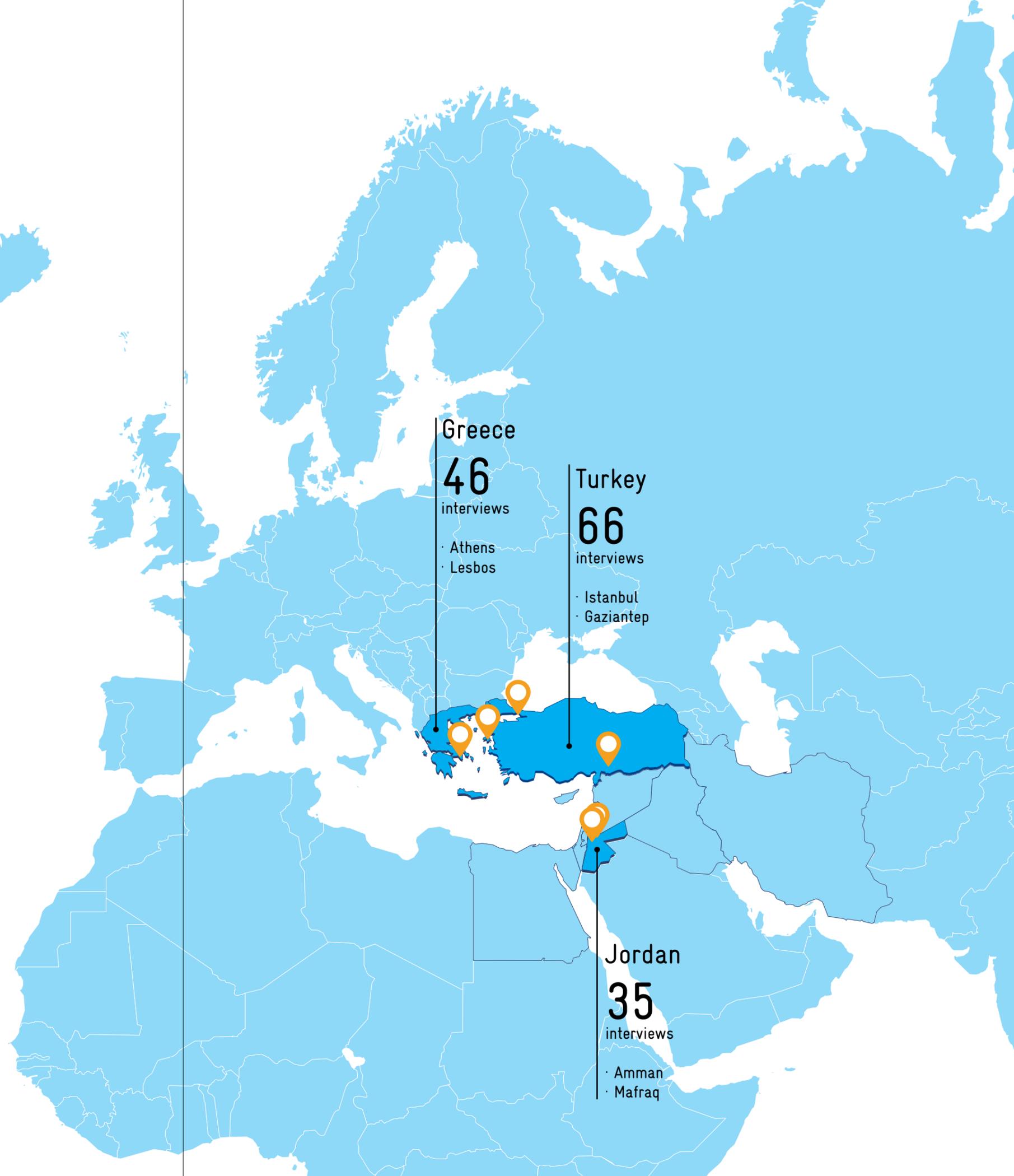


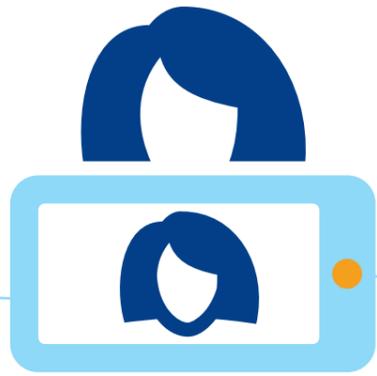
ICT4Refugees

A report on the emerging landscape of digital responses to the refugee crisis

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1. Introduction

The number of people fleeing war, violence and persecution is higher today than at any point since the 1940s. Of the 250 million¹ migrants worldwide, 60 million are refugees that have fled their home country or are internally displaced.² The estimated 3.88 million Syrian nationals fleeing civil war, combined with other forces and factors, have resulted in the current “refugee crisis”, in which many Middle Eastern, North African and European countries are facing enormous challenges as a result of great influx of people.

If the refugee crisis has been seemingly unprecedented, so too has been response. Due to the scale of the human tragedy, and to high levels of global awareness and media coverage, we have witnessed – and are still witnessing – an extremely dynamic response from a novel and diverse constellation of actors. Established humanitarian organisations, state institutions, development cooperation and international and local NGOs have been joined by groups of volunteers and activists of different stripes.

Digital technology is playing a big role in the experiences of refugees. Smartphones are an essential piece of kit for millions as they travel.³ And this dimension of technology has not gone unnoticed: a refugee tapping on a smartphone, taking a selfie, the generator-powered phone-

charging stations within refugee camps – these are among the iconic images of the present crisis.

Similarly, in the efforts to respond to these mass migrations and to support refugees, there has been a proliferation in digitally focussed projects, from established humanitarian actors, and from members of the civic tech community.



A new eco-system is emerging internationally with a speed, intensity and diversity that has not been seen before in the field of information communication technology for Development (ICT4D).

The goal of this report

This report is a result of a collaboration between BMZ, GIZ, betterplace lab and Kiron, institutions which share the view that the current phenomenon of “ICT for refugees” is novel and has great potential that should be investigated.

A charging station at Kara Tepe camp in Lesbos

¹ UNDESA / World Bank (December 2015)

² UNHCR <http://www.unhcr.org/5672c2576.html>; 13/05//2016

³ See e.g. “The most crucial item that migrants and refugees carry is a smartphone” <http://qz.com/500062/the-most-crucial-item-that-migrants-and-refugees-carry-is-a-smartphone/>

Drawing on field and desk research, this report aims to give an introductory navigation to, and interpretation of current developments. It shall capture the breadth of different areas where technology can create impact, of varying local contexts, and of actors involved. This report does not provide a comprehensive review, and a thorough discussion of assessment and effectiveness is also beyond the scope of this research. Rather we aim to understand current developments, highlight important areas of potential and contribute to a discussion about the opportunities and risks involved.

Defining “ICT for refugees”

Our research focuses on ICT projects that help to receive and support refugees who have fled their homes and are staying elsewhere in camps or among host communities. In the case of our field research this is a host community in another country, although the approaches we look at here may also be relevant for internally displaced persons (IDPs).

By “ICT” (information communication technology) we refer to digital devices and systems which are accessible to everyone, be it refugees, civil society groups, humanitarian or development cooperation actors such as private companies. We talk about projects using personal computers, smartphones and tablets which can access the Internet. We did not intend to exclude the conventional telephone or SMS networks, but during our research we found little evidence of projects making use of these technologies; neither did we encounter any projects using radio to communicate. **The predominant technology used for information and communication – due to its low cost and easy access – is the Internet.** Even displaced, the Internet enables refugees to maintain contact with loved ones elsewhere, providing some degree of stability in an otherwise insecure and uncertain situation. Internet access is of crucial importance for refugees both during their journey and as they settle in a host community.

ICT for refugees is a field containing a spectrum of different actors. We pay particular attention to the **emerging civic tech community** (characterised in part 2) which has great potential to **provide rapid, innovative and adaptive kinds of support** to refugees. We discuss below how to harness this potential, and how the role of civic tech fits together with the efforts of other humanitarian and development cooperation organisations and host communities.

The concepts of “ICT for peace” (where digital projects contribute to stability and peace-building) and ICT in post-conflict redevelopment are not within the scope of this report. However, we point out the potentials for linkage, collaboration and inclusion wherever possible.

Structure of this report

We will begin by characterising civic tech actors, who are playing a particularly interesting role in the landscape of ICT for refugees. Secondly, we will discuss the use of technology by refugees, which will serve as important framing for subsequent analysis of projects. Thirdly, we will explain further our methodology. We then, fourthly, present a report of our field research in Greece, Jordan and Turkey, outlining key findings and setting them in context. Fifthly we proceed to an overview of key areas of activity and potential, drawing on case studies from our field research. Finally we discuss cooperation and exchange between different kinds of actors, some challenges and risks common to ICT for refugee projects, finishing with recommendations for practitioners and policymakers.



2. The “New Humanitarians”: Civic tech and the refugee crisis

The emerging landscape of ICT for Refugees contains a range of different actors. Established humanitarian organisations and NGOs are running technology-focussed interventions.⁴ Alongside these we are seeing a mushrooming of new actors emerging, responding to the crisis with digital projects. **Our research was particularly interested in these actors, which we will group under the term “civic tech”, and how their efforts can be encouraged in a way that complements the work of others.**

Civic tech denotes a collection of typically less formal organisations. The civic tech community is populated by people mainly with a professional tech background, aiming to build technological responses to social issues. Many of these projects are partially or entirely powered by volunteers.

What characterises civic tech groups is an affinity with the world of tech start-ups and a tendency to borrow from it modes of planning and working and attitudes towards how to start and grow a project. Civic tech projects aim to become social enterprises which achieve sustainability through a business model rather than external funding.

Perhaps above all, a civic tech approach can be extremely agile, that is, fast in developing and deploying an idea with few resources in the early stages. This is coupled with a strong learning culture, where experimentation is encouraged (and failure de-stigmatised) and iterative and adaptive project design according to user-centred principles come naturally, with a high degree of networking and exchange.

Civic tech activity tends to be focussed in larger cities where there is good Internet connection and access to resources. Innovation hubs, co-working spaces and hackathons can provide a kind of infrastructure and focus of activity for the local civic tech eco-system.⁵

On the project side, our field research focused on the civic tech communities in the three countries. Digital approaches of the international humanitarian community were also investigated but not the centre of attention.

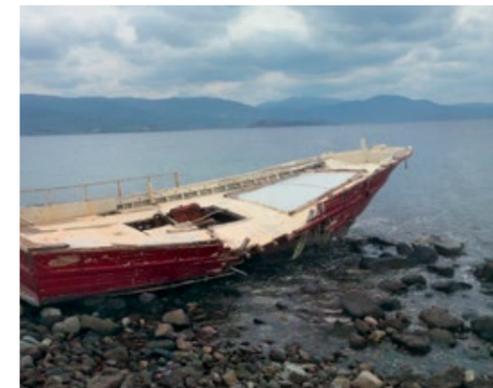
The most important actor in the space of civic tech is undoubtedly Techfugees: a network organisation founded by well-known technol-

ogy writer Mike Butcher in September 2015.

Techfugees serves as a kind of umbrella organisation for civic tech projects with a refugee focus, and hackathons to create new such projects have taken place across Europe (as well as in New York and Melbourne) under the Techfugees banner, working as a kind of franchise.

Techfugees has created a novel media landscape. As well as conferences in London and New York, Techfugees held a live-streamed all-day event in February 2016 in which an online audience were introduced to a string of international initiatives through Skype-interviews. The Techfugees Facebook page and Slack channel (an instant messenger cum online forum) have become central sites of networking and exchange for those working in the space.

We can identify some strengths and weaknesses common in civic tech approaches in this space. We will return to these points in part 8 to suggest the most suitable areas and ways to engage these actors.



An boat lies abandoned on a beach on Lesbos

Strengths:

- A strong culture of innovation, agility and adaptability could be an asset in contexts where circumstances are changing rapidly and/or the needs of the target group are not well understood. Particularly as the proportion of urban refugees in major cities increases,⁶ local civic tech actors are close to the needs of the refugee community and the flourishing of a local civic tech community can boost the economies of host communities.
- More informal organisational structures might allow opportunities for employment or gainful activity for refugees.
- In the specifically volatile situations the refugees are in, the international civic tech community can provide extraordinary support and expertise.

Weaknesses:

- Members of the civic tech community can sometimes hold naïve beliefs about digital projects as “silver bullets” whilst underestimating the complexity of the problem and the importance of local context and on-the-ground experience.
- Projects can experience problems around ownership and commitment. If a project is dependent on volunteers then it can be vulnerable to “volunteer fatigue” among its team. And lack of formal organisational structures can mean questions around ownership and accompanying responsibilities are not clearly settled.

⁴ Examples include refugeeinfo run by International Rescue Committee in partnership with others (see case study below) and the Red Cross's Trace the Face platform.

⁵ The characterisation of civic tech in this chapter draws heavily on the accumulated experience of lab around the world, betterplace lab's field research programme which has investigated the civic tech scene in 21 countries across five continents.

⁶ UNHCR Policy on Alternatives to Camps (2014) <http://www.unhcr.org/5422b8f09.html>



3. Methodology

This report is based primarily on field research conducted in February-March 2016 in Jordan, Turkey and Greece. These three countries were chosen because of their particular significance in the present crisis as host and transit countries in and outside of the European Union. They are also hosting refugee populations in a range of circumstances. At the time of the research Greece had a high volume of refugees who had recently arrived contrasted with the situation in Jordan with a relatively “established” refugee population and Turkey’s situation somewhere between the two - with large numbers of new arrivals and also many who had been there longer.

Our research took place in the context of a changing situation. In particular, the agreement between the EU and Turkey had a significant impact on the situation of refugees in all three countries. It came into effect only after our research in Greece and Jordan had been completed. Hence our findings belong in the context of a particular time and place. However, the insights gained here will also allow inference regarding the situation and potential in other countries hosting refugees such as Lebanon, Egypt, Morocco, Libya, Italy or Spain.

In each country we conducted qualitative interviews and undertook participant observation. We interviewed members of two different groups:

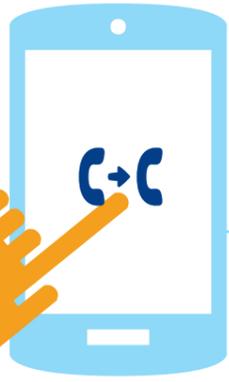
1. **Project side:** people working on digital refugee projects. We wanted to get the fullest possible picture of what projects exist, and we wanted to understand not only what the projects do, but also who is behind them and how they came to be involved, how the project has developed and what challenges they face. We identified our interview partners through desk research, existing networks, and the snowball effect of one interviewee introducing us to others. Our approach and questions were informed by the experience of betterplace lab’s lab around the world field research programme, which has investigated the civic tech scene in 21 countries since 2014.
2. **Refugee side:** in each country we spoke to a sample of refugees (35 in Greece, 40 % female; 23 in Jordan, 30 % female; 50 in Turkey, 90 % female; in total 108 refugees, approx. 50 % female)⁷ about how they use digital technology and which of the projects that are emerging they know about and use. This serves as crucial context and as a kind of reality check for the digital projects – an impression of how successfully they are reaching their target group, how well they match the actual needs, and whether they are based on realistic assumptions about technology use among refugees. We will explore these points below.

⁷ More detailed numbers in the Appendix Methodology

A minority of these interviews were in English but most were through interpreters in Arabic (in Jordan, Turkey and Greece) and Farsi (Greece only). We interviewed refugees in various camps on Lesbos; in Turkey and Jordan we were not able to access camps on security grounds and spoke instead with urban refugees.

We supplemented this with desk research as well as Skype interviews. See appendix for more detailed information about the demographics of our interviewees and interview methodology.





4. Understanding refugees' usage of technology

A key aim of this research was to gain an insight into the usage of digital technologies by refugees. This is crucial contextual information, and may also serve as a reality check for the interventions and projects, whether they are based on realistic assumptions about their target group.

Whilst the circumstances of the refugees differed across the three countries in our research, many aspects of the ways they use digital technology were consistent across all three. The following points are the main takeaways from our interviews. They are broadly consistent with the experience of practitioners we spoke to.

Smartphone ownership is widespread, among Syrians it is close to universal. Most of these smartphones are Android devices. Among refugees from less prosperous nations such as Afghanistan not everybody has a smartphone, some only have a feature phone (i.e. a mobile phone that is not a smartphone).

Ownership of smartphones is best understood in terms of household. In many instances a family will share one device, which is most commonly kept by the male as precaution against theft while the family is in transit, but also used by the other family members. We had the impression that the children and younger family members were often

the most tech literate and heaviest users, showing their elders how to do it, or doing it for them.

Most people seem not to have much difficulty accessing the mobile network arriving in a new country, with local SIM cards readily and cheaply available. Outside at least one of the camps on Lesbos, i.e. Vodafone has set up a stall selling SIM cards with basic pre-paid phone and data plans for as little as 5 Euros.⁸



⁸ In fact on Lesbos the main frustration in getting a mobile internet connection is that, since the island is only 5km from mainland Turkey, the signal strength from Turkish network providers is often much stronger than from Greek ones, sometimes making it difficult to connect with a new Greek SIM. This anecdote serves as a good illustration of the kind of detail which is important but difficult to anticipate without on-the-ground experience.

Their use of these smartphones is overwhelmingly focussed on social messaging apps: above all Facebook and WhatsApp, with small numbers additionally using others including Viber, Telegram, Line and WeChat. They are using these channels to communicate with their friends and family: those staying in the same place and those from whom they have been separated, having stayed behind in the home country or taken refuge elsewhere.

WhatsApp messages are sent one-to-one and in groups, but as far as we saw these groups did not extend beyond a person's circle of acquaintances. Our impression was that Facebook too was being used above all as a messaging service, much more than as a social network in which users produce and consume public and semi-public content.

As well as instant text message, voice call and voice note (in effect leaving a voicemail) are widely used functions, in part due to illiteracy or inability to type in Arabic or Latin letters (functional illiteracy).

Since these web-based apps are familiar, it is tempting to infer that refugees use their smartphones in a similar way to those in Europe. But this is illusory. For many of our interview partners these apps were not subordinate to an overarching concept of "the internet", rather these communication apps were primary.

Email is not widely used. Most refugees do not have an email address at all, among those that do, some check it only infrequently. Downloading new apps is not common behaviour.

Few seemed to frequently "surf" the web, in the sense of accessing websites through a browser. Indeed, some were unfamiliar with the concept of a website. In Lesbos we asked several people why they did not use the refugeeinfo.eu service, despite prominent banners advertising the site. At least some of the people we asked seemed not to have recognised "refugeeinfo.eu" as a URL, or to know what to do with a URL. (We discuss this case study in more detail below.)

This is connected to a broader point about information-seeking behaviour. Smartphones are not typically regarded as an information portal with which one can independently search for information and resources from an external source. Rather, information flows are overwhelmingly peer-to-peer. If people need to know something, they will most readily seek answers from within their social network rather than, for instance, googling it. It's likely that this is in part to the issue of trust: for people who have lived in a situation where media reports are being distorted by partisan propaganda, mistrusting reports from authorities and preferring personal corroboration may well be a sound strategy.

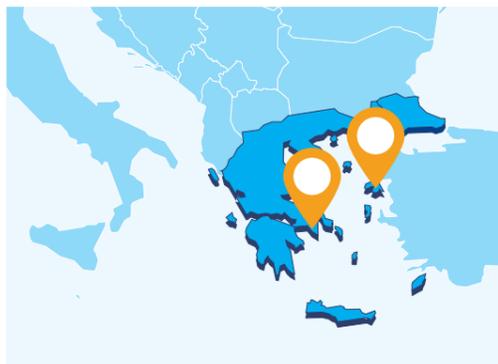
In summary, in spite of high rates of smartphone usage, the levels of tech literacy among the refugee population seem on the whole to be low. Smartphone usage is mostly limited to Facebook, WhatsApp and some other messaging apps. Use of these devices is mostly limited, then, to direct communication with known contacts. That is to say, in spite of the up-to-date software, as a telephone in a remarkably traditional sense. Information flow is overwhelmingly peer-to-peer.

It's important to stress that within the refugee population there are some individuals using a broader range of services for more sophisticated purposes – one notable example we met was a young Syrian pharmacist in a Lesbos camp teaching himself English and German by watching videos on YouTube. But such individuals are outliers. However, it may be worthwhile to explore in how far such individuals could be invited to participate in projects and act as multipliers, dissemination agents, trainers or coaches for their fellows.

Likewise important and a success factor for ICT for refugee projects is to engage with users customers at their individual level of tech literacy, preferably through the channels they are already using.

5. Field research report

GREECE



Research dates: 13 – 20 March 2016

Locations: Athens, Lesbos

Project side interviews: 11

Refugees interviewed: 35

Official development assistance

Greece contributes to Official Development Assistance (ODA) of OECD, ranking 21st out of 23 countries (2011: 0.43 billion US-Dollar or 0.15% of the GDP). Greece does not receive any ODA.

Context at the time of field research

For Greece the refugee crisis comes hot on the heels of an acute economic crisis which is still having a major influence on society, e.g. through very high rates of youth unemployment (we will discuss below the potential for civic tech activity to provide economic growth and create jobs

in the host community). As a result, many state or civic authorities and civil society groups dealing with refugees are doing so with constrained resources. These challenges were often mentioned by our interview partners.

During the first half of March a daily average of 1,157 refugees had been arriving in Greece⁹ and we can estimate that 58% of them travelled through Lesbos.¹⁰ This represents the continuation of a major reduction steadily since the peak in October 2015. During the days of our research, estimated arrivals to Greece were just 128 and 252.¹¹

As our research was taking place, negotiations between EU and Turkey were underway and were a subject of speculation for many people we spoke to. The Macedonian border at Idomeni had been closed several days earlier and during the time of our research reports about troubling conditions there were starting to circulate and appear in the international media.

Situation for refugees

The refugees we spoke to on Lesbos had mostly been there for a relatively short time, a matter of days or weeks. They expressed a sense of happiness and relief about having arrived in Europe

⁹ UNHCR Data Snapshot 17 March, <http://data.unhcr.org/mediterranean/country.php?id=83>

¹⁰ This is an extrapolation from UNHCR data from the beginning of 2016 until the end of March.

¹¹ UNHCR Data Snapshot 17 March, <http://data.unhcr.org/mediterranean/country.php?id=83>



and the intention to travel onwards – almost all said they intended to travel to Germany.

As such their needs, as they perceived them, were tightly circumscribed to immediate matters of food, shelter, clothing etc. and they were not giving thought to less immediate concerns such as education. The question of employment and integration into the workforce barely arises due to the lack of opportunities both on Lesbos and, due to very high unemployment, in Athens and the rest of the country.

Landscape of ICT for refugees

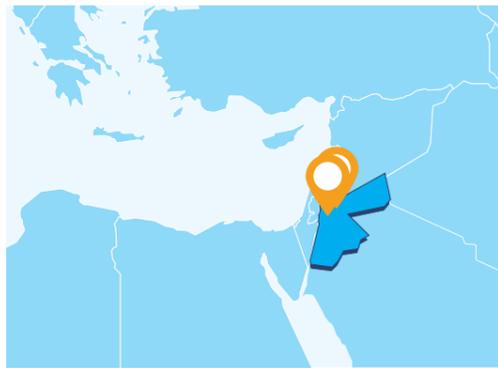
In Athens we encountered a small but dynamic social entrepreneurship scene, populated by highly educated and internationally mobile young Greeks. The Athens Impact Hub is a key network point for this community. They are motivated by applying a social entrepreneurship approach, often with a digital angle, to the challenges arising from the refugee crisis (as well as other issues such as unemployment). The concept of social entrepreneurship does not seem to be well established in Greek society at large and is often met with suspicion and hostility. Projects emerging from this community include Startup Aid and Marhacar (see case study below).

Greece has a commercial tech start-up scene which is nascent but growing, but this does not seem to be directly spilling over into civic tech activity e.g. through pro bono work.

Another group which has played a significant role in providing support for refugees in Greece are networks of anarchist activists. They are less focussed on digital projects, but nonetheless were behind First Contact, an information portal along similar lines as refugeeinfo.eu (see case study below). The anarchists are also one of the groups that have been involved with efforts to install Wi-Fi in camps, a vital service for those who have no or limited access to mobile Internet through a smartphone.

Well-known international NGOs (International Rescue Committee, Médecins Sans Frontières, Save the Children, etc.) were more visible on Lesbos, where they are active in various camps across the island. These exist alongside a number of small groups run by mostly international volunteers, which were very active during the period of peak arrivals in autumn 2015. There is some cooperation between these two tribes, but also some degree of tension and mistrust.

JORDAN



Research dates:	20 - 27 Februar 2016
Locations:	Amman, Mafraq
Project side interviews:	12
Refugees interviewed:	23

Official development assistance

Since the start of the Syrian refugee crisis in 2012, the BMZ has made available a total of 475 million euros to Jordan, of which 148.47 million euros are earmarked for special measures to tackle the refugee crisis. In addition, the Federal Foreign Office has provided 89 million euros for humanitarian relief operations. In addition, the BMZ announced further financial support during the German-Jordanian government consultations on 10 and 11 November 2015. In the fifth year of the Syria crisis, the BMZ is providing a further 128 million euros for cooperation in the water sector and to further support education and employment creation. In 2014, Jordan has received 2.7 billion US-Dollars in ODA.

Context at the time of the research

As the conflict in Syria enters its fifth year, Jordan is hosting 1.4 million Syrians, of whom 646,700 are refugees. Approximately 23.5 per cent of all Syrian refugees are women, and almost 53 per cent are children, 18 per cent of whom are under five years of age. Out of an estimated four million refugees, about 450,000 are between the ages of 18 and 22.¹²

Providing for their needs has impacted heavily on Jordan's public finances, increasing government expenditure on subsidies, public services, and security, while further compounding the negative economic consequences of regional instability. The local water and power infrastructure, which was already weak, is being stretched to the very limits. The education and health systems are also under great strain.

In some municipalities refugees outnumber residents, and the impact on inflation, employment, and access to public services and community resources has fuelled local tensions and threatened to spark wider social unrest. The government's response to the crisis has been backed by national and international agencies, but there is a growing acknowledgment that current life-saving humanitarian funding and programming are neither sustainable nor sufficient, and should be complemented by a more development-oriented approach to build national resilience and sustain the level and quality of services provided.

The Jordanian government has registered a need for 2.9 billion US dollars in aid in order to meet the basic needs of the Syrian refugees and lessen the negative impact on the country's development.

Situation for refugees

Eighty-five per cent of refugees live outside camps in some of the poorest areas of the country. The people we interviewed can roughly be separated in three groups with a diverse set of needs: Firstly, people who left Syria some time (3-5 years) ago, and who are financially stable due to having been able to find a job when they arrived or personal background. This allows them to live integrated in the Jordan society to a certain extent. This group fears a change in the perception of refugees in Jordan as people continue to arrive. Additionally, this group of people is in constant fear for their family and friends, who are often still living in Syria. A need to stay in constant contact with all parts of the family and to evaluate the security situation in both Syria

¹² UNHCR Jordan country operations profile 2016

and Jordan is named as the biggest concern, while trust in news reports are low due to suspected propaganda. This is why refugees usually rely heavily on the information provided through their social networks off- and online.

A second group can be defined as people who left Syria more recently. They want to remain in the region and return to Syria when the war is over. For this group, due to market saturation, there are very few employment opportunities either formal or informal, and in most cases few opportunities for social, let alone political, participation. The third group of people is on the move and describing their situation as a planning phase until the next step can be afforded or planned. A majority mentions leaving to Europe, currently focusing on planning the next step to Turkey. Germany is mentioned as the favourite destination.

Landscape of ICT for refugees

Though there are many organisations working with refugees in Jordan – unsurprisingly given the number of refugees in the country for some time – we found little by way of digital projects. Around education some organisations are starting to incorporate more of a digital element – e.g. Edraak (see case study below).

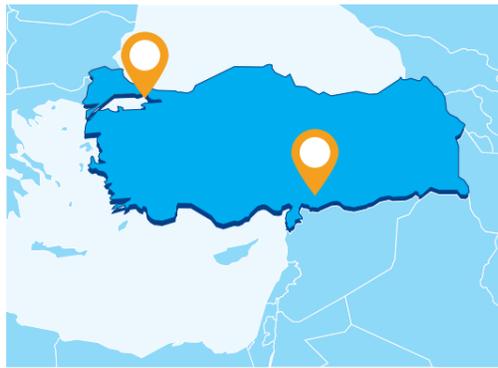
Jordan has a growing cluster of tech start-ups based in the King Hussein Business Park in Amman, encouraged by preferential tax-rates and ready access to seed funding.



Visiting the 'Digital Projects Initiative' at the King Hussein Business Park.

However, at present there seems to be little spill-over in the form of civic tech initiatives. Besides Edraak the only local civic tech initiative supporting refugees that we learnt of was 3DMena (see case study below).

TURKEY



Research dates:	21 – 25 March 2016
Locations:	Istanbul, Gaziantep
Project side interviews:	16
Refugees interviewed:	50

Official development assistance

Turkey does receive German help to tackle the Syrian refugee crisis. Since 2012, Turkey has received 11.4 million euros in support by BMZ for this purpose (as of 2014). GIZ's activities in Turkey have been focussing on climate change mitigation and adaptation, economic development and reconstruction assistance for Syria. In 2014, Turkey received 3.4 billion US-Dollars in ODA, a number which is rising due to the recent EU-Turkey Agreement.

Context at the time of the research

Arrivals of Syrians in Turkey rose very quickly between late-2014 and late-2015, but by March 2016 the number of arrivals was levelling off.¹³ In March 2016 2.7 million Syrian refugees were registered in Turkey,¹⁴ with this figure increasing by an average of 1439 per day.¹⁵

The agreement between the EU and Turkey had come into force a few days before our research took place, but it was too early to develop a clear

¹³ <http://data.unhcr.org/syrianrefugees/country.php?id=224>

¹⁴ *ibid*

¹⁵ This figure is calculated from two data points on 29 February (2,688,686 registered) and 11 April (2,749,140 registered). Source: *ibid*

sense of how this affected the lived reality for refugees in Turkey or the organisations helping them.

Situation for refugees

Only around 10 per cent of refugees in Turkey live in camps.¹⁶ Most, especially those who have been in the country many months or even a couple of years, live among the host population. The Syrians we spoke to saw themselves as semi-integrated: while they hope to be able to return home in the future, for now they must settle and find accommodation (mostly rented), employment and a daily routine, education for their children etc. The high numbers of Syrians in Turkey means that communities have formed in many places.

Refugees living in camps receive a small allowance to provide for their basic needs. Those living outside the camps receive no such support and so finding work seems to be an imperative for most of the men who are breadwinners. They are mostly employed informally, due to the difficulty in obtaining a work permit,¹⁷ many of them working long hours in manufacturing and textile factories for well below minimum wage.¹⁸ Child labour is also widespread.¹⁹ Women typically do not work, with the consequence that NGOs supporting refugees find themselves disproportionately dealing with women.²⁰

Syrian children have the right to attend Turkish schools, but actual attendance rates are low: research in 2014 put them at 27 per cent.²¹ As discussed below, these children will be increasingly difficult to reincorporate into the schooling system and the risk is of creating a “lost generation” with low levels of literacy and education.

¹⁶ TURKEY UNHCR EXTERNAL UPDATE 30 November, 2015

¹⁷ <http://www.hurriyetdailynews.com/turkish-govt-says-citizens-employment-will-not-be-hampered-by-work-permits-for-syrians.aspx?pageID=238&nid=93737>

¹⁸ The study “From the Ante-Chamber to the Living Room” by Zümray Kutlu cites research by Amnesty International that: “the wages received by Syrian refugees stand at 80 per cent of a worker from Turkey in Akçakale, between half and 80 per cent in Urfa, half in Hatay and Killis, and only one third in Istanbul.”

¹⁹ <https://www.hrw.org/report/2015/11/08/when-i-picture-my-future-i-see-nothing/barriers-education-syrian-refugee-children>

²⁰ This is what accounts for the skew in our interviewees, who were also overwhelmingly female.

²¹ Dorman, S. 2014: Educational Needs Assessment for Urban Syrian Refugees in Turkey

Landscape of ICT for refugees

Among the many established humanitarians working with refugees, we found several in Istanbul and Gaziantep which are running or piloting ICT-based programmes, e.g. the Syrian Education Commission's recently launched Elmedresa e-learning platform (see case study below).

Although Turkey has a vibrant civic tech community concentrated primarily in Istanbul, it seems curiously quiet on the subject of refugees. In the most recent “Your Things” competition for civic tech initiatives, out of over 100 applicants not one of them was aimed at supporting refugees. We can only speculate as to why this might be: perhaps because of low awareness due to a lack of media coverage; or because in a country where poverty exists among the population, the plight of refugees isn't felt to be such an urgent priority; language barriers; perhaps also because most of the refugees from Syria and Iraq reside outside camps and become somewhat “invisible” in major migrant cities such as Istanbul and therefore lack a lobby. It may also be that the Syrian-Iraqi diaspora in Turkey – Arabic speakers – constitute such a large group that they act auto-sufficient and lack interfaces with a Turkish-speaking community.

Perhaps hoping to change this, during the time of our research the “Borderless Hack” event was held to mobilise people around the topic of refugees.

Ways should be investigated to create greater interaction between Turkish- and Arabic-speaking communities. This is important not only for the sake of social harmony. The country's civic tech community should recognise the potential of Arabic-speakers as potential users, collaborators and “assets” for Turkey's economic development and growth.

Rami Sharrack of Syrian Economic Forum addresses the participants at Borderless Hack





6. What's out there?

This section gives an overview of how ICT projects might have potential to address various needs. Drawing on case studies interviewed during our field research we are able to build up a picture of current activity, what lessons this holds, and how things may develop.

One thing that became clear from interviewing refugees in the three countries is that, although circumstances and needs vary from individual to individual, the most important determining factor is how long refugees have been in a place. New arrivals who still consider themselves to be in transit are on the whole concerned only with meeting their more basic needs. Issues such as education and employment become concerns only once more settled. ICT projects conceived and developed with little on-the-ground experience run the risk of misjudging the needs profile of their target group.

The categories below are therefore roughly ordered from “more immediate” to “more long-term”.

Basic and essential needs

Food, shelter, clothing, toiletries etc. are not things that can be provided digitally. ICT projects can play a major organisational role, as the example of Marhacar shows (see Case Study later). In Jordan and Turkey schemes exist whereby refugees are issued by NGOs with cards loaded with prepaid credit (300TL, around 93€, per household per month).

Medical care

We did not encounter any m- or eHealth projects in our field research. Our findings about tech usage and behaviour suggest that hypothetically a patient-facing service – e.g. a symptom checking app for refugees to download and use independently – would probably not see great uptake unless it were accompanied by face-to-face care and support in using the tool by agents in the refugee diaspora. Once successfully introduced, apps featuring audio-visual services in refugee’s mother tongue (Facetime, Skype, or similar) may be helpful to reach the refugee population.

A three-year research project led by Johns Hopkins University of Public Health is developing guidelines for treatment of hypertension and diabetes in Lebanon, including piloting an mHealth intervention; results of the research are due to be published this year.²² It may be a helpful tool for treatment for refugee population groups, since some of them may also suffer from hypertension or diabetes, especially senior members of the community.

The 3DMena case study is one of a handful of projects using 3D-printers for the manufacture of prosthetics for people who have lost a limb.

²² <http://www.elfha.org/map-location/jhusph-ncd-guidelines-refugees-lebanon-call1/>

Communication

As we have seen, digital devices are used above all for communication with friends and relatives, including those who remained in the home country. It is clear that commercially available messenger apps and social networks are fulfilling this need adequately. Successful ICT for refugee projects seek this entry point and use messaging services as a dissemination and promotion channel or operate through these services.

There are some platforms to reunite members of refugee families who have become separated. Refunite is a civic tech project which has been successful for several years, mostly in sub-Saharan Africa but is also active in Jordan.²³ The Red Cross runs a platform called Trace the Face where photos are posted of refugees searching for family members but with no further identifying information, and people can make contact mediated by the platform.²⁴

NGOs working with refugees are also making use of these channels to reach and maintain contact with those who are helping. For example, the Yuva Community Centre in Gaziantep, southern Turkey, aside from disseminating information through its Facebook page, uses Telegram to communicate with refugees (this is more suitable for mass one-way communication than WhatsApp). Other organisations including

²³ <https://refunite.org/about/>

²⁴ <http://familylinks.icrc.org/europe/en/Pages/search-persons.aspx>

Support to Life told us that they were not currently using WhatsApp for this purpose, but that they thought it would be a good idea.

Information

Having access to reliable information is hugely important to allow refugees to orient themselves, seek what they need, and avoid exploitation. People recently arrived in a place need to know where to register themselves and find provisional accommodation. Once refugees are more settled their informational needs are more about the details of the legal processes which they are in and finding services and resources available to them. The two case studies below exhibit this difference: refugeeinfo.eu is a source of information for new arrivals whereas [8rbtna](http://8rbtna.org) is used mostly by Syrians who are more settled.

Case Study: refugeeinfo.eu

This online information portal has been designed for refugees in several Eastern European countries, and has had 95,000 visitors (60,000-70,000 of these are estimated to be refugees).

The information is housed in a webpage and so is accessed through a browser with a responsive design optimised to be viewed on smartphones. The website, moreover, has been kept as minimal as possible so that it requires little data to load for users with a poor connection or limited mobile data access; it is white text on a black

background in order to be as sparing as possible on phone battery; and provides information in four languages: English, Greek, Arabic and Farsi.

Of all the projects we spoke to, the team of refugeeinfo.eu seemed to have given most thought to how to reach their target group, having concluded that the prospects of reaching them digitally (or that they will find the site of their own accord) were poor. One part of this outreach strategy has been what Jeff Wishnie of Mercy Corps (and [refugeeinfo](http://refugeeinfo.eu)) describes as a “totally old-school approach”, namely advertising offline through posters and banners in refugee camps (see photo).

Banner in
Pikpa camp
in Lesbos,
advertising
the site in four
languages.



Secondly, and more importantly, the project worked with organisations providing Wi-Fi hotspots for refugees and set the [refugeeinfo](http://refugeeinfo.eu) site as the splash page, i.e. the page that automatically loads when people access the Wi-Fi. These splash pages are responsible for 2000–3000 daily visits, the vast majority of traffic. Although many users will immediately navigate away, the average visit is several minutes, suggesting that a significant number of people are actually reading the information.

The project is run by the International Rescue Committee (IRC) in partnership with Mercy Corps, Save the Children, SOS

Children's Village Serbia and Disaster Tech Lab and was developed with support from Google.

Case study: 8rbtana

8rbtana (pronounced rab-at-na) is an information service for Syrians living in Turkey, dispensing information about the asylum process, current affairs, job opportunities and more. The project was set up in 2013 by Moujahed Akil, a Syrian national who fled to Gaziantep two years previously.



The service has been downloaded 30,000 times as an app and the website has 3000–5000 visitors per day. This level of traffic allows 8rbtana, a social business with a paid team of five people working part-time, to finance itself through advertising on the site and paid content in the case of job and accommodation offers.

On the basis of our interviews with refugees, which we carried out before we learned visitor numbers to these two sites, we had expected usage of such services to be extremely low. This kind of information service would seem to be at odds with the way information was sought and shared – i.e. overwhelmingly peer-to-peer rather than from an external source.

However, the numbers tell a different story of two services which appear to

Founders
Moujahed
Akil and Prof.
Marouf Babelli
demonstrate
the 8rbnta app

have reached a significant number of their target group – albeit still a minority. And since peer-to-peer information sharing is so widespread, reliable information provided by a site like this is likely to spread and benefit others beyond the direct users.

We can draw lessons from both examples. 8rbnta is an interesting civic tech project in that it was created by Syrian nationals. This means that they have a close connection to and clear understanding of the situation of their target group, and it is likely also to add to the trustworthiness of the information in the eyes of users. We should note that this social business contributes to the economy of the host community, creating jobs and mediating the employment of others.

refugeeinfo.eu shows the importance of reaching refugees through the channels which they are already using. The project is also an impressive example of effective collaboration between different actors. The partners include a civic tech group (Disaster Tech Lab) and a corporation (Google), but the fact that the main running was undertaken by an established humanitarian organisation (IRC) ensured a stable commitment.

Education

According to UNICEF estimates more than 13 million children in the Middle East are currently out of school.²⁵ This includes nearly three million Syrians inside and outside the country.²⁶ Whereas before the conflict attendance rates in Syria were 99%, now less than half of Syrian children in neighbouring countries attend.²⁷

If this state of affairs continues, the future cost of having a “lost generation” will be tremendous: it will cost the post-conflict Syrian economy an estimated \$2.18bn a year.²⁸ In less abstract terms, a Human Rights Watch report²⁹ contains the following quote: “If a person is sick, they can get treatment and get better. If a child doesn’t go to school, it will create big problems in the future – they will end up on the streets, or go back to Syria to die fighting, or be radicalized into extremists, or die in the ocean trying to reach Europe.” The words are from Shaza, a Syrian woman whose teenage son, unable to attend school in Istanbul, returned to Syria and was killed.

Integrating refugee children poses serious challenges for the host community’s education system. Not only can large numbers of additional children put a strain on resources, there are likely to be difficulties integrating children due to differences in language, their previous curriculum, falling behind due to time spent outside education, and psychological trauma. Digital approaches can contribute to overcoming some of these challenges.

²⁵ http://www.unicef.org/mena/Education_Under_Fire.pdf

²⁶ *ibid*

²⁷ Figure is for attendance in Turkey, Lebanon, Jordan, Iraq and Egypt, the five main host countries. Source: *ibid*.

²⁸ Estimate by Save the Children as cited in “When I Picture My Future I See Nothing” by Human Rights Watch (2015), <https://www.hrw.org/report/2015/11/08/when-i-picture-my-future-i-see-nothing/barriers-education-syrian-refugee-children>

²⁹ *ibid*

Case study: elmedresa.org

Elmedresa (meaning “school” in Arabic) is an online learning platform launched by the Syrian Education Commission (SEC) in March 2016. The NGO was founded in 2013 to teach Syrian children and teenagers in Turkey in Arabic and based on a Syrian curriculum. To begin with SEC was active in 32 schools and after expanding rapidly they now provide classes up to high-school level in 322 schools to around 300,000 pupils.



Inside Elmedresa Head-quarters

SEC launched the elmedresa.org platform to further increase reach among Syrian children in Turkey not attending school. SEC is creating its own video content in a studio in Istanbul, and at the time of our research 150 videos were finished of 2,700 planned.

Syrian Education Commission is funded mainly through Turkish state educational funding, but is also supported by Unicef and through donations from the Syrian community and diaspora.

Two major barriers identified by Human Rights Watch to Syrians attending school in Turkey are language and economic hardship obliging children to work for money.

Elmedresa’s platform offers a solution to the former and aims to ameliorate the latter by providing at least some level of schooling to children who work.

Mobile delivery of learning materials via electronic devices can be valuable, but this alone is insufficient and should be accompanied by comprehensive teacher support.³⁰ One way of achieving this is the so-called “flipped classroom” model that Elmedresa uses, whereby content is introduced through videos which pupils watch online outside school, and are then clarified and consolidated in the classroom with a teacher. The Syrian Education Commission, the Turkish NGO behind the platform, hopes that this will allow them to reach more students more efficiently, since – after the initial investment of producing the videos – the hope is that it requires fewer teacher resources per child.

In terms of post-secondary education, online learning can give options to refugees who may struggle to access the university education system in the host country due to high costs or the need for legal documentation.

Case study: Edraak

Edraak is an Arabic-language MOOC platform supported by the Queen Rania Foundation. The site offers a range of online courses with titles ranging from “Project management for life” to “Introduction to solar energy”.

The project was set up with the aim of making post-secondary education and vocational training accessible to more people in Jordan, and at the beginning it did not have refugees specifically in mind as beneficiaries. It was CARE Jordan who in 2014 started offering four courses in the Azraq Camp: Child Mental Health, The

³⁰ Dahya, N (2016) “Education in Crisis and Conflict: How Can Technology Make a Difference – A Landscape Review”

Arab Contemporary City, CV Writing, and Human Resource Management. Lectures are shown on screens in the camp’s community centre once a week, and a facilitator is present to lead a discussion and elaborate on the content.

Shireen Yacoub, Edraak’s Head of Strategic Partnerships & Initiatives, explains that they are very interested in offering the service to more refugees. The biggest general problem they face, she explains, is that the concept of MOOC courses is not widely known about in the Arab world, and participation is not recognised by universities, ministries or the population generally.

MOOC courses from established providers such as edX, Udacity etc. are theoretically available for refugees to access on their own initiative – but there are a number of hurdles here. Firstly, they may not know this material exists. Secondly, the language barrier of resources in highly technical

English is likely to exclude large numbers of potential students. Edraak provides an answer to both points.

Edraak’s work with CARE Jordan is a positive example of cooperation between a tech-focussed organisation and a more established NGO. And the case study draws attention to a further important factor: accreditation. Participation in MOOC-based learning could be of much greater value to students if it resulted in recognised certification. It is on this point that Kiron offers a solution (note: Kiron is a partner of this research and this report). The concept is that students spend two years learning from MOOC content online and then transfer to offline learning at a partner university for a final year, which also issues them with a university degree. Kiron has been operating in Germany since 2015 and plans to expand operations to Turkey and Jordan in 2016.



E-learning projects also highlight the issue of access and connectivity as a potential limiting factor to ICT for refugee interventions. While smartphone ownership is widespread, digital learning interventions come with higher technical demands. Desktop computers or laptops are still important for most projects of this kind.³¹

One way of creating access to these facilities is through providing computer labs. Research has shown that efforts to do this can fail if they are too focussed on expensive and maintenance-heavy hardware – instead local procurement and maintenance are key.³² To this we would add a further pitfall we observed in Jordan, where the computer labs in camps are popular and often fully booked, but the biggest problem is the high cost of powering them by generator.

The potential of ICT education projects for refugees is examined with a geographical scope and in greater depth in “Education in Crisis and Conflict: How Can Technology Make a Difference – A Landscape Review” written by Dr. Negin Dahya of the University of Washington and published by GIZ in February 2016.

A computer lab at the Red Crescent Community Centre, Istanbul



Employment and skill development

Integrating refugees into the labour market of the host community is a challenge that is highly determined by local context. As described in the country profiles above, the situations in our three countries were very different: In Greece refugees were not seeking work because they were not anticipating settling there, and in any case employment opportunities are scarce in the depressed Greek economy; in Jordan finding work is a high priority for many but there are few opportunities open to them; in Turkey most men (and many children) are employed, often informally due to the difficulty obtaining work permits. Little is known about women. Most of them seem to be housewives and active in community work.

In situations where there are employment opportunities, job-matching platforms could provide a valuable service – indeed 8rbtina is already doing this on a small scale. However, people seeking work informally without a work permit would not use a public platform for fear of being caught, so until the position of refugees within the host labour market is stabilised, the potential of such services will remain limited.

Where the main problem is that opportunities don't exist, it might be possible to create positions of social and community work or volunteering so that more refugees are able to engage in meaningful activity which benefits the community and through which they gain experience and skills – without necessarily needing a work permit. The 3DMena programme has this effect.

³¹ We are referring here to a survey in Dahya (2016) of ICT4E projects in crisis and post-conflict settings, p.16

³² *ibid.*

Case study: 3DMena

3DMena is a social innovation hub and founding partner of Refugee Open Ware (ROW), a global humanitarian innovation consortium.

3DMena provides the infrastructure (3Dprinters) and training in their use. It also researches, produces and licenses items which can be printed, including prosthetic legs, prosthetic hands and visual feedback tools for blind people.

The first devices have been printed in King Hussein Business Park including components of several prosthetics. So far 420 refugees have been trained in a cutting edge skill-set: 3D design, 3D printing and manufacturing, digital fabrication, hardware incubation, and physical computing.

Thus 3DMena serves the dual purpose of manufacturing prosthetics for people that need them and providing training in the up-and-coming technologies, increasing participants' future employability.

Case Study: ReBootKAMP

Another project to train refugees in advanced tech skills, ReBootKAMP takes a concept which has already been successful in the USA – namely, an intensive 16-week course in software development (using the curriculum of Hack Reactor) resulting in a qualification well respected by tech companies – and exports it to Ammaan. For the first cohort 33 students were selected from 800 applicants, half of them refugees and half from the host community.³³

Producing a cohort of highly capable techies in Jordan has benefits on many levels. It gives the students themselves better prospects of finding work. But it does this not through making them more competitive in an overcrowded labour market, but rather in a way that can help drive the growth of the tech sector in the host community, thereby creating jobs.

Finally, members of the refugee community who are advanced tech users could act as multipliers to raise the overall levels of tech literacy. And at the same time they could contribute to a shift within the 'ICT for refugees' movement beyond simple user-centred design towards co-creation and self-dependence: ICT solutions for refugees by refugees.

³³ <http://rbk.org/>; accessed 13/05/2016

Strengthening systems and the work of NGOs

The projects examined so far in this section have used ICT in the way they directly interact with refugees. But in addition, digital technology can have a great impact in helping NGOs and other actors to be more effective, even if the support they ultimately offer does not have a digital element.

Turkish NGO Support to Life uses various self-developed software to organise their work more efficiently and increase accountability. They use tablets to conduct need assessment surveys, and the evaluation and processing of the responses are automated, and share their data with other NGOs through the Sahana platform. Spark, a Dutch NGO which awards scholarships, has a digitised application process and their outreach includes going with a tablet to areas where refugees live and helping them to make an application.

The Marhacar initiative has been very effective in improving complicated logistical coordination on Lesbos, using only existing software – primarily WhatsApp. The project could serve as a blueprint for future scenarios where a very flow of people places extreme pressure on logistical infrastructure.

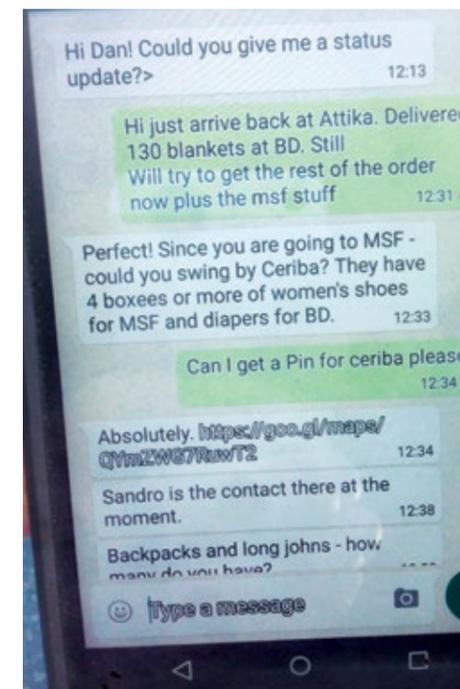
Case study: Marhacar

In autumn 2015 the number of refugees arriving on Lesbos reached a peak – sometimes thousands per day. Providing so many refugees with the food, clothing, toiletries that they needed presented a huge logistical challenge. These items arrive first in warehouses where they need to be sorted and delivered to the various camps on the island run by different organisations.



Marhacar is an initiative which fulfils the role of coordination and delivery with the help of ICT – i.e. WhatsApp and Google Drive – and a globally distributed network of volunteers. In the centre of the action are the dispatchers who work shifts remotely – some sitting in Texas and Malaysia in what is for them the middle of the night. The dispatcher on duty is in contact with three other groups through WhatsApp channels (see photo). The camp staff tell the dispatchers what supplies are required where; they then instruct the warehouse staff to pick the orders and finally they direct the volunteer drivers who the collection and delivery. "It's a bit like playing a video game," say Ayu Abdullah, a dispatcher living in Kuala Lumpur.

Daniel, one of the volunteer drivers receiving his next instructions



WhatsApp communication between dispatcher and driver

The project was created by the team at Startup Aid who identified the need after spending time on the ground. Marhacar is a good example of making effective use of existing digital media (primarily WhatsApp), and is encouraging in quickly getting buy-in from a wide range of organisations involved in running the various camps.

7. Insights from a civic tech perspective

Where civic tech approaches can be impactful

In part 2 we outlined some of the characteristics of civic tech – for present purposes broadly defined as innovative tech-based initiatives from actors that are new in the humanitarian and/ or development cooperation field. Specifically in responding to the refugee crisis and managing mass migration, the adaptive nature and rapid development of civic tech approaches can be valuable in situations when circumstances are changing quickly – Marhacar being a good example which achieved considerable impact quickly and with few resources.

As the case of 3DMena shows, civic tech approaches can be beneficial in providing not only direct interventions but also ways in which refugees can become involved, gaining new skills. An increase in local civic tech activity can also bring economic benefits for the host communities.

Complementarity of ‘old’ and ‘new’ humanitarians and development cooperation actors

More established humanitarian organisations, NGOs and development organisations thus stand to profit from working more closely with these new actors. Indeed, the benefits would go both ways, with the established actors counteracting points on which civic tech projects can be weak.

For example, while civic tech approaches can be innovative, they can be naïve in their belief in the ability of technology alone, rather than viewing ICT as just one part of a solution to a human problem. Or else suffer from lack of on-the-ground experience – especially if built by people outside the host community. This can mean that the project is based on misplaced assumptions about the context and need. Or even if this not the case, a civic tech group might build a useful tool but lack the resources to reach the target group and to sustain and scale the project.

Collaboration between the two groups could combine the innovation, expertise and energy of civic tech with the nuanced understanding of the situation and more stable organisational structure of established actors. One way of achieving this would be to rethink procurement such that it specifies the problem in careful detail but does not specify the solution to leave scope to create something new.

The Norwegian Agency for Development Cooperation (Norad) is currently doing just this by holding EduApp4Syria, an innovation competition to create a learning app for Syrian children. At the time of writing, five winners had been selected from 78 applicants, but had not yet been publicly announced.³⁴

³⁴ <https://www.norad.no/en/iron/thematic-areas/education/innovation/edu-app4syria/>



Bridging the gap

Historically the two groups have been somewhat sceptical of each other and exchange and collaboration has been limited. But this may be starting to change. Indeed, three of our case studies – refugeeinfo.eu, Edraak, and Marhacar – see civic tech groups and established actors working well together.

Jeff Wishnie, who after years working in Silicon Valley start-ups now works for Mercy Corps, said that the West African Ebola crisis was a watershed in terms of established humanitarians and civic tech groups talking and working together. Wishnie talks of “hyperconnectors” that exist at the intersection of different groups who play a crucial role in this exchange.

Nevertheless, the two groups still operate not only with different mindsets, but also talk and plan in different terms. More could be done to promote a constructive dialogue between different kinds of actors to reduce prejudice and mistrust and encourage cooperation.

There are some challenges which all projects in this space should bear in mind:

Challenge 1: Access, tech literacy and usage among refugees

Any projects in which refugees themselves are the intended users of an ICT solution should be mindful of the very narrow use for which most of the refugee population puts digital technology, as described in part 4. It would be a serious error to start from the fact that smartphone penetration is fairly high and then to start imagining what software would be theoretically possible to develop for such smartphones.

On a point of detail: as mentioned above, only a small minority of refugees use email. This has implications beyond simply how to contact people: it means that any service aimed at refugees which requires an email address, e.g. as a mode of authentication or create an account in the Google App Store to download an app, is likely to exclude a large proportion of the target group.

Ask the question: Do different refugee groups have access to the technologies and services in question, not just technically, but also culturally, socio-economically, politically or legally?

Challenge 2: Outreach and trust

Even if a project is based on a sound interpretation of circumstances and provides a valuable solution, that is not yet a guarantee that it will be used and successful. Getting people to use it requires active outreach. It is delusional to believe “build it and they will come”. The best places to reach target users are those places where they already spend time – both online channels and offline spaces.

An effective outreach strategy includes raising not just awareness but also trust, and making the value to the user immediately tangible. Working through networks that have the personal trust of the refugees could help here, for instance the NGO workers and volunteers in camps – and above all, more technologically individuals within the diaspora.

Challenge 3: Data protection and security

Investing in gaining a true picture of refugees’ situations also includes understanding the risks they face. The starting point should be the principle of Do No Harm. The identity of refugees is sensitive information connected, in many cases, to grave harm potential. Many refugees left their homes because their lives were in danger – if their location became known they could be targeted, or family members they left behind could be.

Thus it is imperative that any projects handling any data which could personally identify refugees use strict ethical data practices. This includes risk analysis whenever such data is shared with (including, in some cases, sold to) third parties, and robust security and protection against data being hacked or intercepted. All parties involved

should conduct a risk analysis before they start to develop a project, including gaining an awareness of which data is sensitive in which context. For instance a refugee unable to obtain a work permit but nevertheless hoping to find work informally is likely to shy away from registering on a job platform with personal information.

The level of tech literacy among many refugees is often low, which adds another level of complication to the issue of informed consent around data collection and usage.

Appropriate levels of awareness and action on this are often lacking. Some civic tech groups and projects have given too little thought to the risks. Established humanitarians and development cooperation actors are less likely to underestimate the risks, but may lack necessary technical expertise. All parties could benefit from dialogue and access to resources on the topic of “responsible data”.



The 'Better Days For Moria' Camp on Lesbos



8. Recommendations and conclusion

1. **Work with what already exists.** Building a good digital service or piece of software is difficult, and requires a lot of time and resources. Projects should always consider, before creating something new, whether an existing service could be used or adapted to fit the purpose instead. This principle extends not just to operational tools but also content and resources which might be digitally available – particularly for educational projects.
2. **Lower the barriers for usage** as far as possible whenever refugees are the intended users. Our research indicates that using Facebook and WhatsApp will be most accessible for refugees. Even creating a website creates a significant barrier; creating an app that must be downloaded, or requiring an email address, far more so.
3. Consider programmes to **increase tech access and literacy**. Several kinds of projects that could have impact – digital learning initiatives in particular – demand a higher level of access and tech literacy than is currently prevalent among refugees. Steps could be taken to increase access – e.g. providing hardware to specific groups or for computer labs, or providing discounted mobile data packages. Local procurement should be favoured. But note that increased access is not enough; it also requires behavioural change, which can take time.
4. **On-the-ground experience is key** to understanding the complex reality of refugees' situation. Try to operate with principles of user-centred design, and ideally its logical conclusion of co-creation with refugees.
5. **Outreach is likely to be the biggest hurdle.** Even if the project is based on an appropriate understanding of need and tech usage, making users aware of it requires a thought through strategy and plenty of work.

6. **Prioritise responsible data practices.** The potential harms pertaining to refugees should not be underestimated whenever personally identifiable information about them is collected, stored or shared with third parties. Organisations such as Responsible Data Forum are creating guidelines and resources to support here.
7. **Engage the civic tech community.** The new actors can bring expertise, innovation and dynamism into humanitarian and development cooperation sectors. Consider different kinds of financial and non-financial support, not just to individual projects but also on a systemic level: investing in hubs, networks, hardware and connectivity.

8. **Facilitate dialogue and collaboration between different groups of actors.** Acknowledge the differences in approach, the relative strengths and weaknesses and work towards mutually complimentary cooperation.

Conclusion

The current “refugee crisis” in Europe, the Middle East and Northern Africa is prompting the emergence of a remarkably diverse and dynamic international eco-system of ICT for refugee projects. Our field research granted us an insight in the context of a particular moment in three places. But out of this we hope the analysis presented in this report acts as a broader overview of areas of activity and potential which is of use to practitioners and policymakers.



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About betterplace lab

Founded in 2010, betterplace lab is a think-and-do-tank researching the intersection of digital innovation and social good. Projects include the betterplace lab trendradar, a database of innovative civic tech projects worldwide, and the lab around the world field research programme which has investigated civic tech activity in 21 countries since 2014.

About Kiron

Kiron Open Higher Education is a social start-up gGmbH, founded in 2015. Kiron gives access to higher education, combining online and offline elements, for displaced people – worldwide, free of charge and regardless of their legal status. Thereby Kiron aims to foster integration in the host country and create long term perspectives for displaced people.

About GIZ Sector Project “Internet and sustainable development”

The use of digital tools has increased dramatically over the last twenty years. This has led to fundamental changes in social, political and economic structures. With the increasing digitalisation of the society as a whole, new opportunities for prosperity, quality of life and sustainability arise at a global level. The sector project “Internet and sustainable development” supports the Federal Ministry for Economic Cooperation and Development (BMZ) in exploring new fields of action, practices and instruments for development cooperation.

Appendix: Methodology

We interviewed a total of 108 refugees, approximately 50 % of them female.

We conducted a total of 39 interviews on the project side, i.e. either people engaged in running an ICT for refugees project or who could offer another relevant perspective on the field.

Selecting interview partners among refugees:

In Greece, where we had access to camps, we walked into them and engaged the people we met there in conversation. In Jordan and Turkey, where we were not able to access camps on security grounds, we interviewed refugees that we met through the NGO projects that we were in contact with or at community centres.

Selecting interview partners among project staff:

We identified our interview partners through desk research, existing networks, and the snowball effect of one interviewee introducing us to others. Our approach and questions were informed by the experience of betterplace lab’s lab around the world field research programme, which has investigated the civic tech scene in 21 countries since 2014.

Country breakdown:

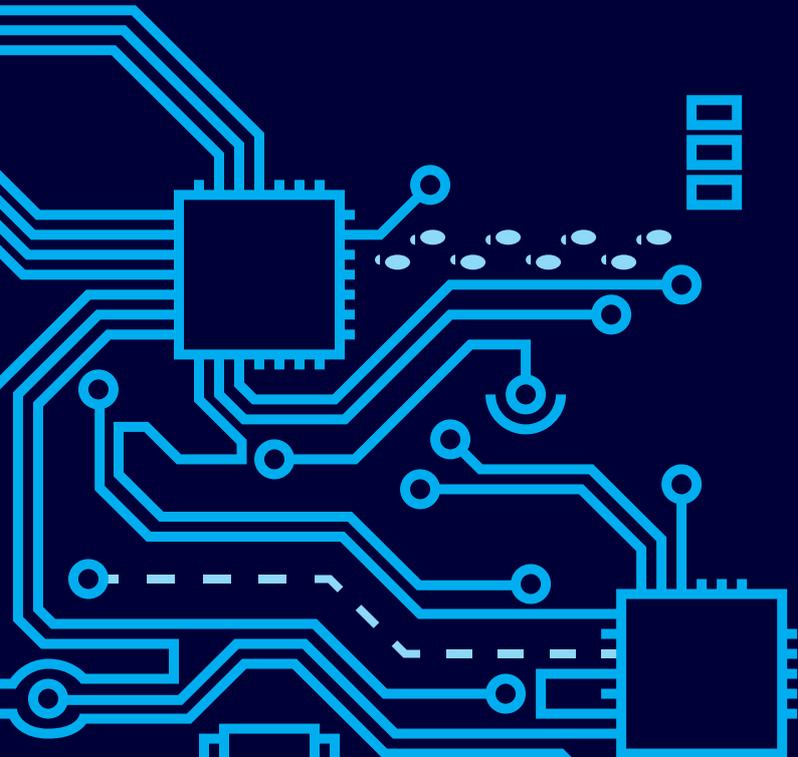
Greece: On 16 and 17 March 2016 we talked with 35 refugees in four camps on Lesbos: Pikpa, Kara Tepe, Olive Grove (aka Better Days for Moria) and Mantamados transit camp. Those at Mantamados (we spoke to three there) had been on Lesbos for a few hours; the rest had been on the island for between 3 and 30 days. Their nationalities were: 22 Syrians, 7 Afghanis, 3 Pakistanis, 2 Iraqis, 1 Iranian (in terms of nationalities, a roughly representative sample of arrivals in Greece). 40 % of them were female.

Jordan: On February 25 and 26, 2016 we talked with 23 refugees. These were urban refugees living in Amman and Mafraq, with the exception of two individuals who were living in camps (we were unable to access the camps ourselves on security grounds). Their nationalities were: 19 Syrians, 1 Iraqi, 3 Palestinians. 30 % were female.

Turkey: Between 21 and 25 March we spoke with 50 urban refugees in Istanbul and Gaziantep. These had been in Turkey for between 1 and 3 years. They were 90 % women. The reason for this bias is due to the fact that most male refugees work and so were more difficult to reach through NGOs and community centres during daytime.

Interview content: Our approach was essentially ethnographical. The overarching questions we were interested in were (1) perception of own situation and needs, (2) access to and use of digital technology and level of tech literacy, (3) sources of information, perceptions of trustworthiness around information sources. To establish trust, and in order to be open to unanticipated findings, we let conversations develop naturally rather than using a set questionnaire.

Responsible data: To protect the anonymity of our interview partners among refugee partners we did not ask their names or for other personally identifiable information, and we did not document the interviews with audio-recording or photos; we made notes during the interviews and immediately afterwards. If we took photos, we would ask for informed consent (explaining that the picture may be published in a report for the conference to be held). Informed consent was also given by all interview partners among the civic tech and humanitarian communities, both for quotes and photos.



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