



The Importance of Mobile  
for Refugees:  
**A Landscape of New Services  
and Approaches**



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## Disaster Response

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The GSMA Disaster Response programme aims to strengthen access to communications and information for those affected by crisis in order to reduce loss of life and positively contribute to humanitarian response. We work to drive the creation and adoption of coordinated, impactful solutions and practices that leverage the ubiquity of the mobile technology under the umbrella of the Humanitarian Connectivity Charter.

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# Executive summary

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In 2015, refugees began arriving in Europe in large numbers, forced from home by conflict in Syria, Iraq, Afghanistan, and beyond. Large numbers of refugees continued to arrive in Europe in 2016 and the trend has shown no signs of abating in 2017. By mid-2015, aid workers and volunteers quickly recognised that many refugees not only had smartphones, but saw them as a critically important tool for organising their journey and staying in touch with friends and family. So important were mobile phones that, on arrival, many refugees asked for Wi-Fi or charging services ahead of food, water, or shelter. This phenomenon has generated significant interest, both from aid agencies—which are now recognising that refugees regard connectivity as a basic necessity—and mobile network operators (MNOs), which see new customer bases, growing markets, and an opportunity to develop and provide innovative new services that can have a positive impact on the lives of refugees.

The political and media focus on the refugee crisis in Europe has demonstrated how mobile technology has proved to be a lifeline for refugees to navigate their journeys and resettle in new European countries. However, the fact remains that all of the world's top ten refugee hosting countries are outside of Europe. MNOs and humanitarian agencies have been delivering mobile connectivity and creating innovative services for refugees in a variety of rural and urban contexts in Africa, Asia and the Middle East for many years. There are wide-ranging lessons that can be shared across sectors and regions on the challenges and opportunities of providing mobile connectivity and services to this segment of the population which will be explored in this report.

Current research and activities on refugees use of mobile technology focus largely on the following themes: connectivity, digital tools and platforms, family reconnection, education, and livelihoods and mobile money. Below is a summary of each of these themes.

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## Connectivity

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The magnitude of the refugee crisis has highlighted the critical importance of connectivity and the unique challenges of accessing and providing mobile services for refugees in different contexts. In addition to mobile network coverage, connectivity also involves issues of access, usage and affordability, ranging from mobile device and SIM card ownership to charging facilities, digital literacy, relevant content, and data services.

Given that a significant proportion of refugees arriving in Europe were mobile users in their home

countries, one of the key questions is how to establish continuity in access to mobile services while refugees are on the move and relocating in new countries for the foreseeable future. Beyond Europe, where long-term and persistent refugee crises are common, delivering long-term connectivity for refugees is a real challenge. Providing reliable and sustainable mobile connectivity is crucial as it enables a range of other mobile services—education, financial, information, and others—that can improve the livelihoods of refugees over the long term.

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## Digital tools and platforms

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There has been significant growth in the development of digital tools for refugees, with particularly innovative mobile applications emerging in the context of the European response. Apps have been especially popular

with volunteer technology communities and MNOs, but more research is needed to map the adoption of these apps and understand their actual impact on refugee communities.

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## Family reconnection

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For refugees, separation from family is a stark reality. The potential of mobile services and online platforms to facilitate reconnection is being explored by organisations such as REFUNITE—a platform supported by Ericsson and several MNOs around the world—as well as the International Committee of the Red Cross (ICRC), Télécoms Sans Frontières, and UN

agencies, such as UNICEF's Rapid Family Tracing and Reunification (RapidFTR) project. Several platforms have been rolled out to support family reunification, and although the adoption of some of these platforms and their impact is still nascent, it is clear that mobile technology has a critical role to play in facilitating reconnection.

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## Education

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It is estimated that 51% of refugees are children, with the majority facing long-term displacement. This makes it critical to address interruptions in schooling and make educational continuity a priority. There has been heavy interest in the potential of mobile services to overcome the many challenges of providing education to refugees, including a lack of language-appropriate school materials and the availability of teachers. Projects that use mobile technology to

deliver education and partnerships between MNOs and humanitarian agencies are relatively advanced, with some initiatives like Vodafone Instant Schools Programme and Ericsson's Connect to Learn initiative now several years old. Assessments of these programmes have found that digital education services need to be planned with care and require appropriate commitments of time and money to deliver.

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## Livelihoods and mobile money

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The humanitarian sector's interest in mobile technology for delivering aid is strongest in the livelihoods sector. Mobile phones are an important tool in the livelihood strategies of refugees, enabling them to find employment, run small businesses and work in ancillary services, such as selling charging or credit services and mobile phone repair, as well as mobile money services.

An interest in cash transfers, combined with the growing importance of digital platforms in managing financial transfers, has led humanitarian organisations to dedicate resources to projects focused specifically on digital financial services, and to try to leverage mobile money infrastructure and other digital platforms to deliver services. However, having proof of identity is a serious issue for refugees as it can

be a potential barrier to accessing financial services and owning a mobile phone. Also, the mobile money ecosystem is still nascent in many refugee contexts and not always a viable option.

International Money Transfers are another critical facility for refugees, which can be accessed more affordably and easily through mobile. Refugees who are able to work in host countries can send remittances home, but those living in refugee camps and unlikely to obtain a work permit often rely on receiving remittances from family and friends elsewhere. This issue is of major interest to the mobile industry, as international transfers have become the fastest growing mobile money service.

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## Looking ahead

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Current global trends suggest that the number of refugees will continue to rise. It can be assumed that demand for mobile services among these populations will also continue to grow, becoming a central component in the delivery of all forms of humanitarian

aid. Mobile money services and cross-border remittances have the potential to revolutionise financial management for refugees, and service providers need to move beyond emergency models into long-term planning.



# Introduction: A snapshot of the current landscape



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There are over 65 million refugees and internally displaced persons in the world, many of whom are living without reliable mobile connectivity and internet, according to a global assessment by UNHCR, the United Nations Refugee Agency.<sup>1</sup> Refugees are 50 percent less likely than the general population to have an internet-enabled mobile phone, and 29 percent of refugee households have no mobile phone at all.<sup>2</sup> However, depending on the context, refugees may be highly connected, with 90 percent of refugees in urban areas covered by 3G networks. There is significant disparity between urban and rural refugees, with 20 percent of refugees living in rural areas having no connectivity at all. Even when refugees are in areas covered by mobile networks, cost is a significant barrier to becoming or staying connected: UNHCR research found that refugees spend up to a third of their disposable income on connectivity. Language barriers and low levels of digital literacy can create even more obstacles to using the internet and mobile applications.

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The state of the connectivity landscape for refugees highlights the need for humanitarian organisations and the mobile industry to make connectivity improvements a priority.

For MNOs, especially those in affected countries, refugees are becoming a significant customer base, worthy of attention from both a commercial and corporate social responsibility (CSR) standpoint. For example, in Turkey, Turkcell reports that refugees spend more on data and overseas calls than Turkish nationals.<sup>3</sup> Some MNOs have begun to invest in infrastructure and specific products and services for refugees as part of their core business strategy.

From a humanitarian perspective, aid agencies have begun to respond to demands for mobile access from refugees and to consider how mobile technology can enhance refugee responses overall. Key coordination bodies, such as UNHCR and the Emergency Telecommunications Cluster (ETC), are now formally recognising the importance of connectivity for affected communities. Some humanitarian sectors are also actively exploring how mobile technology could be leveraged to deliver cash-based aid disbursements and education.

To raise awareness of the importance of connectivity for refugees, the GSMA Disaster Response programme launched the Refugees and Connectivity Portal during the 2016 UN General Assembly. The Portal brings together examples of refugee-focused initiatives using mobile technology from a range of stakeholders, including MNOs, non-governmental organisations, and civil society groups. By consolidating these initiatives into a common space, our hope is to showcase the positive impact the mobile industry can have on the lives of refugees, create a starting point for an industry-wide conversation about the connectivity challenges, and a resource for those seeking to implement similar initiatives.

This report continues this work, providing a snapshot of the current interest and activities of aid agencies and the mobile industry. It outlines ongoing activities (pilots, projects, and initiatives) across different regions, divided into five key themes: connectivity, digital tools and platforms, family reconnection, education, and livelihoods and mobile money.

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1. UNHCR, 2016, "Connecting Refugees", <http://www.unhcr.org/publications/operations/5770d43c4/connecting-refugees.html>

2. Ibid.

3. GSMA Refugees and Connectivity Portal, 2016, "Turkcell - Refugees as valued customers", <http://www.gsma.com/refugee-connectivity/case-study-turkcell-refugees-as-valued-customers/>

# 1. Connectivity



The state of the connectivity landscape for refugees, and the unique challenges of accessing and providing mobile and internet connectivity, make it important for humanitarian organisations and the mobile industry to ensure connectivity for refugees is a priority. This is particularly important given the magnitude of the refugee crisis and the fact that, as UNHCR research has found, *“refugees deem connectivity to be a critical survival tool in their daily lives and are willing to make large sacrifices to get and stay connected.”*<sup>4</sup>

Historically, connectivity in crisis situations has been delivered by a small group of specialist organisations, such as NetHope, whose remit has been to support connectivity for those responding to the crisis. Coordinated by the Emergency Telecommunications Cluster (ETC), which is led by the World Food Programme (WFP), these organisations have worked closely with the private sector, notably the Ericsson Response programme, which has provided staff, equipment, and technical support to disaster response projects for the last 15 years (Case Study 1).<sup>5</sup>

## CASE STUDY 1

### Ericsson Response

Ericsson Response is a global initiative, established in 2000, which is helping to transform emergency response. In the early days of the programme, ICT’s role in disaster response was still in its infancy, yet today it is widely accepted that connectivity is as vital as other necessities, such as water, food and shelter, when disaster strikes. Ericsson Response is a member of the Emergency Telecommunications Cluster (ETC) and also works in partnership with other United Nations agencies and NGOs to respond to requests for telecommunications support in disaster situations and in a range of aid and development contexts. The team sets up mobile networks for voice and data communication, as well as supporting partners with ICT training and knowledge sharing.

Employee volunteers from Ericsson, with a range of technical skills and backgrounds, staff the programme and are deployed to disaster-affected regions according to the necessary requirements and roster system.

In 2015, Ericsson underlined its commitment to disaster and humanitarian response by signing GSMA’s Humanitarian Connectivity Charter. April 2016 marked the 15th anniversary of Ericsson Response, which since its launch has supported more than 40 relief efforts in over 30 countries.

In 2016, Ericsson Response and the ETC provided communication capabilities in Haiti, Iraq, and South Sudan with the support of local operators in many locations.

4. Ibid.

5. Coordination in refugee situations is led by UNHCR.



The aid sector is seeing growing demand from disaster-affected populations for internet and mobile services, and recognises it is no longer sufficient to provide connectivity just to responders. The ETC recently published a new strategy with a vision to create *“an emergency response environment that provides humanitarians, citizens and governments with a seamless, resilient and principled communications experience.”*<sup>6</sup> To deliver this, the ETC is *“evolving from being primarily a service provider, to broker, facilitator and convenor of technology in emergency response.”*<sup>7</sup> UNHCR, which takes the lead in refugee responses, now has a dedicated Connectivity for Refugees project and team.

The current refugee crisis in Europe and the Middle East has had the most comprehensive connectivity response to date, from both the humanitarian sector and the mobile industry. Those playing a leading role include the Vodafone Instant Network project, NetHope, and several new volunteer technology groups. Vodafone Instant Network, a project that delivers localised mobile networks using portable equipment in disaster zones, established connectivity services at registration centres and camps in Greece, as have NetHope and partners (which also work elsewhere in Europe). Vodafone piloted their new Instant Charge tool that allows simultaneous charging of up to 60 phones.<sup>8</sup>

The European response has required aid agencies and organisations to adapt their existing models of operation. High demand for Wi-Fi, for example, led to Vodafone Instant Network setting up internet connections rather than the more traditional voice/SMS services.<sup>9</sup> NetHope launched a dedicated fundraising campaign to pay for smartphones, SIM cards, and airtime for refugees.<sup>10</sup> MNOs are also working to establish mobile connectivity rapidly to meet this demand. Turkcell, for example, has extended and enhanced connectivity to camps in Turkey, while Deutsche Telekom has connected sites hosting refugees in Germany.

In the European context, affordability and access to mobile phones and SIM cards are major barriers for refugees. New organisations have emerged to address these issues through a different response model, such as providing handsets and SIM cards to arriving refugees and fundraising for top-up services for refugees. This work has primarily been led by local civil society and volunteer tech organisations. One example is Refugee Phones Sweden, an organisation that collects and reconditions second-hand mobile phones and distributes them to arriving refugees with chargers and SIM cards.<sup>11</sup> Coordinated from the UK, another group, Phone Credit for Refugees, enables individual donors to pay directly for credit for refugees who need it.<sup>12</sup>

6. Emergency Telecommunications Cluster, 2015, “ETC 2020: A New Strategy for Humanitarian Connections,” p. 2, <https://www.etcluster.org/document/etc2020-new-strategy-humanitarian-connections>

7. ETC: <https://www.etcluster.org/about-etc>

8. GSMA Refugees and Connectivity Portal, 2016, “Vodafone Instant Network – Providing connectivity for refugees in an emergency environment”, <http://www.gsma.com/refugee-connectivity/case-study-vodafone-instant-network/>

9. Ibid.

10. NetHope: <https://donatenow.networkforgood.org/1427613?skinid=107726%2f>

11. Charlotte Hellichius, PSFK, 29 March 2016, “Organisation supplies prepaid cash cards and phones to those most in need”, <http://www.psfk.com/2016/03/refugee-phones-digital-reliance-nonprofit-donates-smartphones-to-refugees.html>

12. Phone Credit for Refugees: <https://mydonate.bt.com/charities/phonecreditforrefugees>

## CASE STUDY 2

## Vodafone instant network—providing connectivity for refugees in an emergency environment

The Vodafone Foundation deployed its Instant Network project in 2015, sending equipment and staff to meet the connectivity needs of refugees arriving on the shores of Greece.

The Instant Network is an easily deployable kit consisting of an antenna, a foldable mast, an industrial computer and a base transceiver station, all powered by a portable generator capable of providing instant connectivity for small geographical areas. Although designed primarily for sudden onset emergencies like typhoons or earthquakes, the Instant Network has previously been deployed in South Sudan to support refugees living in camps prior to the Greece deployment.

The importance of connectivity to refugees arriving in Greece has been apparent to everyone working on the crisis. Syrian refugees comprised 48% of refugee arrivals in Greece until January 2016,<sup>13</sup> and the majority are young (under 35), educated (half have university degrees), skilled, and technologically savvy. “Unlike some refugee situations, many of these refugees were very tech savvy, they had smart phones, they were very comfortable with the use of technology,” says Justin Waller of Vodafone Foundation, who was part of the Instant Network project in Greece. Aid workers quickly found that among the first questions the new arrivals asked was not where they could find food and shelter, but how to charge their phones and access Wi-Fi.

To help meet this need, UNHCR asked the Vodafone Instant Network team to deploy in November 2015. Working under UNHCR leadership and alongside other partners such as Nethope and several volunteer groups, they assessed several sites in Greece where the need was greatest. Four sites were selected on the basis they were registration and/or arrival sites, and thus locations where incoming refugees congregated and where demand for services was greatest.

From the start, it was clear that the refugees would be best served by providing WiFi rather than just traditional mobile network-based voice and connectivity services, as the mobile network was intact and operational in all areas.

There was also high demand for charging services. Vodafone was able to deploy a new service, the Instant Charge facility, designed to allow up to 60 phones to be charged simultaneously, removing the need for adaptors or for refugees to supply their own chargers. In Greece, the team found that 80–85% of phones were Android models using micro USBs. They also found it was necessary to split the unit up and offer three charging points with a capacity of 20 each. “People stuck by their phones,” says Waller. “They know how important their phones are – they are quite willing to sit there and watch them charge.” The team left five units in Greece and are in the process of building more.

For Waller, a key difference with other disasters is that many people were using web-based platforms such as Skype, Viber, and Whatsapp rather than just the traditional voice or SMS services, leading to a demand for WiFi as well as the more basic mobile connectivity the team had provided in other countries. The importance of these new platforms was highlighted when the Greek authorities started requiring refugees to apply for the necessary permissions for onward travel via Skype. To meet this need, the team used commercial WiFi equipment. A further challenge was that use of Wi-Fi often incorporated high bandwidth tasks like video. Over the six months of deployment, Instant Networks carried 12,744,000 MB of data, equivalent to 1.7 billion WhatsApp messages.

13. UNHCR, Refugees/Migrants Response – Mediterranean, <http://data.unhcr.org/mediterranean/country.php?id=83>

**CASE STUDY 2 cont.**

Providing WiFi, while desperately needed by the refugees, also created additional challenges. People started to watch YouTube and download content. This was not necessarily trivial: many were trying to keep up with news from home and, as Waller says, there can be huge value in psychosocial terms for people in watching entertainment. *“We had to strike a balance,”* he says. *“We had to restrict torrents and access to some kinds of content, obviously. But we managed it.”*

A key issue in Greece, says Waller, is the need for longer term sustainable forms of service provision that can pick up where projects like Instant Network – designed to fill gaps in service in a major crisis until normal services are resumed – need to scale down. Instant Network, for example, was running on an expensive satellite backhaul. *“What is needed in the longer term – in this crisis and others – is cheaper commercial services and power for these locations,”* says Waller. The needs of refugees, especially those caught in limbo between displacement and permanent resettlement or return, are very different to those of people in a crisis like an earthquake. *“In a disaster, people want to make a call or send an SMS just to say they’re alive. But here we had people who needed to stay in constant contact with their families, and access online tools to secure their basic rights as well as source information. These are often high bandwidth tasks, not like a simple phone call.”*

As he points out, WiFi is easy to provide and cheap, and necessary – especially in locations where refugees cannot access or afford local data plans or only have access to feature phone handsets. But WiFi and longer term connectivity services are increasingly a matter for local MNOs, and those working with the refugees rather than a disaster response model.



## Beyond Europe

There is work underway to address connectivity in refugee environments beyond Europe, where populations have been displaced for many years and are often confined to refugee camps.

One challenge of traditional response models such as Instant Network and NetHope is that they are designed for short-term sudden onset crises, rather than long-term displacement. Shifting to cost-effective, longer term connectivity provision requires engagement with local actors, including national MNOs and governments, as well as the delivery of robust equipment and a more strategic approach.

Only 17 percent of rural refugees live in areas covered by 3G networks, and UNHCR suggests there is an opportunity for MNOs to expand and improve their network coverage in these areas, particularly given that these refugee locations are often densely populated.<sup>14</sup> Safaricom has seized this opportunity, viewing refugees as a significant customer base. Three of its towers in Dadaab refugee camp are among its 10 most profitable in Kenya. Last mile connectivity is a broader industry and policy challenge which GSMA's Connected Society programme aims to address, by working with the mobile industry and other stakeholders to improve network coverage in several countries, many of which host large refugee populations. The programme also seeks to tackle other barriers to the adoption of mobile internet for the underserved, such as affordability, digital skills, and locally relevant content.

Initiatives to improve connectivity in refugee camps are already well underway. They typically involve partnerships between aid agencies and local connectivity service providers, usually focused on well-

established camps with large populations. In Dadaab in 2012, for example, Cisco, Microsoft, Invenio, USAID, and NetHope collaborated on the creation of Dadaabnet, which provided internet services to sustainable community centres across the camp. Negotiated with local MNO, Orange, the service also provided reliable connectivity to those working in and running the camp.<sup>15</sup> Another partnership, between UNHCR and Vodacom, recently brought improved connectivity to Nyarugusu camp in Tanzania. To boost connectivity in the camp, which is home to approximately 160,000 people, Vodacom built a new tower.<sup>16</sup> The GSMA Disaster Response and Connected Society programmes are working to assess the socio-economic impact of these efforts in Nyarugusu camp. Better connectivity will also assist the Vodafone Instant Schools project currently operating in the camp (see Education section, page 24). There are also smaller scale projects in other camps, like the ETC pilot with the United Nations Population Fund (UNFPA) which provides connectivity for affected communities via youth centres in Domiz camps in Iraq.

In some cases, refugees themselves have taken the lead in bringing connectivity to their camps and displacement locations. Betts et al. cite the case of Abdi, a Somali refugee in Kakuma camp in Kenya, who took the initiative to invest in a monthly high-speed internet package designed for small businesses, covering the cost (installation and monthly fees) by charging others in the camp for access and making a modest profit in the process.<sup>17</sup> Abdi built his business on a previous enterprise led by another refugee (Mohammed) who invested in a satellite service in 1997 using a similar business model, including constructing the tower to which Abdi's internet router is attached.

14. UNHCR, 2016, "Connecting Refugees", <http://www.unhcr.org/publications/operations/5770d43c4/connecting-refugees.html>

15. NetHope, "New High-Speed Network Connects Dadaab Aid Agencies For Collaboration", <https://s3.amazonaws.com/nethope/DadaadNET-casestudy-final.pdf>

16. CIO, September 2016, "Vodacom Tanzania installs new base station at refugee camp to boost connectivity", <http://www.cio.co.ke/news/top-stories/vodacom-tanzania-installs-new-base-station-at-refugee-camp-to-boost-connectivity>

17. Betts et al., "Refugee Innovation: Humanitarian innovation that starts with communities", p. 28, <https://www.rsc.ox.ac.uk/refugee-innovation-humanitarian-innovation-that-starts-with-communities/refugee-innovation-web-5-3mb-1.pdf>

## Connecting urban refugees

The vast majority of refugees, however, do not live in camps—over 60% of refugees worldwide, and up to 90% in Jordan and Lebanon, live in urban environments.<sup>18</sup> Work to address their connectivity needs has included projects such as the Al Tawasol initiative in Lebanon, a low-cost bundle that includes calls and SMS to Syria,<sup>19</sup> and in Turkey, Turkcell is investing heavily to ensure Syrian refugees can access their services wherever they are.<sup>20</sup> One unique initiative to provide connectivity to refugees living in urban environments was launched recently in Jordan. UNHCR, Zain, and Facebook announced a project to bring free high-speed 4G internet access to over 700,000 refugees and surrounding local communities in Jordan. The project is offering unlimited 24-hour outdoor and indoor Wi-Fi access points<sup>21</sup> in four locations initially, and the service will also be available to host communities.

Such initiatives have come primarily from MNOs, driven by a desire to access new customers as well as support

humanitarian services. In Turkey, for example, refugees present an opportunity to grow the market. In addition to their sheer numbers—there are around 3 million Syrian refugees in Turkey—they typically outspend domestic customers, particularly on long-distance calls and data.<sup>22</sup>

Finally, in many refugee areas, supporting connectivity has become a small-scale industry, generating income for refugees themselves. Small businesses charging for connectivity, credit vendors, and mobile repair services are now common. A forthcoming film supported by Oxfam focuses on the experience of a mobile repairman in Zaatari camp in Jordan.<sup>23</sup> Leveraging mobile technology as a form of income generation is explored in the 2014 paper, *“Refugee Economics”*, which found such activities were common in Uganda.<sup>24</sup> (See livelihoods and mobile money, page 28).



18. UNHCR, “Urban Refugees”, <http://www.unhcr.org/uk/urban-refugees.html>

19. GSMA Refugees and Connectivity Portal, 2016, “Al Tawasol, Lebanon – Developing and marketing refugee specific products”, <http://www.gsma.com/refugee-connectivity/case-study-al-tawasol-lebanon-developing-and-marketing-refugee-specific-products/>

20. GSMA Refugees and Connectivity Portal, 2016, “Turkcell – Refugees as valued customers”, <http://www.gsma.com/refugee-connectivity/case-study-turkcell-refugees-as-valued-customers/>

21. Zain, 19 September 2016, “Zain, UNHCR and Facebook collaborate to support Connectivity for Refugees initiative in Jordan [http://www.zain.com/en/press/Zain\\_UNHCR\\_Facebook/](http://www.zain.com/en/press/Zain_UNHCR_Facebook/)

22. GSMA Refugees and Connectivity Portal, 2016, “Turkcell – Refugees as valued customers”, <http://www.gsma.com/refugee-connectivity/case-study-turkcell-refugees-as-valued-customers/>

23. <http://www.districtzero.org/>

24. Betts et al., 2014, “Refugee Economics: Rethinking Popular Assumptions”, <https://www.rsc.ox.ac.uk/files/publications/other/refugee-economies-2014.pdf>

## RESEARCH EXAMPLE 1

## Existing research on the importance of connectivity

The importance of connectivity, confirmed by existing research, is explored in more depth in several studies. Campbell, Janbek and Wall's detailed analysis of mobile phone use in Zaatari found that strong social networks translate directly into greater resilience.<sup>25</sup> Their paper concludes that *"mobile phones are seen as a vital tool by transnational populations, potentially enabling social and economic networks to remain strong, be repaired or developed anew."*<sup>26</sup>

BBC Media Action's Voices of Refugees project also finds a close relationship between resilience and the psychosocial capacity of refugees and their use of phones. "The analysis showed that participants who stayed in regular contact with other refugees and who had wide communication networks were likely to be more resilient and feel less vulnerable than those who were not connected."<sup>27</sup> Refugees also said that their phones were crucial tools in helping them navigate their routes, and in shaping their experiences of displacement.<sup>28</sup> A study of Syrians in Zaatari camp in Jordan found that refugees used mobile phones to cope with *"information precarity"*—a lack of access to information and exposure to inaccurate or dangerous information.<sup>29</sup> Studies focused on Africa have also identified the importance of local services, such as mobile money for refugees.<sup>30 31</sup>

These findings concur with the experience of MNOs in countries with large-scale refugee populations, who have found that refugees can actually be more significant consumers of mobile services than domestic populations.

25. Campbell et al., 2015, "Syrian Refugees and Information Precarity", *New Media & Society*, <http://journals.sagepub.com/doi/abs/10.1177/1461444815591967>

26. *Ibid.*, p. 13

27. N. Bailey, T. Hannides, and D. Kaoukji, July 2016, "Voices of Refugees: Information and Communication Needs of Refugees in Greece and Germany", BBC Media Action, p. 25, <http://www.bbc.co.uk/mediaaction/publications-and-resources/research/reports/voices-of-refugees>

28. Gillespie et al., "Mapping Refugee Media Journeys: Smartphones and Social Media Networks", Open University, [http://www.open.ac.uk/ccig/sites/www.open.ac.uk/ccig/files/Mapping Refugee Media Journeys 16 May FIN MG\\_0.pdf](http://www.open.ac.uk/ccig/sites/www.open.ac.uk/ccig/files/Mapping%20Refugee%20Media%20Journeys%2016%20May%20FIN%20MG_0.pdf)

29. Campbell et al, 2015, "Syrian Refugees and Information Precarity", *New Media & Society*, <http://journals.sagepub.com/doi/abs/10.1177/1461444815591967>

30. GSMA, 2014, "Disaster Response: Mobile Money for the Displaced", <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/01/Disaster-Response-Mobile-Money-for-the-Displaced.pdf>

31. Betts et al., 2014, "Refugee Economics: Rethinking Popular Assumptions", <https://www.rsc.ox.ac.uk/files/publications/other/refugee-economies-2014.pdf>

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## 2. Digital tools and platforms

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In addition to the growing recognition of the importance of connectivity, there has been a surge of interest in mobile-based tools for refugees. Apps have been particularly popular. From major aid agencies to volunteer groups that develop mobile tools, these players are interested in apps that provide services, such as access to legal support, instant translation, or information about asylum processes. Several MNOs are also joining in this effort. Deutsche Telekom's careers4refugees.de, which helps refugees who have recently arrived in Germany to find work, was developed in-house, as was the refugees.telekom.de platform, which helps them find essential services.<sup>32</sup> (See Case Study 2, page 11). For Turkcell, refugee needs have driven the development of innovative new tools, such as their simultaneous spoken Arabic/Turkish translation app, Hello Hope.

There have been fewer initiatives from the aid sector, for which this is a new area and few agencies have technical expertise. The most significant to date is the Crisis Info Hub project for refugees arriving in Europe, refugeeinfo.eu, which offers basic information on registration processes, transport, medical care and accommodation, and other topics. Led by Mercy Corps and International Rescue Committee (IRC), the project has had substantial support from Google.org, which provided much of the technical development capacity. Project staff estimate 500 refugees a day use the website. Other studies report that some refugees were unable to use the site as they were unfamiliar with the concept of a website.<sup>33</sup>

Some initiatives have been developed by specialist organisations with substantial expertise in this area, such as Souktel,<sup>34</sup> which launched a mobile phone-based legal information service for Syrian refugees, supported by the American Bar Association.<sup>35</sup> The app was promoted through an SMS-based campaign alerting Syrians to the service and explaining how to use it.

Finally, an important emerging trend is the development of digital services by refugees themselves. One example is Gherbtna, a platform which helps newly arrived Syrians navigate Turkish services, such as health and education. Designed by a 26-year-old Syrian computer programmer, Gherbtna had 40,000 downloads as of September 2016, and the team is in discussions with Turkish companies about further commercial development.

Although apps have been popular with MNOs and aid agencies alike, there is ongoing debate as to their impact and the best approaches. A Huffington Post article on apps for refugees details how several have struggled to demonstrate impact, and recommends that the technology would be better used for state-led efforts like Germany's app, Ankommen, for incoming refugees.<sup>36</sup> In its latest report, The Migration Policy Institute acknowledges that the speed and creativity of the development of new digital tools for refugees has been impressive, but encourages governments to do more to bring together the various stakeholders *"to maintain momentum, better integrate innovation with mainstream services, and to ensure the most promising ideas can scale."*<sup>37</sup>

Several apps have demonstrated success in meeting needs for crucial information services, particularly for those on the move and resettling in new countries. The appetite for such apps is evident from the encouraging uptake of services such as Gherbtna and Hello Hope. Further research on the adoption and usage of these apps will be important to ensure the information needs of refugees are met as effectively as possible.

32. GSMA Refugees and Connectivity Portal, 2016, "Deutsch Telekom - Helping Refugees Integrate", <http://www.gsma.com/refugee-connectivity/case-study-deutsche-telekom-helping-refugees-integrate/>

33. B. Mason and D. Buchmann, 1 May 2016, "ICT4Refugees: A Report on the Emerging Landscape of Digital Responses to the Refugee Crisis", <http://www.cominit.com/global/content/ict4refugees-report-emerging-landscape-digital-responses-refugee-crisis>

34. SoukTel, 19 August 2015, "For Syrian Refugees, ABA & SoukTel Launch Mobile Legal Info Service", <http://www.soukTel.org/media/news/syrian-refugees-aba-soukTel-launch-mobile-legal-info-service>

35. GSMA Refugees and Connectivity Portal, 2016, Q&A with SoukTel President & CEO Jacob Korenblum, <http://www.gsma.com/refugee-connectivity/qa-soukTel/>

36. Krithika Varagur, The Huffington Post, 30 June 2016, "Refugees Don't Need Your Apps", [http://www.huffingtonpost.com/2016/06/30/refugees-dont-need-your-a\\_n\\_10757006.html](http://www.huffingtonpost.com/2016/06/30/refugees-dont-need-your-a_n_10757006.html)

37. Meghan Benton and Alex Glennie, October 2016, "Digital Humanitarianism: How Tech Entrepreneurs are Supporting Refugee Integration", Migration Policy Institute, <http://www.migrationpolicy.org/research/digital-humanitarianism-how-tech-entrepreneurs-are-supporting-refugee-integration>

## CASE STUDY 3

## Deutsche Telekom – helping refugees integrate

Nearly 1 million refugees arrived in Germany over the past 12 months and Deutsche Telekom has been helping them find work and integrate into German society. In response to this influx, and the German Government's "Wir schaffen es" (We Can Do It) policy, many companies within Germany stepped up to offer support to the newcomers.

Among the first to respond was Deutsche Telekom, Germany's largest MNO, with a 40% market share.

In September 2015, Deutsche Telekom established an internal taskforce and launched a portfolio of initiatives, drawing on the capacity of the whole organisation. One obvious priority was helping to meet the essential connectivity needs of refugees – and those handling the response – by providing WiFi. To date, Deutsche Telekom has provided WiFi and other services to 70 refugee locations nationwide.

Deutsche Telekom also developed a number of projects designed to help refugees' job prospects. Working with partners Jobware and Jobstairs, the company developed an online portal [careers4refugees.de](http://careers4refugees.de) that helps match companies with appropriate jobs with refugees looking for work. The portal is optimised for mobile devices and also advertises university scholarships.

Many refugees are unfamiliar with German recruitment processes. Using a Train the Trainers model developed with the Haufe Academy (a leading provider of vocational and adult training services), Deutsche Telekom staff are delivering core trainings to colleagues who have volunteered to help refugees find employment. This is in addition to the general and specialised training courses that Deutsche Telekom is offering to refugees.

Another initiative designed to help refugees integrate into German society is the [refugees.telekom.de](http://refugees.telekom.de) portal, a website providing key information and contacts. The portal, launched in November 2015, involves collaborations with several partners, among them news organisation Deutsche Welle and German television networks, and by September 2016, had been visited over one million times. The site operates in 9 languages, but 40% use the Arabic language version and 90% access the website via a mobile phone.

Overall, the company believes that all these projects will contribute not just to meeting refugees' immediate needs, but also to the broader national objective of integration through encouraging contact – professional and personal – between their German staff and incoming refugees.

For the company, this strategy is not just about meeting CSR requirements. It also makes good business sense, for Deutsche Telekom and the German commercial sector as a whole. In the meantime, Deutsche Telekom is committed to providing support for at least the next two years. *"These programmes require a lot of investment, time and patience but they will bring us more cultural diversity which we need to build a more peaceful and stable society,"* says Vice President for Corporate Responsibility, Gabriele Kotulla. *"Companies need stable societies to do business successfully. A truly peaceful and stable society has to be connected, not just on a technical but also a cultural level."*

## RESEARCH EXAMPLE 2

## Existing research on the importance of data, Wi-Fi, and the mobile internet

Historically, research into mobile phone use by affected populations has focused on voice and SMS. Research among refugee populations makes it clear, however, that apps, social messaging services, and mobile internet are quickly growing in importance. Several papers, including “*Voices of Refugees: Mapping Refugee Media Journeys*” and ICT4Refugees’ 2016 paper found that refugees in the current crisis (Syrian/Afghan/Iraqi) primarily use messaging services and platforms rather than voice/SMS and thus prioritise data/Wi-Fi connectivity.

ICT4Refugees’ research found that the use of smartphones was “*overwhelmingly focussed on social messaging apps*” - primarily Facebook and WhatsApp, but also Viber, Telegram, WeChat, and Line. So dominant are these platforms that many refugees do not use websites or even know how the internet works. They found email is rarely used and some refugees in Lesbos did not recognise what a URL was and thus did not understand the [refugeeinfo.eu](http://refugeeinfo.eu) services. “*Smartphones are not typically regarded as a portal through which one can independently search for information... rather information flows are overwhelmingly peer-to-peer.*”<sup>38</sup>



38. B. Mason and D. Buchmann, 1 May 2016, “ICT4Refugees: A Report on the Emerging Landscape of Digital Responses to the Refugee



## 3. Family reconnection

The circumstances under which refugees leave their homes mean that families are frequently separated. Reuniting refugee families has been a part of working with displaced communities since the earliest days of organisations like UNHCR.

The potential of mobile technology to facilitate family reconnection has been explored by several organisations. The most prominent is REFUNITE, founded in 2008 by David and Christopher Mikkelsen, and now the world's largest global family tracing platform.<sup>39</sup> REFUNITE is supported by Ericsson and has partnerships with several MNOs, including Asiacell, Korek, Safaricom, Vodacom, Zain, and Smart. The core of the REFUNITE project is a global database (developed with Ericsson) for refugees and displaced populations to search and connect with their missing

loved ones. REFUNITE reports that over 600,000 members have signed up to the platform to date, of whom approximately one third are Somalis. Another strategic focus is Democratic Republic of the Congo (DRC), where there are nearly 80,000 users. A recent partnership with Facebook's Free Basics platform has expanded the reach of the project and, according to REFUNITE, resulted in a spike in registrations in Pakistan and Iraq. In 2016 alone, REFUNITE reconnected more than 3,300 family members worldwide.

39. REFUNITE: <https://refunite.org/>

As mobile phone ownership in refugee populations increase, particularly smartphones, refugees are becoming better connected (particularly in Jordan and Turkey) and able to stay in touch with friends and family through online applications, such as Facebook, WhatsApp, and Viber. Therefore, the need for reunification services depends on the context. For example, ICT4Refugees found that many refugees were using their phones to maintain family connections, and in some cases messenger apps and social networks were fulfilling this need.<sup>40</sup> REFUNITE notes that these recent experiences highlight the need for detailed assessments of local technology use, literacy, and cost-consciousness of potential REFUNITE users, which are integral to designing and localising for users.<sup>41</sup> REFUNITE reports that their close partnerships with MNOs, particularly communications departments, are invaluable because they enable them to forge effective outreach strategies and tailor services to each context based on a deep understanding of the MNO's customer base. This is crucial to increasing registrations, user activity, and reconnections.

The International Committee of the Red Cross (ICRC), which leads on family reunification worldwide, has also begun to work with digital platforms. A 2012 ICRC paper recognised that *"it is critical for the ICRC to adopt and utilise new tools as much as possible."* The most recent development from ICRC has been the launch of Trace the Face, a project under their longstanding Restoring Family Links project that is focused on refugees arriving in Europe.<sup>42</sup> The service allows people to upload their picture for family members to see, or to check whether their family is looking for them through the site. It is web-based, coordinated across several national Red Cross societies, and at the time of writing hosts more than 2,000 profiles. Accepted profiles are published

online and in printed materials such as posters in the relevant countries. ICRC is now thinking about how to expand this work and the potential of new partnerships: *"In some cases the most efficient way to do this may not be working to grow in-house capacity, but might instead be developing cooperative relationships with other actors who already possess technological expertise."*<sup>43</sup> ICRC has worked with CrisisMappers on an analysis of the risks and advantages of new technologies.<sup>44</sup>

Another agency working on family reconnection for refugees is Télécoms Sans Frontières (TSF), which provides access to phones for refugees who need to call home. Over a 65-day deployment in Idomeni camp in Greece in 2016, TSF provided over 12,000 minutes of calls to reconnect 2,788 families, most of whom came from Iraq, Syria, or Afghanistan. Refugees with contact numbers for family members in their countries were able to use TSF phones to make short calls home.<sup>45</sup>

UNICEF's Rapid Family Tracing and Reunification (RapidFTR) platform uses an open-source mobile phone application and data storage system to reunite children affected by emergencies with their caregivers. RapidFTR was trialled in a Congolese transit refugee camp in Uganda and deployed in the Philippines after Typhoon Haiyan, and in Nyarugusu Refugee Camp in Tanzania, after thousands of refugees fled violence in Burundi.<sup>46</sup>

There are also a number of amateur, small-scale efforts, such as the Search and Find Your Family Facebook page for refugees. However, it is difficult to determine how long these have been in existence, whether they will stay current, how they are used, and what impact they have.

40. B. Mason and D. Buchmann, 1 May 2016, "ICT4Refugees: A Report on the Emerging Landscape of Digital Responses to the Refugee Crisis", p. 10, <http://www.cominit.com/global/content/ict4refugees-report-emerging-landscape-digital-responses-refugee-crisis>

41. Sacha Robehmed, REFUNITE, 6 May 2016, "Getting Online in the Kurdistan Region of Iraq", <https://refunite.org/getting-online-in-the-kurdistan-region-of-iraq/>

42. Trace the Face – Migrants in Europe: <https://familylinks.icrc.org/europe/en/Pages/home.aspx>

43. Ibid.

44. IFRC, 2013, "World Disasters Report 2013", <http://www.ifrc.org/PageFiles/134658/WDR%202013%20complete.pdf>

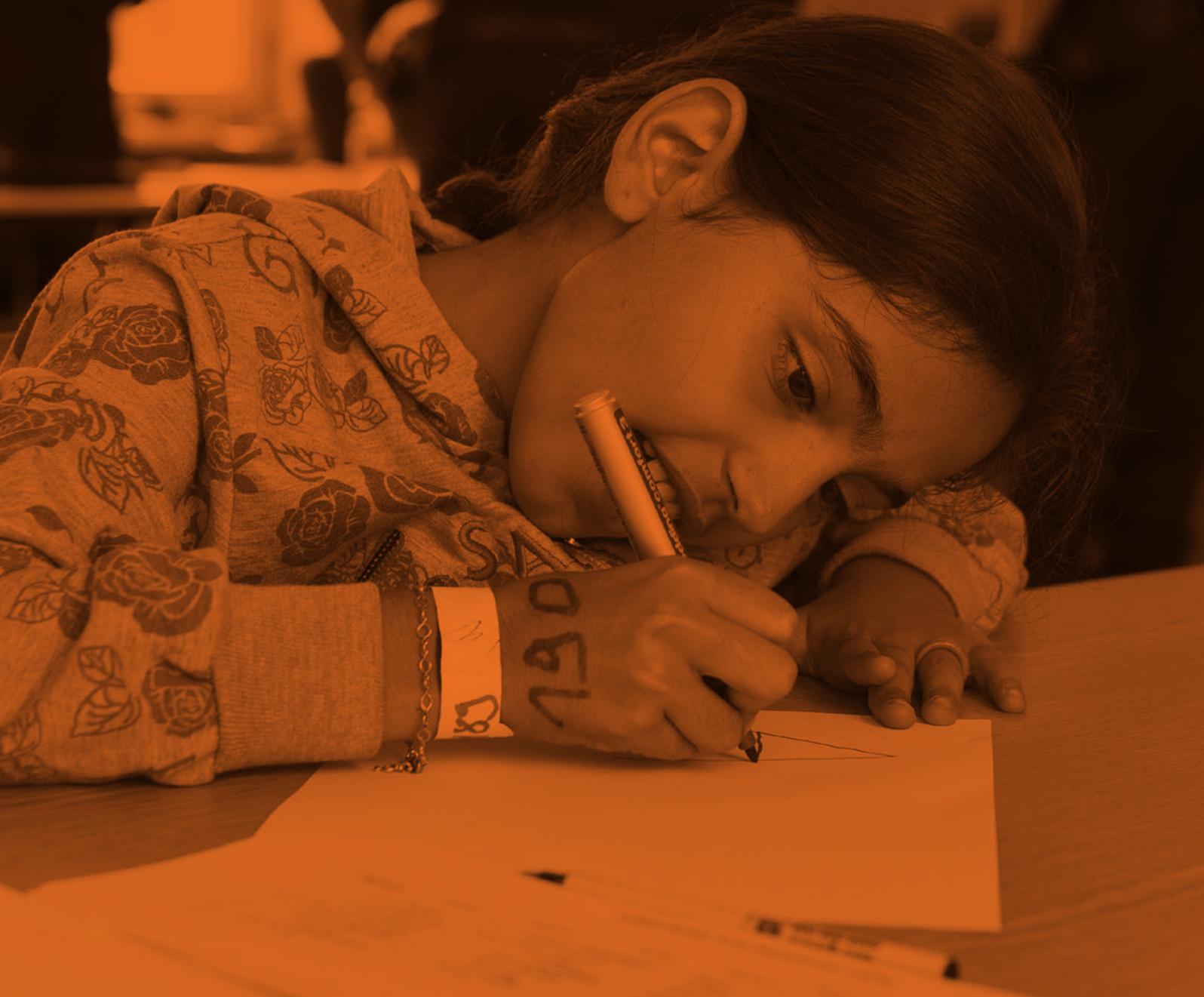
45. Télécoms Sans Frontières: <http://tsfi.org/en/action/emergencyresponse/250-dernieres-infos-tsf-fournit-des-appels-gratuits-aux-migrants-bloques-aux-portes-des-balkans>

46. Anthea Rowan, UNICEF, 6 August 2015, "In Tanzania, using mobile technology to reunite families", [https://www.unicef.org/infobycountry/tanzania\\_82759.html](https://www.unicef.org/infobycountry/tanzania_82759.html)

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# 4. Education

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According to UNHCR, 51% of refugees are children, so education becomes a priority for refugees as soon as they begin to settle.<sup>47</sup> One of the first and most important things to learn is the cultural context, which helps with settlement and transition. Skills development is also crucial for refugees to begin work and start building their lives anew. There is also considerable demand among refugees for adult education services, especially learning new languages. This was demonstrated in the context of the Syrian emergency.

UNHCR reports that the main challenges in providing education to refugees include a dearth of qualified staff and appropriate educational materials. The potential of distance learning and digital learning materials to address these problems has compelled aid agencies to explore the use of digital technology. As this area expands, it would benefit from the lessons of other organisations and improved collaboration.

## Delivering education projects

Numerous digital education projects exist, but coordinating these efforts can be challenging. One of the most established projects involving an MNO is the Vodafone Foundation Instant Network Schools initiative, designed in partnership with UNHCR. Launched in 2014, it currently supports 20 schools in Tanzania, Kenya, South Sudan and DRC and, according to Vodafone, benefits 30,000 students and 600 teachers per month.<sup>48</sup>

Building on the Instant Network Schools initiative, Vodafone launched the Instant Classroom project in 2015. This is a digital ‘school in a box’ designed to be set up in 20 minutes and includes a laptop, (pre-loaded with education software), 25 tablets, a projector, speaker and modem, and works without internet access.

Other tech partners working directly on education issues include Ericsson, which supports the Connect to Learn initiative, which operates in 22 countries, engaging 16 MNOs. One project supports refugees in Iraq’s Domiz refugee camp by providing teachers with access to resources through technology. Ericsson works with the IRC and Asiacell to provide camp-based education, enabled through Ericsson’s cloud-based ICT platform, Connect to Learn, which is accessed through 3G internet provided by Asiacell.<sup>49</sup> The Massachusetts Institute of Technology is also currently hosting a competition inviting submissions on how to improve education for children living in refugee camps.<sup>50</sup>

There are also several humanitarian initiatives. The Norwegian Agency for Development Cooperation (Norad) launched an innovation competition, EduApp4Syria,<sup>51</sup> to develop apps that provide learning opportunities for Syrian and other Arabic speaking children affected by crisis and conflict. In conjunction with UNESCO Mobile Learning Week, the two winners’ games will be launched on Google Play and App Store in March 2017.<sup>52</sup>

In Lebanon, UNICEF is looking for ways to scale up the Digital Labs initiative that uses low-cost tablets to provide access to online learning for children. UNHCR’s Connected Learning work focuses on connecting adult refugees with accredited centres of learning and mentors. They see considerable potential in working with the private sector to generate cost-effective business models for the delivery of connected learning through, for example, “a learning centre that is used as a revenue-generating Internet cafe during the evenings.”<sup>53</sup>

In 2014, CARE Jordan began using online courses developed by Edraak—a large-scale online learning system supported by the Queen Rania Foundation—in Azraq camp, but found scaling up difficult, not least because Edraak is a not-for-profit, which presents challenges in terms of ensuring financial sustainability. Edraak nevertheless aspires to become an important resource for refugees.<sup>54</sup>

48. Vodafone, Instant Network Schools, <http://www.vodafone.com/content/index/about/foundation/instant-network-schools.html>

49. Ericsson, 25 February 2016, “Ericsson partners with Asiacell and the International Rescue Committee to bring Connect to Learn to schools in refugee camps in Iraq”, [https://www.ericsson.com/news/160225-ericsson-partners-with-asiacell\\_244039856\\_c](https://www.ericsson.com/news/160225-ericsson-partners-with-asiacell_244039856_c)

50. Solve CoLab, “How can we improve learning in refugee camps to provide children there with a quality education?”, <http://solvecolab.mit.edu/challenges/2016/learn-refugee-education>

51. Norad, Innovation competition: EduApp4Syria, <https://www.norad.no/en/front/thematic-areas/education/innovation/eduapp4syria/>

52. Norad, “Norway launches an innovation competition to teach Syrian children to read”, <https://www.norad.no/en/front/thematic-areas/education/innovation/eduapp4syria/press-release/>

53. UNHCR Innovation, Connected Learning: [http://innovation.unhcr.org/labs\\_post/connected-learning/](http://innovation.unhcr.org/labs_post/connected-learning/)

54. Rahim Kanini, 17 December 2014, “Why Edraak is the future of online learning in the Arab world”, Thomson Reuters Foundation, <http://news.trust.org/item/20141217194218-jzxho/>



Meanwhile, Jesuit Refugee Services (JRS) report success in their pilot work bringing tertiary education to refugees in Kakuma in Kenya and Dzaleka in Malawi. Around 30 students per year can enrol in online learning programs to study for a Diploma in Liberal Studies with Regis University in Denver, Colorado. Internal evaluations found students benefited from increased self-esteem in addition to the actual learning.<sup>55</sup> JRS is now looking to expand the program to other countries.

Although these projects are exciting, most are still in the early stages and have not provided rigorous external evaluations, making it difficult to identify and replicate best practice. UNHCR's experience in Malaysia working with Kachin refugees found that establishing

digital education projects was more complex than anticipated. Working through two Refugee Learning Centres, UNHCR provided digital learning materials pre-loaded on tablets for children. They found, however, that slow internet frustrated students, start-up costs were expensive, and there was no conclusive evidence that tablets improved learning. Despite these challenges, the project has shown promise and continues to explore the potential of digital learning. For more details, see UNHCR's website.<sup>56</sup>

55. P. Dankova and C. Giner, October 2011, "Technology in aid of learning for isolated refugees", *Forced Migration Review*, <http://www.fmreview.org/technology/dankova-giner.html>

56. UNHCR Innovation, BrainPOP: [http://innovation.unhcr.org/labs\\_post/brainpop/](http://innovation.unhcr.org/labs_post/brainpop/)

## RESEARCH EXAMPLE 3

## Exclusion from mobile and marginalisation

The importance of mobile phones to refugees means that the consequences of not being able to access these services is exacerbated. In addition to the overall marginalisation identified by UNHCR, studies note that levels of access can vary significantly. One study of a refugee camp (Zaatari) found a considerable range in access (strength of signal, Wi-Fi access, etc.) within the camp itself.<sup>57</sup> Researchers from REFUNITE had similar findings from assessments in Iraq, reporting large variations in levels of access and patterns of internet usage between different camps despite being close together.<sup>58</sup>

Several papers note that exclusion from connectivity is a real issue, especially for certain groups. UNHCR found that women, the elderly, and less educated are less likely to have access to technology, information, and devices, echoing the findings of other, non-refugee related studies of exclusion, such as GSMA's Connected Women.<sup>59</sup> Those in rural areas are also significantly less likely to have access to connectivity (20% of rural refugees have no coverage at all) and limited access to internet-enabled phones (22%, as opposed to 68% in urban areas).<sup>60</sup> ICT4Refugees found that even among groups like Syrians, for whom smartphone use is almost universal, there are disparities and complexities. While the primary custodian of the phone was usually male, the younger family members were often the most frequent users and the most technologically literate.<sup>61</sup> Looking specifically at the European response, Mapping Refugee Media Journeys found that "gendered and generational differences in access and use are rarely touched upon but hugely important."<sup>62</sup>

Finally, several papers have identified digital/online security as a key issue for refugees. Mapping Refugee Media Journeys found that refugees are concerned about surveillance and sousveillance and factor in security considerations when choosing a platform or service. Research on Syrian refugees and information precarity also identifies security concerns.<sup>63</sup>



57. Belding et al. 2016, "Community Level Access Divides: A Refugee Camp Case Study", [http://cs.ucsb.edu/~pschmitt/docs/ictd16\\_communitydivides.pdf](http://cs.ucsb.edu/~pschmitt/docs/ictd16_communitydivides.pdf)

58. REFUNITE, "Getting Online in the Kurdistan Region of Iraq", <https://refunite.org/getting-online-in-the-kurdistan-region-of-iraq/>

59. GSMA, "Bridging the gender gap: Mobile access and usage in low and middle-income countries", 2015, <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/Connected-Women-Gender-Gap.pdf>

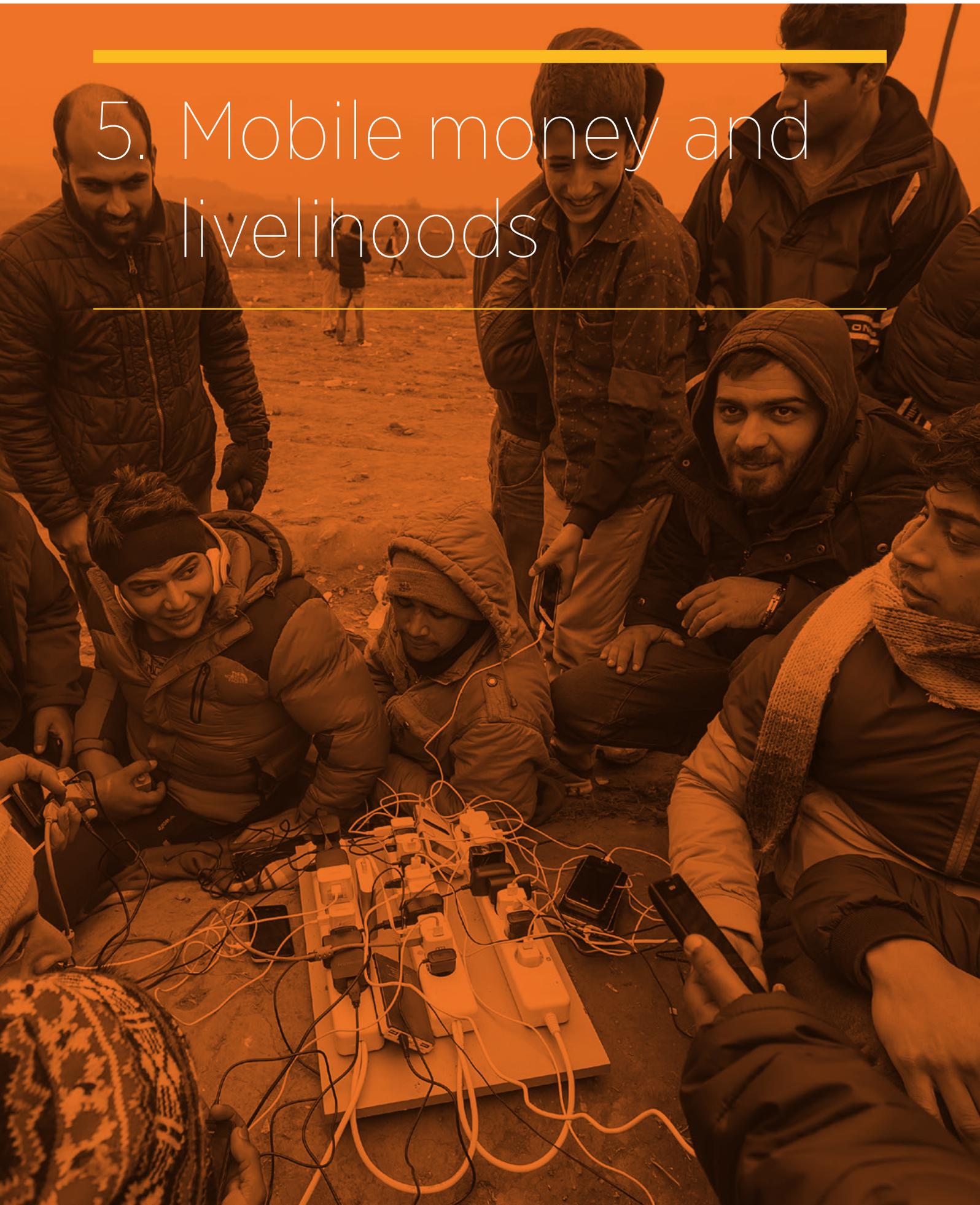
60. UNHCR, September 2016, "Connecting Refugees", <http://www.unhcr.org/uk/publications/operations/5770d43c4/connecting-refugees.html>

61. B. Mason and D. Buchmann, 1 May 2016, "ICT4Refugees: A Report on the Emerging Landscape of Digital Responses to the Refugee Crisis", p. 10, <http://www.cominit.com/global/content/ict4refugees-report-emerging-landscape-digital-responses-refugee-crisis>

62. Gillespie et al., "Mapping Refugee Media Journeys: Smartphones and Social Media Networks", p. 9, [http://www.open.ac.uk/ccig/sites/www.open.ac.uk/ccig/files/Mapping Refugee Media Journeys 16 May FIN MG\\_0.pdf](http://www.open.ac.uk/ccig/sites/www.open.ac.uk/ccig/files/Mapping%20Refugee%20Media%20Journeys%2016%20May%20FIN%20MG_0.pdf)

63. Campbell et al., 2015, "Syrian Refugees and Information Precarity", *New Media & Society*, <http://journals.sagepub.com/doi/abs/10.1177/1461444815591967>

# 5. Mobile money and livelihoods



For refugees, mobile technology is playing an increasingly important role in income generation and livelihood strategies. Mobile phones are enabling them to find employment, run small businesses and work in ancillary services, such as selling charging or credit services and mobile phone repair, as well as mobile money services. This section explores the role of mobile in supporting refugee livelihoods, focusing on the digitisation of cash transfers, the impact of mobile money, and the potential opportunities presented by international remittances.

## Digitisation of cash transfers

In the two years since the publication of the GSMA report, “Mobile Money for the Displaced”,<sup>64</sup> cash transfer programs have become one of the most important ways to provide assistance to refugee populations, and consensus is building that it is more effective than traditional in-kind aid. Humanitarian agencies are increasingly interested in understanding how cash disbursements can be digitised. Digital cash transfers, including the use of mobile money services, mobile vouchers and pre-paid cards, account for a rapidly increasing percentage of humanitarian cash delivery mechanisms, as agencies commit to scaling up the use of mobile cash transfer programs through digital tools. In 2000, UNHCR implemented 15 programmes that delivered cash and cash alternatives. By 2015, that number had increased to 60 programmes with a budget of approximately USD 465 million. In 2016, UNICEF also committed to doubling the funds devoted to cash transfer programming by 2020.<sup>65</sup> As a result of these trends, interest from aid agencies in working with MNOs and digital financial service providers has risen significantly.

In 2015, CALP (the Cash and Learning Partnership) set up the Electronic Cash Learning Action Network (ELAN), a group of humanitarian organisations and

private sector players focusing on digital cash delivery. Collecting and synthesising the lessons of humanitarian agencies with digital cash distributions, CALP has published a guide for both humanitarian and private sector partners, outlining the key challenges and ways to overcome them.<sup>66</sup>

The World Economic Forum (WEF) has also recently facilitated the shaping of principles for public-private cooperation on digital delivery of humanitarian aid, as requested by the United Nations and the broader humanitarian community. The principles aim to provide guidance and best practice for organisations engaged in humanitarian payments and were launched in Davos at the WEF in January 2017.<sup>67</sup>

Most research conducted on digital cash transfer programmes focuses on projects that help internally displaced and vulnerable populations rather than refugees specifically. The findings indicate that, in some cases, the digitisation of cash transfers has proved more complex to implement than expected (see Case Study 4).

64. GSMA, 2014, “Disaster Response: Mobile Money for the Displaced”, <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/01/Disaster-Response-Mobile-Money-for-the-Displaced.pdf>

65. UNHCR, 2016, Policy on Cash-Based Interventions (UNHCR/HCP/2016/3 Date of entry into force: 13 October 2016) as read at <http://www.unhcr.org/581363414.pdf>

66. ELAN, 2015, “Seeking Solutions: New Roles for Technology in Cash and Voucher Programmes”, <http://www.cashlearning.org/downloads/elan-seeking-solutions-brief-workshop.pdf>

67. WEF, 2017, “Principles on Public Private Cooperation in Humanitarian Payments,” [http://www3.weforum.org/docs/1P/2016/FS/WEF\\_FI\\_Principles\\_Humanitarian\\_Payments.pdf](http://www3.weforum.org/docs/1P/2016/FS/WEF_FI_Principles_Humanitarian_Payments.pdf)

## CASE STUDY 4

## mVisa in Rwanda

In 2014, the World Food Programme (WFP) provided cash assistance to registered refugees in Gihembe, Rwanda, based on a list of recipients provided by UNHCR. I&M Bank used a Visa product called mVisa to transfer cash to beneficiaries' mobile phones and were informed of the transfers via Airtel's mobile phone network.

An evaluation of WFP's partnership with UNHCR, the Bank of Kigali, MIDMAR, I&M bank, World Vision, and Airtel notes that while the original pilot in Gihembe camp was successful<sup>68</sup> and the system expanded to other camps, WFP ran into numerous challenges and ultimately decided not to continue the project.<sup>69</sup>

Challenges encountered:

- According to the evaluation, the primary problems were technical challenges when the mVisa product was upgraded, resulting in numerous payment issues for both the beneficiary and the trader.<sup>70</sup>
- A dispute over funds handled by one of the partners also contributed to substantial problems.
- Due to the multiple stakeholders involved, one of the recommendations from the evaluation was to ensure that clearer contracts are in place, specifying each of their responsibilities and relationships.

## Mobile money and forcibly displaced populations

Mobile money has been a major growth area for the mobile industry in recent years. There has been particular success in emerging markets, where many still do not have access to financial services. By the end of 2015, 271 mobile money systems were operational in 93 countries, with over 400 million registered accounts globally, of which over 130 million were active on a 90-day basis.<sup>71</sup>

Several of the trends that define displaced populations today, including the relatively long duration of displacement and increasingly urban living environments, coupled with the proliferation of mobile phones, support the use of well-designed mobile money interventions to reach refugee communities.

Although the opportunities are significant, sustainable delivery of cash as aid to displaced persons via existing mobile money solutions, which can also deliver the full benefits of financial inclusion, is not straightforward, as forthcoming GSMA research has shown. The research looks at the use of mobile money by displaced populations, spotlighting different use cases, including how mobile money is enabling humanitarian cash transfers, international remittances, and person-to-person (P2P) payments. The research focuses on benefits to refugees and internally displaced persons (IDPs) in Rwanda, Pakistan, and Haiti.

68. Tafere et al, October 2014, "Mobile Money Systems for Humanitarian Delivery: World Vision Cash Transfer Project in Gihembe Refugee Camp, Rwanda", [http://commstech-hub.eisf.eu/uploads/4/0/2/4/40242315/maereg\\_tafere\\_stuart\\_katkiwirize\\_esther\\_n\\_kamau\\_and\\_jules\\_nsabimana\\_mobile\\_money\\_systems\\_for\\_humanitarian\\_delivery\\_world\\_vision\\_cash\\_transfer\\_project\\_in\\_gihembe\\_refugee\\_camp\\_rwanda\\_eisf\\_october\\_2014\\_.pdf](http://commstech-hub.eisf.eu/uploads/4/0/2/4/40242315/maereg_tafere_stuart_katkiwirize_esther_n_kamau_and_jules_nsabimana_mobile_money_systems_for_humanitarian_delivery_world_vision_cash_transfer_project_in_gihembe_refugee_camp_rwanda_eisf_october_2014_.pdf)

69. Hedley et al., 8 June 2016, "Operation evaluation: Rwanda PRRO 200744: Food and Nutrition assistance to refugees and returnees: A mid-term evaluation of WFP's operation," p. 23, [http://documents.wfp.org/stellent/groups/public/documents/reports/wfp284815.pdf?\\_ga=1.103181568.1864223717.1462562999](http://documents.wfp.org/stellent/groups/public/documents/reports/wfp284815.pdf?_ga=1.103181568.1864223717.1462562999)

70. WFP pre-identified traders in the relevant local markets who were able to supply sufficient quantities of good quality food. These traders registered with mVisa, to become mVisa merchants, selling food.

71. GSMA, 2015, "State of the Industry Report 2015", <http://www.gsma.com/mobilefordevelopment/programmes/mobile-money/industry-data-and-insights/sotr>

In Rwanda, not only do refugees appear to be regular users of mobile money, they are also able to work as mobile money agents. In this capacity, they serve both refugees and the local community, depending on where they run their agent business, whether inside or outside camps. The primary use of mobile money was for person-to-person (P2P) payments—either receiving money from relatives outside the camp or sending money out. This need to transact with friends and family also drove their choice of network, with most choosing the network their friends and family had adopted. This usage pattern extends to employees of aid organisations resident in the camps as well.

In Pakistan, home to the third highest number of refugees in the world, the government is the primary disburser of cash assistance to displaced people in the country. The transition to mobile money is considered to have alleviated many of the prior challenges surrounding transparency and fraud in the handling of cash, and today, most government-to-IDP cash transfers are conducted via mobile money, with four out of the five MNOs operating in the country actively participating in fund disbursements for IDPs. However, IDPs receiving aid through mobile money services in Pakistan use over-the-counter (OTC) services<sup>72</sup> and therefore do not enjoy other mobile money services via a mobile money account, missing out on the potential longer term benefits of financial inclusion.

Despite some successful use cases, the research makes clear that a number of challenges remain, notably infrastructure—both technical and human—including agent networks, agent liquidity, and mobile network coverage. The convenience of a mobile money service (proximity to agents) was shown to trump familiarity with technology as a success factor in humanitarian contexts, in cases where adequate training was provided. However, in Haiti, whilst training and awareness campaigns do result in increased usage of mobile money services, they are too expensive for operators to maintain as an active programme on their own.

Although mobile money services have extended further into rural areas than more traditional financial services have in the past, rural customers still remain an underserved segment. A key barrier to reaching these customers is operational. Creating, managing, and sustaining an agent network in rural areas remains an industry blind spot. Finally, a lack of identity documentation to comply with Know Your Customer (KYC) requirements for SIM and mobile money account registration also poses a significant barrier. Local regulatory environments must be fully understood before a cash payment system is deployed in a chosen market.

Two more studies that explore these topics in depth are GSMA's, "Mobile Money for the Displaced"<sup>73</sup> and Betts et al., "*Rethinking Popular Assumptions*", from the Oxford Refugee Studies Centre, both of which focus on Uganda.

The GSMA study looks specifically at mobile money, finding that 48% of those surveyed in Kyangwali settlement and self-settled displaced populations in Kampala used a mobile money service, with nearly all respondents receiving money transfers from friends and family. As stated in the report, "this volume is extremely significant and demonstrates the importance of informal flows of aid and the critical opportunities for mobile money platforms to facilitate them." Furthermore, of the displaced populations interviewed in Uganda, more women reported using mobile money compared to men (73% versus 60%). "This suggests where strong infrastructure is in place, the use of mobile money by displaced populations can be high, particularly for women."

"*Rethinking Popular Assumptions*" looks at the wider role of mobile phones in income-generating activities, finding that 89% of refugees in Kampala use their phones to generate income.<sup>74</sup> Although the primary use of mobile phones was for voice and SMS services rather than mobile money, the research highlights the huge opportunity to provide mobile money services

72. OTC is essentially a voucher to cash-out service

73. GSMA, 2014, "Disaster Response: Mobile Money for the Displaced", <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/01/Disaster-Response-Mobile-Money-for-the-Displaced.pdf>

74. Betts et al., 2014, "Refugee Economics: Rethinking Popular Assumptions", <https://www.rsc.ox.ac.uk/files/publications/other/refugee-economies-2014.pdf>

for this segment of the population, particularly given the high usage of mobile technology for a range of services. With education and marketing to build awareness of the product and investment to build out the agent network in these locations, mobile money could be a transformative service for refugees in similar contexts. Almost all refugees surveyed used phones to communicate with suppliers and customers, no matter what their business. One-third also relied on phones to find out market information. The study found that for refugee farmers in particular, mobile phones played a critical role in *“helping to facilitate and sustain trade networks between the host economies and rural settlement-based refugees.”*<sup>75</sup> Only 10% of survey respondents of settlement-based refugees reported using mobile phones to transfer money, presenting a clear opportunity for MNOs to expand this service and for more refugees to benefit from using mobile money.

Widespread use of mobile phones and the relative maturity of the mobile money industry in Uganda, combined with CSR motivations, has prompted local MNOs to invest in building infrastructure in refugee areas. Orange Uganda has erected a tower in Nakivale camp to support the launch of its mobile money service targeting the large refugee population. An Orange

representative told researchers that *“Nakivale is a busy market. There’s always communication going on there, and we thought it was a good space for a match [with Orange Mobile Money]. Refugees are always moving between camps and the cities, so if they buy our services in Nakivale they’ll also buy in Mbarara and in Kampala.”*<sup>76</sup>

Research on this topic shows that mobile money can be a viable tool for disbursing cash, and its true potential is reached when the ecosystem is mature enough to support not only disbursement of aid, but also financial services like airtime top-ups, remittances, savings, and loans. These services all help to support financial inclusion, the resilience of refugee communities, and the sustainability of MNOs. Yet, there are still many challenges to overcome before mobile money becomes the principal channel for digital cash transfers for displaced populations. Dialogue and improved coordination between MNOs, humanitarian organisations, and donors well in advance of emergencies will be vital. More research on the needs of this vast and growing demographic is also necessary, as well as investments in appropriately designed products and services that meet the needs of all stakeholders: beneficiaries, humanitarian organisations, and MNOs.



75. Betts et al., 2014, “Refugee Economics: Rethinking Popular Assumptions”, p. 33, <https://www.rsc.ox.ac.uk/files/publications/other/refugee-economies-2014.pdf>

76. Ibid., p. 34

## The relevance of international transfers for refugee populations

The ability to move money internationally via mobile money is both a current focus of the industry and an area particularly relevant to refugees. One recent paper found that *“Remittances are often a lifeline in situations of forced displacement, helping households cope with insecurity and helping people escape conflict.”*<sup>77</sup> There is some evidence that sudden large-scale movements of people across a border could significantly drive demand for, and use of, cross-border transfers. This would have clear implications for MNOs that provide these services.<sup>78</sup>

The mobile money international remittance market is evolving rapidly. It is now possible to send remittances from one mobile money account to another mobile money account between more than 20 countries worldwide. The GSMA has found that mobile money is driving a price revolution in the cost of international remittances, publishing findings that show using mobile money for international remittance transfers is, on average, 21 percent cheaper than using global money transfer operators (MTOs), including the cost of cashing out. When funds are left in the mobile money account, the cost of international remittance is 50% cheaper than using a traditional MTO.<sup>79</sup>

For MNOs, the international remittances business represents an opportunity to develop the digital financial ecosystem, which is critical to ensuring the sustainability and profitability of mobile money. According to the World Bank Group, Sub-Saharan Africa will receive an estimated USD 34 billion in remittances in 2016,<sup>80</sup> yet it is the most expensive region to send money to.<sup>81</sup> This presents a significant opportunity for MNOs to evolve their mobile money offerings to include remittances, increasing competition and ultimately reducing remittance fees for customers.

Of particular interest is the rapid growth in mobile money transfers between neighbouring countries (versus transfers from developed to developing countries, which is often seen as the more significant market). Where cross-border systems have been launched, notably in Mali, Senegal, Ivory Coast and Burkina Faso, a GSMA study found *“remarkably fast”* adoption levels that had surprised operators, and concluded that *“the success of these initiatives indicates the readiness of customers in mature [mobile money] markets to send and receive cross border transfers using their mobile money account.”*<sup>82</sup>

77. Carlos Vargas-Silva, KNOMAD, March 2016, “Literature review: Remittances sent to and from Refugees and Internally Displaced Persons”, p. 7, [http://www.knomad.org/docs/working\\_papers/KNOMAD\\_WP\\_12\\_Lit\\_Review\\_Remittances\\_to\\_from\\_Refugees\\_and\\_IDPs.pdf](http://www.knomad.org/docs/working_papers/KNOMAD_WP_12_Lit_Review_Remittances_to_from_Refugees_and_IDPs.pdf)

78. *Ibid.*, p. 8

79. GSMA, 2016, “Driving a price revolution: Mobile money in international remittances”, [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/10/2016\\_GSMA\\_Driving-a-price-revolution-Mobile-money-in-international-remittances.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/10/2016_GSMA_Driving-a-price-revolution-Mobile-money-in-international-remittances.pdf)

80. World Bank, 13 April 2015, “Migration and Remittances: Recent Developments and Outlook. Special Topic: Financing for Development”, Migration Development Brief 24, <https://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1288990760745/MigrationandDevelopmentBrief24.pdf>

81. World Bank, March 2016, “Remittance Prices Worldwide”, Issue 17, [https://remittanceprices.worldbank.org/sites/default/files/rpw\\_report\\_march\\_2016.pdf](https://remittanceprices.worldbank.org/sites/default/files/rpw_report_march_2016.pdf)

82. C. Scharwatt and C. Williamson, GSMA, March 2015, “Mobile money crosses borders: New remittance models in West Africa”, p. 5, [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/04/2015\\_MMU\\_Mobile-money-crosses-borders\\_New-remittance-models-in-West-Africa.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/04/2015_MMU_Mobile-money-crosses-borders_New-remittance-models-in-West-Africa.pdf)

# 6. The future



## RESEARCH EXAMPLE 4

### Recommendations for improving connectivity for refugees

The most comprehensive strategic recommendations for addressing connectivity issues are outlined in UNHCR's *"Connecting Refugees"* paper. The UNHCR policy has three pillars: access, affordability, and usability. First, they advocate working with MNOs, governments, and regulators to improve access by improving network coverage, including refugee hosting areas in connectivity service planning and, as a last resort, investing in infrastructure themselves. With regard to affordability, they want to work with MNOs and other connectivity service providers to deliver low-cost refugee-specific products and connectivity. Third, they identify digital literacy as key to providing training on how to use mobile phones, and supporting the development of refugee-specific content.<sup>83</sup>

In delivering this vision, UNHCR sees the private sector, especially MNOs, as important partners, emphasising that this work is beyond the scope of the humanitarian sector. UNHCR envisions MNOs contributing technical expertise, skills, and physical infrastructure without losing sight of their need to operate as commercial entities. Interestingly, UNHCR is clear that it is appropriate to treat refugees as consumers of connectivity services rather than recipients of charity.

UNHCR's research aside, there are few policy recommendations to be found in the existing literature. The studies of the European crisis emphasise the need for connectivity services, especially Wi-Fi, and investment in longer term infrastructure. As one put it, *"for refugees seeking to reach Europe, the digital infrastructure is as important as the physical infrastructures of roads, railways, sea crossings and borders."*<sup>84</sup> BBC Media Action's paper recommends that camps provide Wi-Fi and consider providing phones.<sup>85</sup> Papers looking at more established, long-term camps such as Zataari, however, found that local MNOs had already put networks in place.

83. UNHCR, 2016, "Connecting Refugees", <http://www.unhcr.org/publications/operations/5770d43c4/connecting-refugees.html>

84. Gillespie et al., "Mapping Refugee Media Journeys: Smartphones and Social Media Networks", p. 2, [http://www.open.ac.uk/ccig/sites/www.open.ac.uk/ccig/files/Mapping Refugee Media Journeys 16 May FIN MG\\_0.pdf](http://www.open.ac.uk/ccig/sites/www.open.ac.uk/ccig/files/Mapping%20Refugee%20Media%20Journeys%2016%20May%20FIN%20MG_0.pdf)

85. N. Bailey, T. Hannides, and D. Kaoukji, July 2016, "Voices of Refugees: Information and Communication Needs of Refugees in Greece and Germany", BBC Media Action, <https://downloads.bbc.co.uk/mediaaction/pdf/research/voices-of-refugees-research-report.pdf>

As the number of displaced people continues to rise, demand for mobile technology is also likely to grow. If current global trends continue, refugees and internally displaced people will become more dependent on, and more sophisticated users of, mobile technology. The mobile industry and humanitarian agencies are seeing rapidly growing demand for data and internet access, in addition to voice and SMS, and continued rapid growth in OTT messaging platforms like WhatsApp and Viber. New platforms will almost certainly emerge and be adopted by certain populations.

The importance of messaging platforms for refugee populations has compelled new players such as Google and Facebook to commit to last mile connectivity (identified by UNHCR as a key issue, especially for rural refugees). Google is supporting [refugeeinfo.eu](http://refugeeinfo.eu), while Facebook is contributing to a recently announced partnership with Zain and UNHCR to bring connectivity to over 700,000 refugees in Jordan.<sup>86</sup>

For MNOs in countries currently hosting refugees, there is a recognition that these new arrivals will not be able to go home for the foreseeable future and that many are likely to be long-term, if not permanent residents. Turkcell, for example, is already anticipating demand for services like domestic Wi-Fi from refugees as they settle, and are investing in them as a long-term customers. The political challenges to providing services to refugee populations are likely to remain, however (this is a particular problem in countries like Pakistan), and continue to affect the ability of MNOs to provide services.<sup>87</sup>

Indeed, many of the barriers to providing mobile connectivity for underserved populations globally also apply to refugees: accessibility, affordability, and literacy. However, not only are these barriers more acute for refugee populations, mobile services are even more important because of their particular needs and vulnerabilities. For example, continuity of education, access to financial services via mobile money and remittances, access to information, and family reunification, are all critical needs that can be met through connectivity. Mobile services, apps, and infrastructure coverage need to be considered over the long term for refugees. Given the growing magnitude of the refugee crisis worldwide, the social and commercial challenges and opportunities of these services are likely here to stay.

Central to any long-term thinking about connectivity for refugees is the issue of identity. While aid agencies, MNOs, and other service providers can provide limited connectivity services in a camp context, this is not a long-term solution, nor one available to the majority of refugees who do not live in camps. Proof of identity is key to accessing mobile services, which usually require an ID to register a SIM card and services like mobile money. Mobile technology offers a way to collect attributes and credentials that can uniquely identify a person, accelerating the scale and reach of an inclusive digital identity, providing continuity of care for refugees, and reducing duplicate registration efforts.

As demand for connectivity grows and the interest of aid agencies intensifies, MNOs and the mobile industry can also expect more interest from global, regional, and national agencies in developing partnerships or delivering services designed to meet a humanitarian need. For all stakeholders working on refugee issues, it is critical to realise that long-term, sustainable solutions are required to meet the connectivity needs of millions of refugees and IDPs. Learning from successful initiatives in different sectors and understanding how partnerships work in practice will also be crucial for refugee connectivity efforts to evolve as fast as they must to serve people in crisis situations.

86. Zain, 19 September 2016, "Zain, UNHCR and Facebook collaborate to support Connectivity for Refugees initiative in Jordan" [http://www.zain.com/en/press/Zain\\_UNHCR\\_Facebook/](http://www.zain.com/en/press/Zain_UNHCR_Facebook/)

87. Monica Encinas, BAAG, 20 June 2015, "Life on the Margins: The Situation for Afghan Refugees", <http://www.baag.org.uk/views-voices/life-margins-situation-afghan-refugees>



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