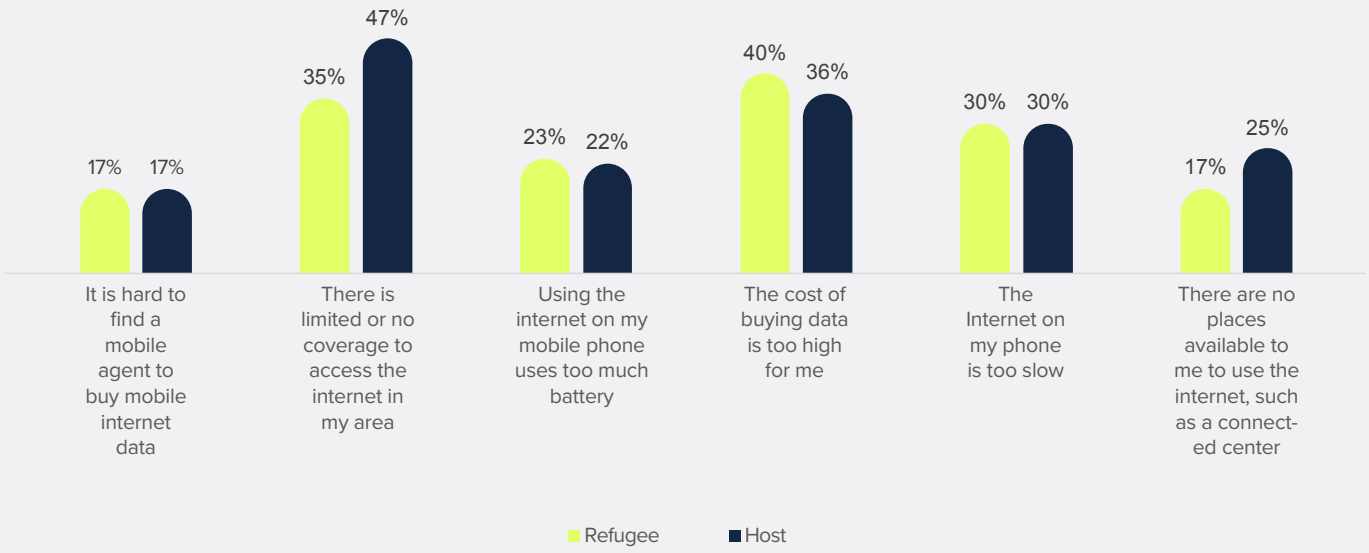
Whilst these issues were not directly addressed in the focus group discussions, in a number of discussions concerns around information integrity were shared with researchers, specifically as it related to the use of social media platforms and previous restrictions of access.

> ***"For over three years there was no access to the internet at all, it was blocked due to the current condition of the country."*** - Refugee, Alemwach Settlement, Person with a disability.

> ***"Of all the mobile applications, TikTok and Messenger have the most users. But sometimes you may see things you don't want."*** - Refugee, Pinyodo 2 Camp, Woman, 31-59.

> ***"We use Facebook, but the information there is usually unreliable and full of scammers. The national media are usually reliable."*** – Refugee, Alemwach Settlement, Person with a disability.

Figure 15: **Use of certain mobile apps and services amongst smartphone owners, by status**



In terms of how you use the internet, are you concerned about the possibility of...
Base: all respondents who have heard of the internet, n: Refugee=2,114, Host =411

Access to networks, services and charging

An essential part of using mobile and digital services is a well-functioning digital ecosystem, including the availability of networks, ability to charge devices, provision of services by agents and merchants and much more. This section highlights assessment results related to these topics across the research settings included in the assessment.

Access to mobile networks

Understanding the availability of mobile networks can be challenging. Network availability and reliability is not static – given that it is a shared resource – and even propagation models based on specific infrastructure data may not tell the full picture. The assessment looked at availability of mobile networks in two ways. Firstly, phone owners were asked about the availability of networks where they lived and where it was accessible (Tables 4 and 5). Secondly, researchers attempted to use a phone in multiple locations across each research location. The findings were also triangulated through focus group discussions.

> ***"I think there are two network satellite towers within the refugee camp, but both are not functioning."*** – Refugee, Melkadida, Man, 31-59.

> ***"I can't use my phone most of the time because there is no network."*** – Refugee, Hilaweyn Camp, Woman, 31-59.

Table 4: **Availability of mobile network coverage, by status**

	At home	In a nearby school	At a nearby market	At work	Have to walk somewhere specific	No coverage nearby	Don't know
Refugee	77%	20%	33%	17%	25%	1%	1%
Host	83%	25%	32%	21%	22%	2%	0%

Do you have network coverage to make calls and send text messages (SMS) with your mobile phone at home or anywhere else?
Base=all phone owners, n: Refugee=2,178; Host=428

Table 5: **Availability of mobile internet coverage, by status**

	At home	In a nearby school	At a nearby market	At work	Have to walk somewhere specific	No coverage nearby	Don't know
Refugee	57%	16%	29%	11%	26%	13%	5%
Host	72%	25%	32%	24%	29%	4%	1%

Do you have network coverage to make calls and send text messages (SMS) with your mobile phone at home or anywhere else?
Base=all internet enabled phone owners, n: Refugee=1,444; Host=273

Access to Wi-Fi and communal spaces

Internet access via mobile networks, whilst the most common in Ethiopia, is not the only means available. The assessment looked at whether respondents could access a Wi-Fi network anywhere (Table 6), or if they could access the internet in a communal space.

Three-in-ten refugees (30%) and 42% of host community members who had heard of the internet reported being able to access Wi-Fi anywhere at all. Additionally, **18% of refugees and 16% of host community respondents who had heard of the internet said that they had access to a space where they can use the internet**, such as a connected community center or a cyber-café.

Table 6: **Availability of Wi-Fi networks, by status**

	At home	In a nearby school	At a nearby market	At work	Have to walk somewhere specific	No coverage nearby	Don't know	Prefer not to say
Refugee	11%	7%	14%	7%	7%	41%	22%	8%
Host	17%	11%	16%	12%	8%	30%	22%	6%

Do you have access to WIFI at home or anywhere else?
Base=all who have heard of the internet, n: Refugee=2,114; Host=411

Refugee location specific insight

Through a combination of data points from this assessment, it is possible to suggest an overall rating of connectivity access for each camp and settlement included in the research. This is caveated in the fact that the data was all collected at the same point of time and is often self-reported. The research did not include detailed speed testing or mapping of coverage – but it still allows for a qualitative distinction to be made and suggest priorities for future investigation or follow-up.

The diagram below has disaggregated the locations into four qualitative categories – a description is available for each camp and settlement to explain why it was included in the relevant category in in Annex 2. This categorization would benefit from more detailed mapping and speed test across all of the refugee hosting sites in Ethiopia, to provide a more detailed picture of network availability.

Whilst access and usage are largely correlated, this is not always the case - for example, Tsore Camp is ranked Medium for access, yet only 1% of residents report using the internet as much as they would like to. This emphasizes the importance of understanding nuanced barriers (as presented earlier in this report).

Little to no access

Hilaweyn
Kobe
Melkadida

Low access

Alemwach
Mirqaan

Medium access

Aw-barre
Jewi
Nguenyyiel
Tsore
Ura

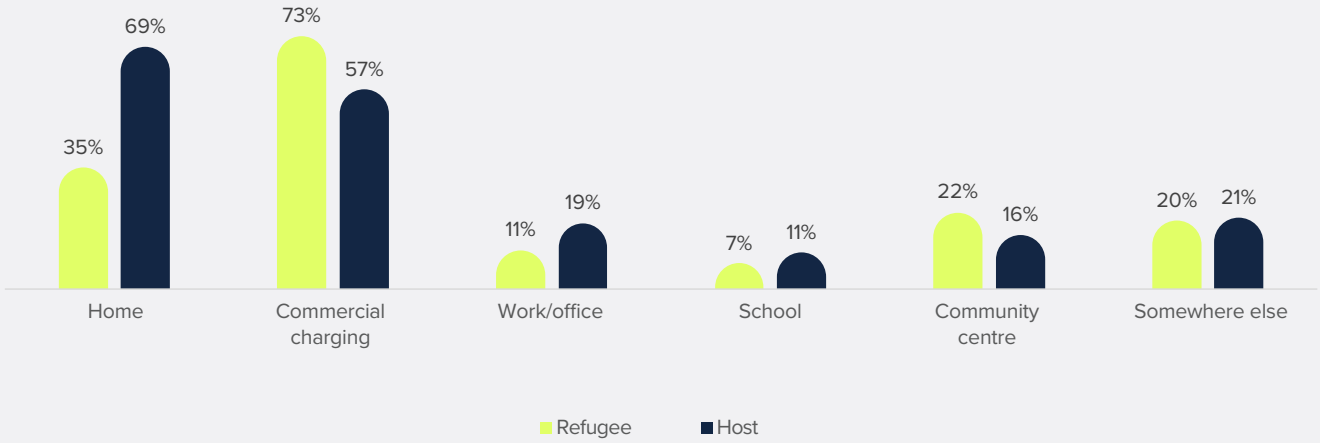
High access

Aysaita
Kebribeyah
Pinyodo 1
Pinyodo 2
Sheder

Charging access

All phone owners were asked where they can charge their phones (Figure 16). Across both refugee and host community respondents, only 9 people were unable to charge their phones anywhere. Half of the merchants interviewed as part of the assessment provided some form of charging services as part of their business.

Figure 16: **Availability of charging, by status**



Can you charge your phone's battery reliably at home or anywhere else? Base: Phone owners, n: Refugee=2,178, Host=428

There were some notable differences across individual camps and settlements, with residents of camps such as Sheder Kebribeyeh being almost universally able to charge a device at home, whilst in others such as Mirqaan and Ura being almost universally reliant on paying at commercial charging stations. Based on focus groups, the cost of these charging stations ranges from 10 birrs to 50 birrs ($0.07-$0.35). Understandably, it appears charging stations are more readily available in locations where home charging is less common, and hence a business opportunity is present.

> ***"Here in Ura Woreda, there are frequent power outages, so we go to the nearby kebeles like Akeda Kebele and Asosa to charge our phones"*** – Refugee, Ura Settlement, Women, 25-59.

> ***"There is no electricity in the camp and also no charging [station], so the entire community travels to the [next camp over] that takes approximately 40 minutes to walk."*** – Refugee, Pinyodo 2 Camp, Woman, 25-59.

Several focus group participants, primarily women and people with disabilities, raised concerns for personal safety when they use commercial charging stations, especially in relation to being in marketplaces after dark. They also raised concerns about the theft of phones from such places.

> ***"Sometimes it's challenging to get your mobile back after it gets charged. At night, it's dangerous to move from place to place so that we might get our life lost."*** – Refugee, Alemwach Settlement, Person with disabilities.

> ***"We worry about charging our phones in [charging stations] because someone might take them."*** – Refugee, Hilaweyn Camp, Woman, 31-59.

Mobile agents and merchants

Thirty-two merchants and agents who provide mobile products and services across the 15 locations were interviewed as part of this assessment. Agents reported serving an average of 35 customers a day. Across all locations, they serve a mix of refugee and host community customers and provide a range of enabling services to help them stay connected – most commonly services related to the sale of airtime and SIM cards, followed by mobile money services.

Several of the merchants also provide other linked services in their businesses, such as charging, selling or repairing mobile phones and providing troubleshooting. Troubleshooting was limited to teaching people how to use a phone in simple ways, how to top-up, and how to insert/remove a SIM card.

Merchants were all open either 6 or 7 days a week, primarily open all throughout the day and operating from a fixed location.

Airtime top-up

The majority of phone owners reported not topping up their balance directly with an agent, instead opting primarily for using scratchcards (Table 7). Younger people in the focus groups seemed to overestimate the rates in which people were using mobile money or an app to top-up (likely because they were more likely to do both).

> ***"Nowadays, everybody uses mobile phones to recharge airtimes as it is simpler than buying paper vouchers for airtime."*** – Refugee, Dabat Camp, Male, 25-59, Smartphone owner

Table 7: **Top-up modality, by status**

	Scratchcard	Directly from an agent	Mobile money balance	Online or through an app	Someone tops me up remotely
Refugee	77%	40%	32%	13%	13%
Host	87%	38%	46%	19%	5%

How do you top up airtime? Base: Phone owners, n: Refugee=2,178, Host=428

Merchant availability

In several locations,[24] it was not possible to conduct interviews with people providing agent services, as they could not be found by the research team. For several of these, this was reinforced by participants in the focus groups, who told researchers that they could not access merchant services – especially those who can sell/register SIM cards. This largely meant that people either had to walk into the nearest town or were reliant on unofficial channels – referred to in discussions as 'the black market'.

> ***"We receive service from the black market because there are no merchants here."*** – Refugee, Kobe Camp, Woman, 60+, Basic phone owner

> ***"In the refugee camp, the delivery of SIM cards or merchants is a problem. When we need services regarding SIMs, we need to go to Jigjiga town"*** – Refugee, Sheder Camp, Man, 31-59, Smartphone

24 Hilaweyn, Kobe, Melkadida, Nguenyyiel

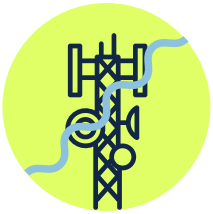
Conclusions and Recommendations

Smartphones: Many community members lack access to smart devices, and digital divides on gender and disability exacerbate this.

The reported levels of access to and ownership of phones across the research locations was high, though varied from location to location. There were however big gaps in ownership of smartphones - and we believe that the overall figure is inflated due to a sampling issue. However, these high figures mask notable differences in phone access/ownership/use amongst potentially marginalized groups. Throughout the assessment it was clear that women, older people and people with disabilities were less likely to be benefitting from connectivity. It was also closely linked to levels of digital literacy.

Recommendations

- Progamming, including commercial options such as de-risking for financing to support more refugees and the communities who host them to own good quality smartphones would likely improve levels of digital inclusion and use of connectivity services in all research locations.
- Such programming needs to ensure issues related to age, gender and diversity (AGD) are effectively considered. This should include both targeted access interventions but also work to support development of adequate digital skills.



Coverage: While many refugee-hosting areas have cell coverage, significant gaps remain.

The availability of internet services varies drastically between the refugee hosting locations covered by this assessment. In some it is possible to access the internet in several ways and through multiple providers. In others there is limited choice, if any access available at all. This assessment provides a snapshot of availability for 15 of nearly 30 refugee hosting sites.

Recommendations

- Further analysis of coverage would be useful, making use of either/both data from providers on infrastructure and detailed mapping across all camps and settlements areas. This should be done across all refugee hosting locations in the country.
- Plans for infrastructure installation and upgrade should prioritize refugee hosting sites with the lowest levels of current access. Of the sites included in this assessment, based on this snapshot, the first priorities should be Hilaweyn, Kobe and Melkadida. *A World Bank-financed project, led by the Government, to install 50 cell towers across camps and settlements will likely see this issue positively impacted in the near term.*

Barriers to adoption: Factors contributing to lack of digital adoption are complex and affect refugee and host communities similarly.

There are a nuanced range of barriers that people are facing to using digital connectivity, at various stages of the digital inclusion journey. These include coverage, digital skills and confidence, cost, availability of support and much more. Refugee respondents were notably more sensitive to cost being a barrier to their use of services, but otherwise the barriers were largely similar between refugees and their hosts.

Recommendation

- Stakeholders with the capacity to address various barriers to digital inclusion should collaborate on multifaceted interventions. Where programming considers a full range of potential barriers it is more likely to lead to improvements.
- Interventions seeking to overcome barriers to digital inclusion in refugee-hosting areas should ensure that they include both refugees and their host communities.

Connected Centres: Private spaces to get online are limited and hampering digital learning and digital employment opportunities

Beyond mobile technology, there were low levels of reported ownership of internet enabled devices or access to a Wi-Fi network. Similarly, only a minority of people in any location reported that they had access to spaces such as connected centres, computer labs or cyber-cafés to allow them to use the internet on a shared device and provide an environment for learning important digital skills or accessing the digital economy.

Recommendations

- As resources allow, it would be beneficial to consider how communal spaces might be provided to facilitate access to internet-enabled devices such as laptops or computers. These spaces should provide not only connectivity, but tailored support to help people use the internet safely and confidently.
- Exploring models of community ownership and management of such spaces will be important in supporting their long-term success and sustainability.
- Alongside centres, the provision of Wi-Fi which communities can use to connect their own devices to the internet – free or paid-for – will provide people with reliable access and potentially a choice between providers.

SIM Registration: While legal, many people don't register SIM cards in their own name in part due to a lack of agents where they are.

Access to a properly registered SIM card came through in this assessment strongly. Whilst it was often linked to access to a valid ID, this was not always the case – with the ability to interact with a representative of a mobile network to register a SIM or access other services flagged as an equally significant challenge. This was true across both refugee and host community research participants, but worse for younger people, women and people with a disability.

Recommendations

- Mobile network operators should ensure that they have adequately resourced agent networks across refugee hosting locations. Agents in these areas should prioritize SIM registration as a service, reducing barriers to initial entry to being a customer.

Digital Skills: Levels of digital skills present a barrier for two distinct groups of people, likely needing addressed in different ways.

Digital skills present as barriers to two key groups. For groups at risk of marginalization such as women, older people and people with a disability, they are more likely to lack even basic skills and be unaware of services such as mobile internet – it is also a key barrier to people owning a phone in the first palce. Additionally, among smartphone owners who are more likely to not be in one of these groups, more than half were unaware of how-to user services such as social media, emailing or USSD.

Recommendation

- Digital skills interventions will likely benefit from disaggregating between basic, entry-level skills support for groups struggling to get online at all, and people already connected who might benefit with support to increase the diversity of the services they use.
- Support for entry-level skills should prioritize women, older people and people with a disability, whilst support for improving uptake should focus on people who own an internet enabled device but make limited use of it.

Collaboration: Digital inclusion efforts for refugee and host communities is a complex issue which requires multi-stakeholder collaboration.

This research has demonstrated that a range of barriers are preventing refugees and their host communities from realizing digital inclusion outcomes. These barriers will best be addressed by different stakeholders across sectors working together.

Recommendation

- A formal coordination mechanism, including stakeholders across government, civil society/ refugee-led organizations, the private sector and humanitarian/development agencies should be established to prioritize action on digital inclusion.

Annex 1 – Full methodology

This annex provides a methodology note for each of the data collection methods and tools used as part of this assessment.

End user survey

The end user survey used a tailored version of the tool provided in GSMA's CoNUA toolkit, considering specifics of internet access for refugees and broadening the remit beyond only mobile/cellular connections. This was coded into Kobo and used to collect data in July 2025. Sampling for the survey was done using a two-stage stratified cluster methodology, with the primary sampling unit being the refugee-hosting site and the second the individual.

In total, 15 camps and settlements were included in the sample, with overall sample size adjusted to based on previous sampling strategies designed for representation across Ethiopia's camp-based refugee communities. One location (Afit) was not included in the final sample due to security concerns.

Within each camps and settlements the sample was set as an even 50:50 split by gender. By excluding age considerations from the sample plan, we know that the final sample significantly over represents people aged 25-49, at the expense of those older and younger.

Before fieldwork, the survey was translated from English into Amharic, Anuak, Arabic, Nuer, Somali and Tigrigna. Enumerators who could speak each language were hired in order to minimize language-based exclusion or misinterpretation.

Focus group discussions

The assessment used a tailored FGD guide, which drew on questions from different guides available in the CoNUA toolkit. The FGD guide explored the services available in each location, the services that people use and the ways that people can charge their phones.

In total, 15 focus groups were conducted with a range of compositions. Most were gender and age disaggregated, except for those focusing on people with disabilities, which were mixed gender and age.

The focus-groups were conducted in a range of languages.

Merchant interviews

This tool collected quantitative data from merchants that provide mobile services (such as airtime sales or charging services) across locations. Using an interview to collect structured data, this exercise identified the types of services available, with customers helping to create a picture of the market in each of the locations.

This exercise uses convenience sampling of merchants who were operating at the time of data collection and willing to speak to researchers. As such, it is not necessarily a comprehensive mapping of service availability, but an indicative understanding of the state of commercial service provision in the research locations. Efforts were made to interview in every location, but in 5 this was not possible – primarily because merchants were not found by the assessment team.

Signal strength mapping

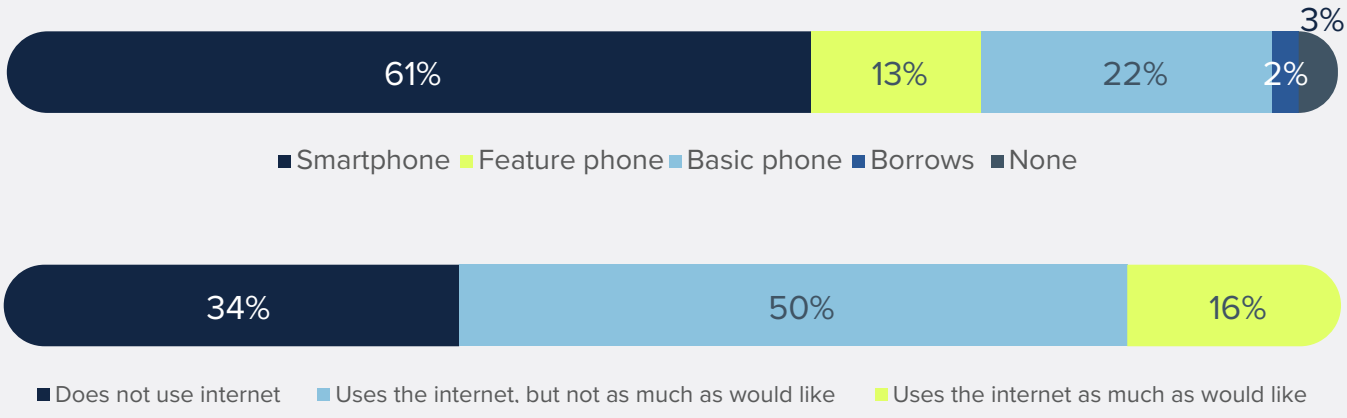
This tool assessed a snapshot of network availability and strength in each location, with both providers, at least once per location. Measurements were taken at central locations, such as a marketplace. Researchers attempted to send an SMS, make a phone call, send a WhatsApp message, make a WhatsApp call and stream a YouTube video and then recorded whether it was successful. Although an indicator of network availability, it is a relatively crude one as it does not account for network variability across the site, differences in network demands at the time of measurement or any atypical outages or disruptions experienced at the time.

Annex 2 – Camp/settlement level snapshots

This annex provides snapshots on coverage and digital service usage for each of the research locations. The data is only for refugees living inside each camp and settlement.

Alemwach - Low access

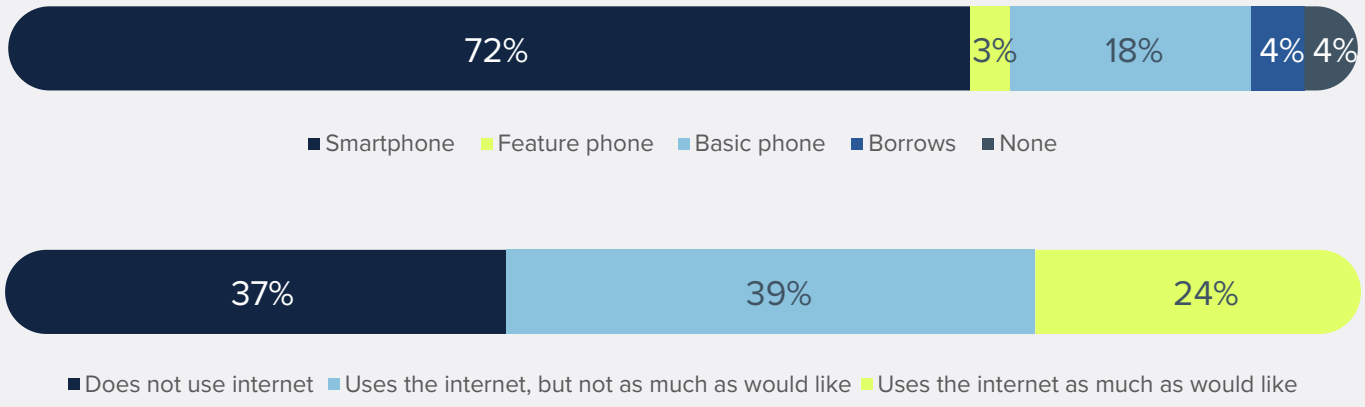
The research suggests easy access to phone calls and SMS services with one MNO in Alemwach Settlement. Access to mobile internet or Wi-Fi is likely a challenge. Nobody reported access to a connected center or cyber-café. Smartphone ownership and internet use are higher than average. Most phone owners use paid-for commercial charging options (87%).



Base: Refugees in Alemwach Settlement, n=150

Aw-barre - Medium access

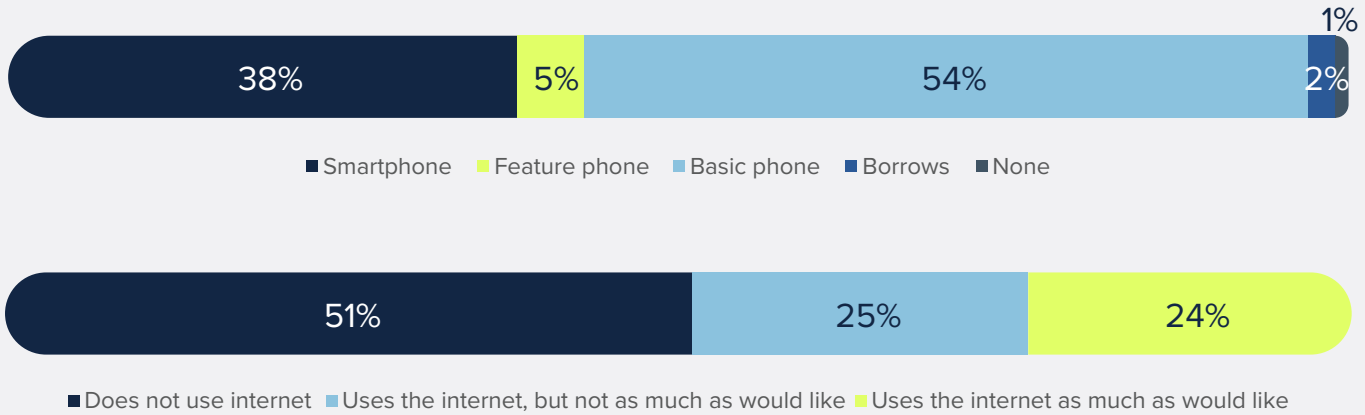
The assessment suggests that mobile connectivity, including internet, is available with at least one MNO in Aw-barre, though some challenges in data access may remain. A minority of people report access to Wi-Fi and dedicated connected spaces. Smartphone ownership and internet usage are both very high and most people can charge their phone at home (75%).



Base: Refugees in Alemwach Camp, n=150

Aysaita - High access

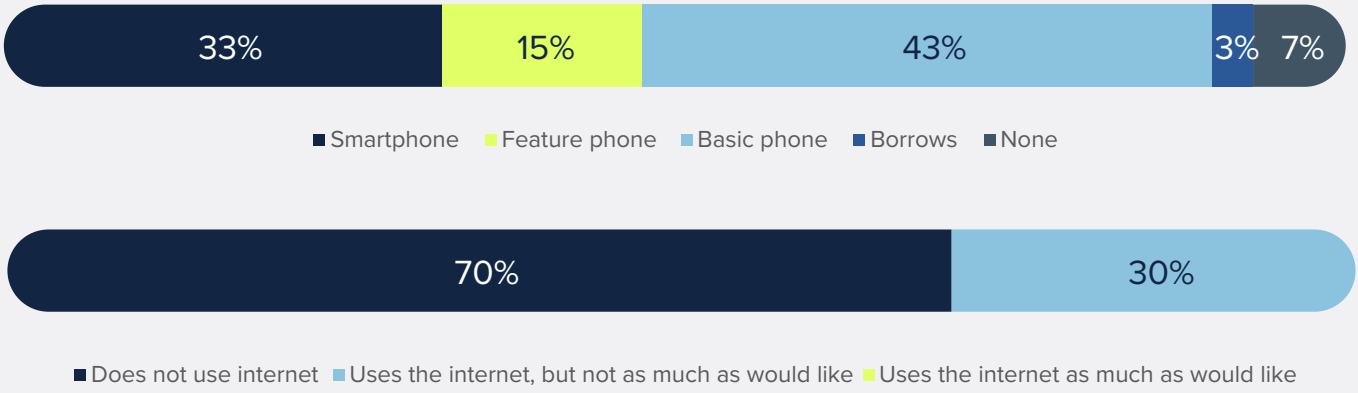
Aysaita Camp seemingly has high levels of access across both MNOs and most people reporting available Wi-Fi. Many people also report dedicated spaces, such as a connected community centers, available to access the internet on a shared device. However, this does not translate into higher levels of internet usage overall. Phone charging is primarily form commercial solutions (77%)



Base: Refugees in Aysaita Settlement, n=180

Hilaweyn - Little to no access

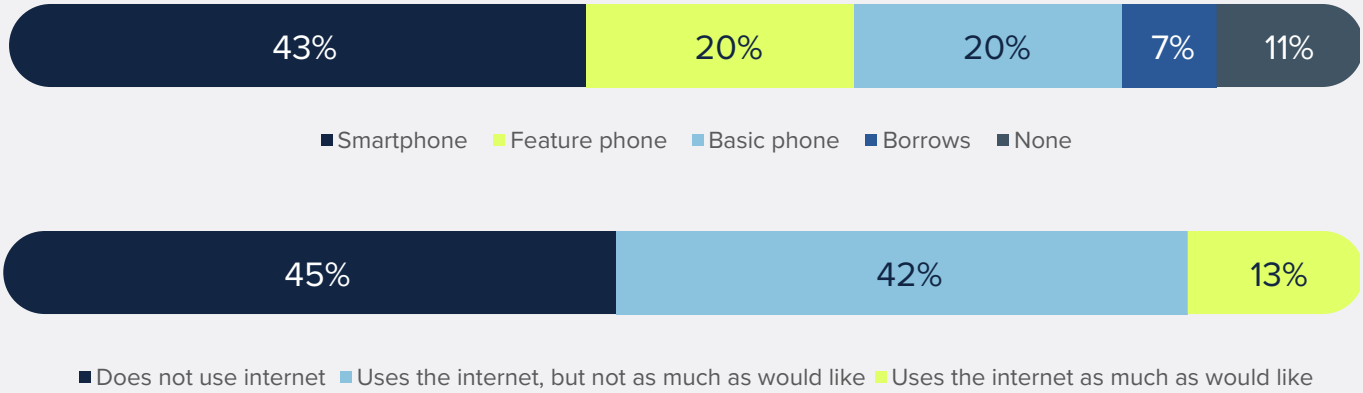
This study indicates that Hilaweyn has almost no access to the internet in any form. Unsurprisingly this means that ownership of smartphones and use of the internet is much lower than the average (0% of respondents in Hilaweyn use the internet as much as they would like). Almost all phone owners rely on commercial charging options.



Base: Refugees in Hilaweyn Camp, n=150

Jewi - Medium access

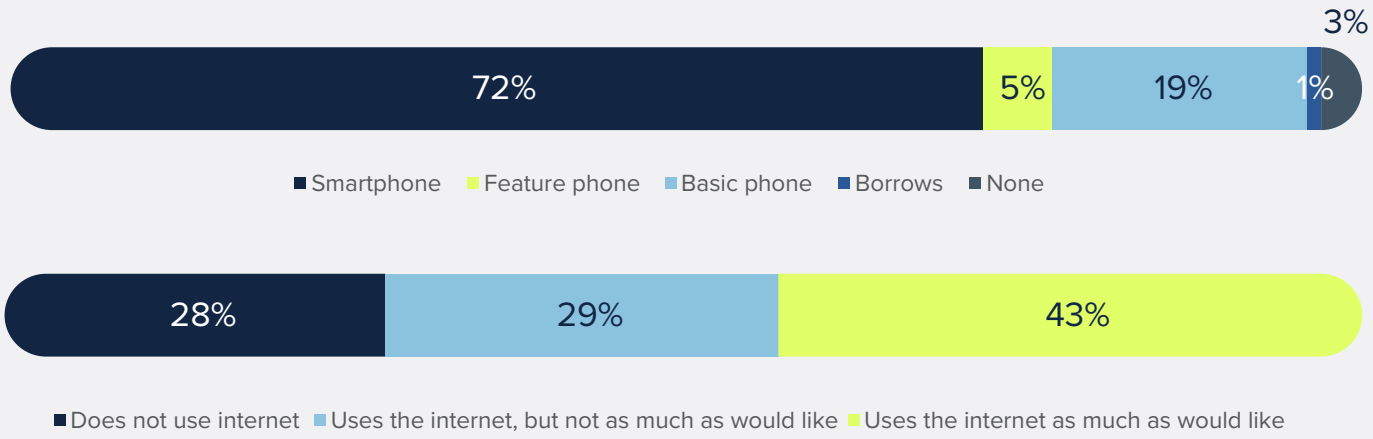
Data from Jewi suggests that access to mobile connectivity with one MNO is possible – with some potential quality issues. There is also indication of some access to Wi-Fi and communal connected spaces, though far from universal. Phone ownership and internet use is largely in line with the average and most phone owners rely on commercial charging (71%).



Base: Refugees in Jewi Camp, n=179

Kebribeyah - High access

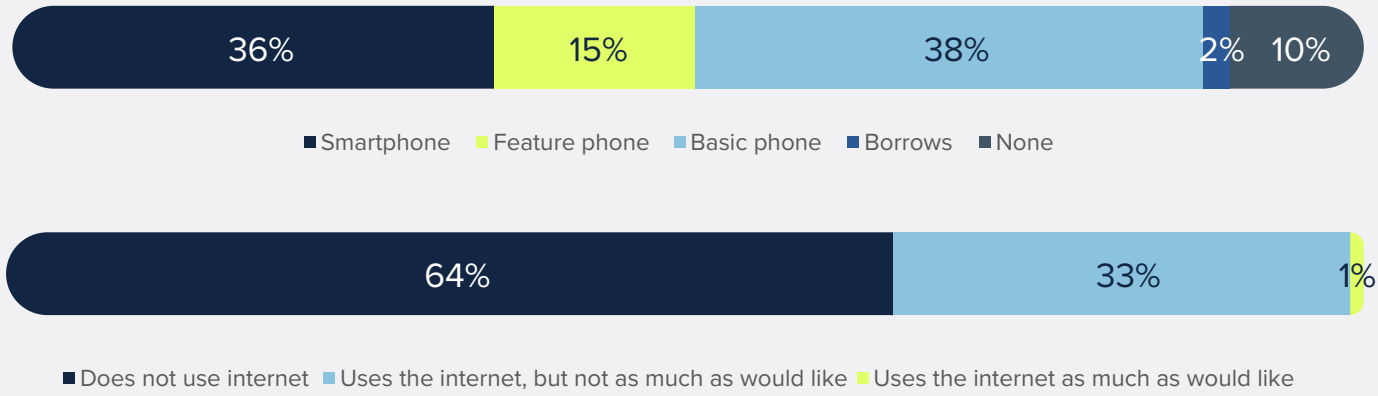
Kebribeyeh seems to have very high levels of access to connectivity with both MNOs. It also has relatively high access to Wi-Fi networks, plus nearly half of respondents report being able to access a communal space to access the internet – such as a cyber café. In line with this, it has some of the highest levels of smartphone ownership and internet use. Most people (94%) can charge their phone at home.



Base: Refugees in Kebribeyeh Camp, n=156

Kobe - Little to no access

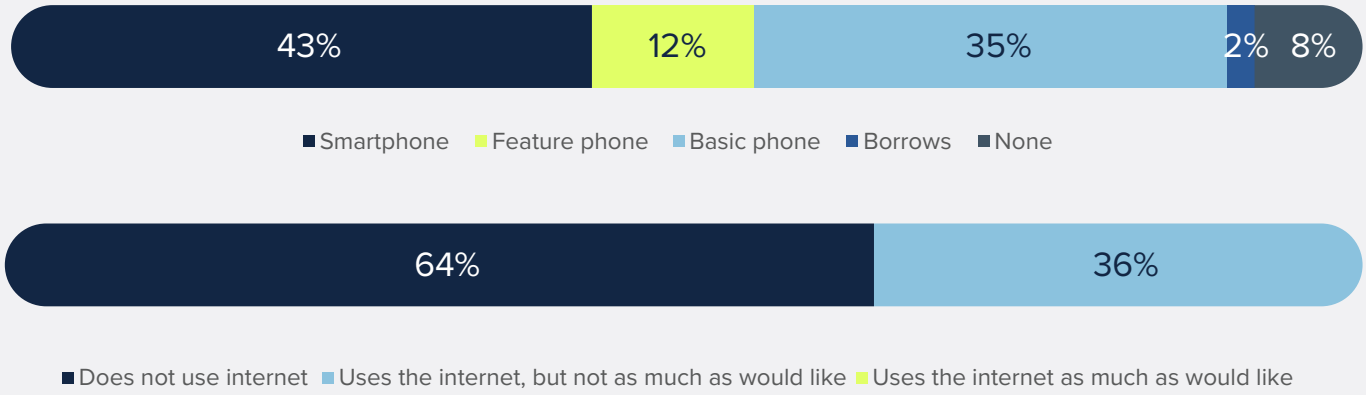
Kobe appears to have almost no access to any form of connectivity, even sending an SMS would likely be a challenge for residents. In line with this, phone ownership and internet use levels are some of the lowest of any research location. Most (87%) phone owners rely on commercial charging.



Base: Refugees in Kobe Camp, n=168

Melkadida - Little to no access

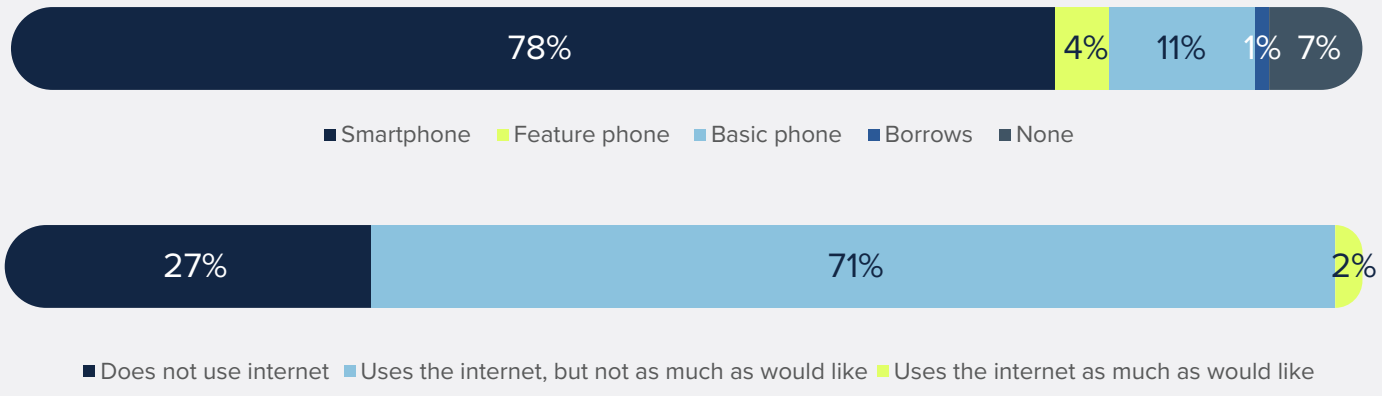
Melkadida appears to have very low access to connectivity, with the only access coming in the form of some basic mobile coverage and potentially a small number of Wi-Fi access points. Unsurprisingly, internet use is low to reflect this. Most (68%) phone owners rely on commercial charging.



Base: Refugees in Melkadida Camp, n=181

Mirqaan (Bokh) - Low access

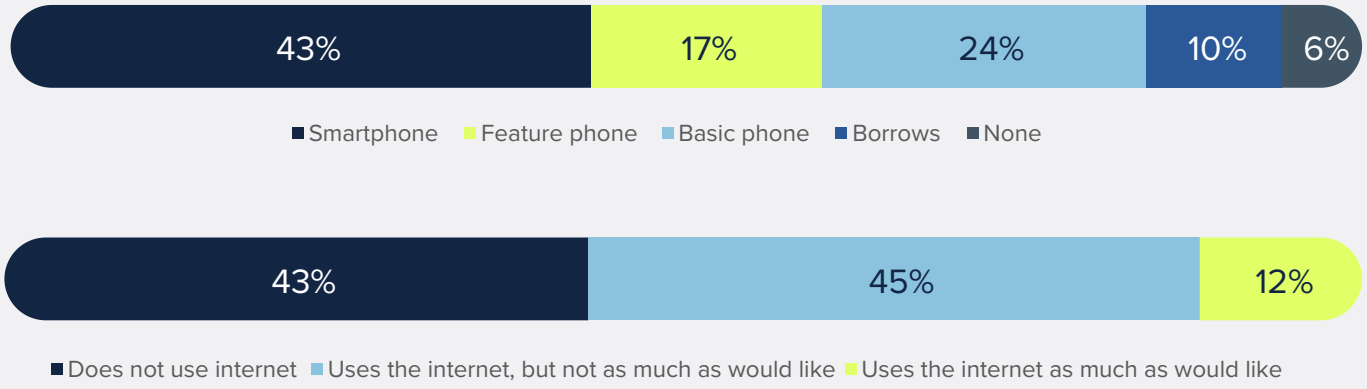
The data suggests that at least phone calls and SMS in Mirqaan are easy with one MNO, however there seems to be a lack of any access to internet services of any kind. Despite this, smartphone ownership is very high in the community, though only 2% of people use the internet as much as they would like. Virtually all phone owners rely on commercial charging.



Base: Refugees in Miqaan (Bokh) Settlement, n=148

Nguenyyiel - Medium access

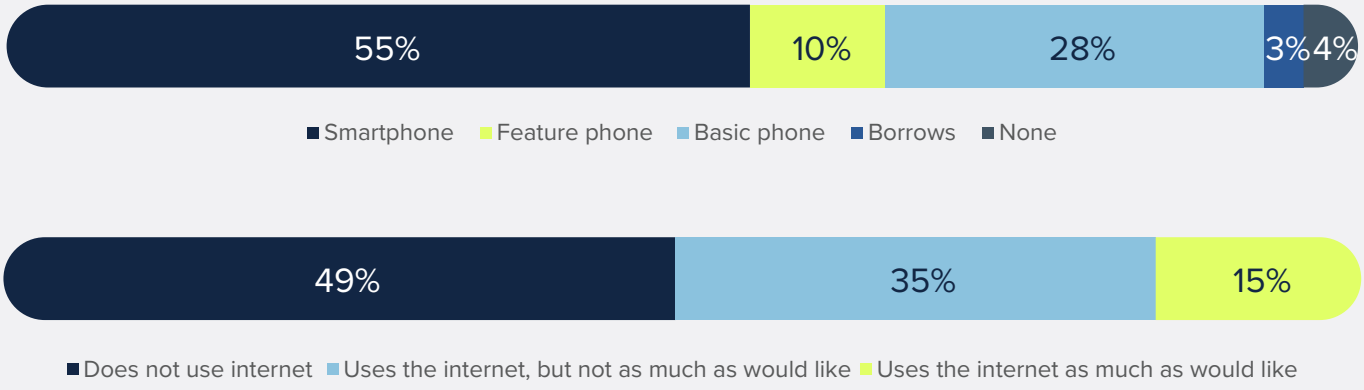
With one MNO there is seemingly good access to mobile internet services in Nguenyyiel Camp. However there is very little reported access to any other form of internet access. Smartphone ownership and internet usage are slightly lower than average and two-thirds (64%) of phone owners use commercial charging.



Base: Refugees in Nguenyyiel Camp, n=229

Pinyodo 1 & Pinyodo 2- High access

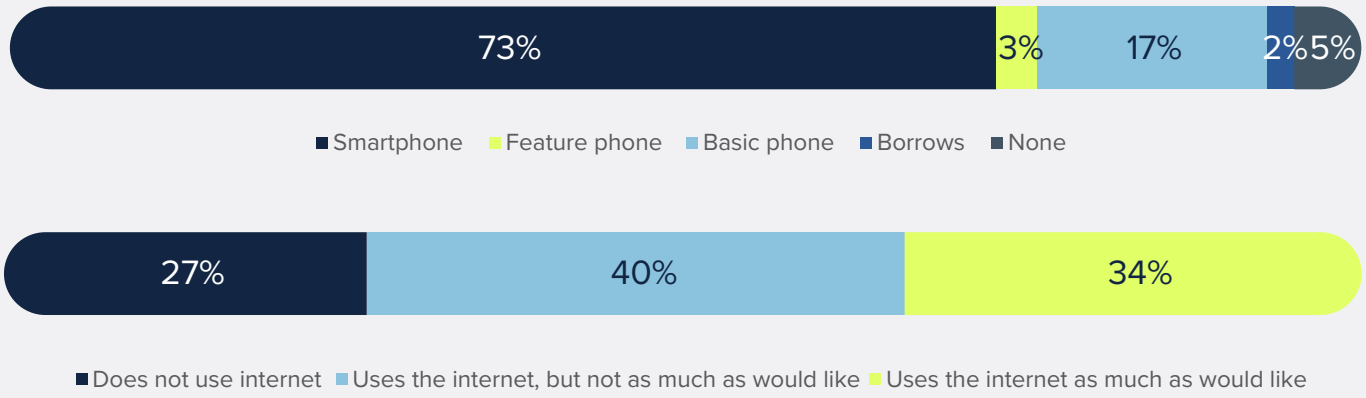
For both of the Pinyodo neighboring camps the data suggests that internet access is strong. There is one MNO with which basic and internet services are available in multiple locations – though the other is not available at all. Additionally, Wi-Fi and connected communal spaces are reportedly easily accessible. Despite this, smartphone ownership and internet use are slightly lower than average.



Base: Refugees in Pinyodo 1 and Pinyodo 2 Camps, n=352

Sheder - High access

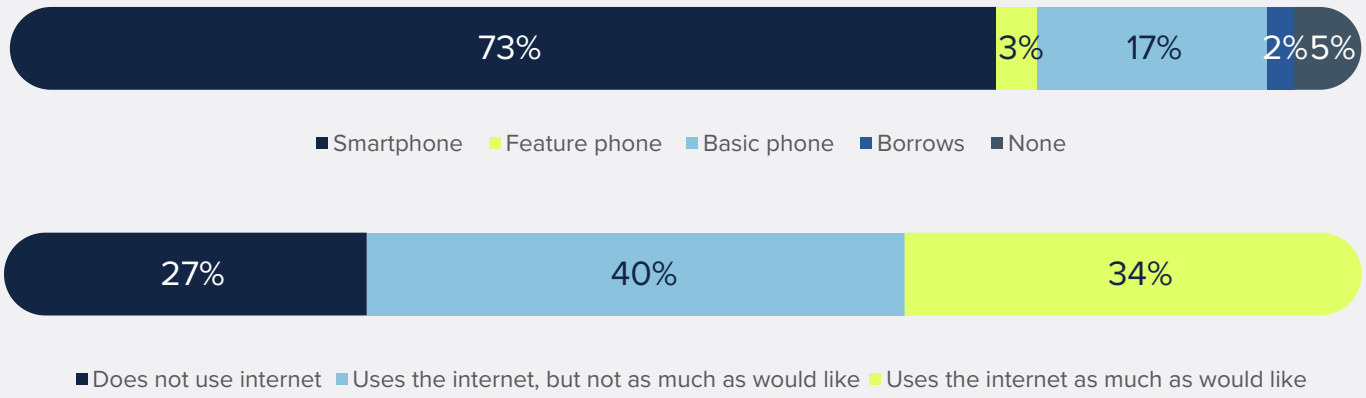
The assessment data indicates that Sheder has very high access to internet services from both MNOs, with adequate access to both Wi-Fi and communal spaces also reported. This has translated into very high levels of smartphone ownership and internet use. All phone owners in Sheder reported being able to charge their phone at home.



Base: Refugees in Sheder Camp, n=101

Tsore - Medium access

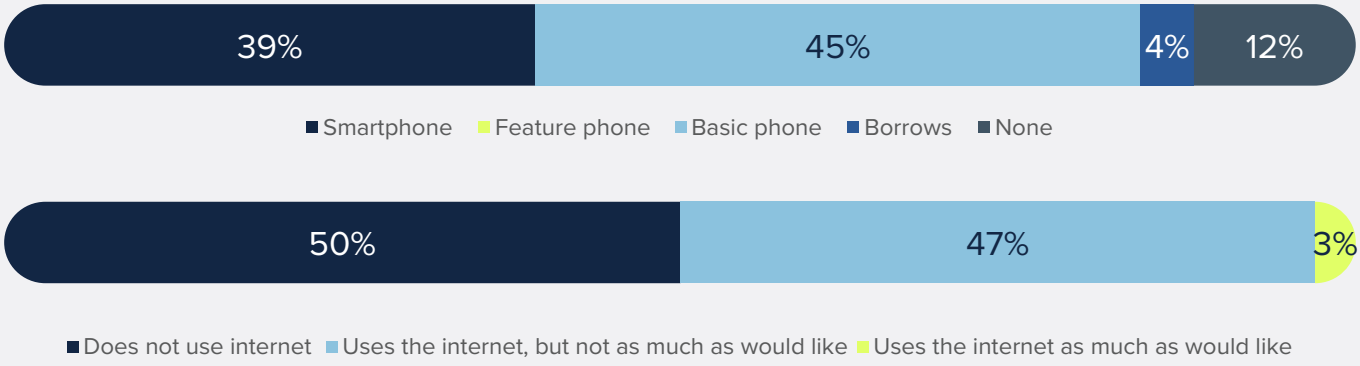
Access to connectivity in Tsore is seemingly not equal across the whole camp, but in certain locations residents can access connectivity from MNO (basic and internet) as well as some Wi-Fi access. There is not access to connected communal locations such as a cyber café. Whilst internet usage overall is high, satisfaction seems low. Virtually all phone owners rely on commercial charging.



Base: Refugees in Tsore Camp, n=202

Ura - Medium access

Mobile internet services are accessible in Ura Settlement from both MNOs, though with some potential speed issues. Although there is very-low/no reported access to Wi-Fi or communal connectivity spaces within the camp.



Base: Refugees in Ura Settlement, n=102

Annex 3 – Barriers provided in user survey

Barrier to phone ownership

The cost of buying airtime (prepaid credit) is too high for me
The cost of buying a mobile phone is too high for me
I do not have the necessary registration or ID documents to buy a SIM card
My family do not approve of me using a mobile phone
It is hard to find a mobile phone agent to buy airtime (prepaid credit)
There is limited or no network coverage in my area
I am concerned that I would receive unwanted calls or messages
Owning or using a mobile phone may put my physical safety at risk, such as theft or mugging
Charging the battery of a mobile is too difficult or expensive
I am concerned that my identity or other private information will be stolen or misused
A mobile phone is not relevant or interesting for me
I don’t know how to use a mobile phone
Other

Barriers preventing or restricting internet use

I do not know how to use the internet by myself
My family does not approve of me using the internet
It is hard to find a mobile agent to buy mobile internet data
There is limited or no coverage to access the internet in my area
There is not enough content in my own language on the internet
Using the internet on my mobile phone uses too much battery

I am concerned that I would receive unwanted contact from people online
I am concerned that it might expose myself or my family to harmful content
I am concerned that my identity or other private information will be stolen or misused
I do not find the Internet relevant or interesting for me
I find it difficult to use a mobile phone in general
The cost of buying a mobile phone that can access the Internet is too high for me
The cost of buying data is too high for me
The Internet on my phone is too slow
I do not have time to learn how to use the Internet on a mobile phone
There is nobody to teach or help me to use mobile Internet
There are no places available to me to use the internet, such as a connected center
There is a center for internet access, but I do not feel comfortable/safe in the center
There is a center for internet access, but I don't know how to access the center
Other

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