Mapping Refugee Media Journeys
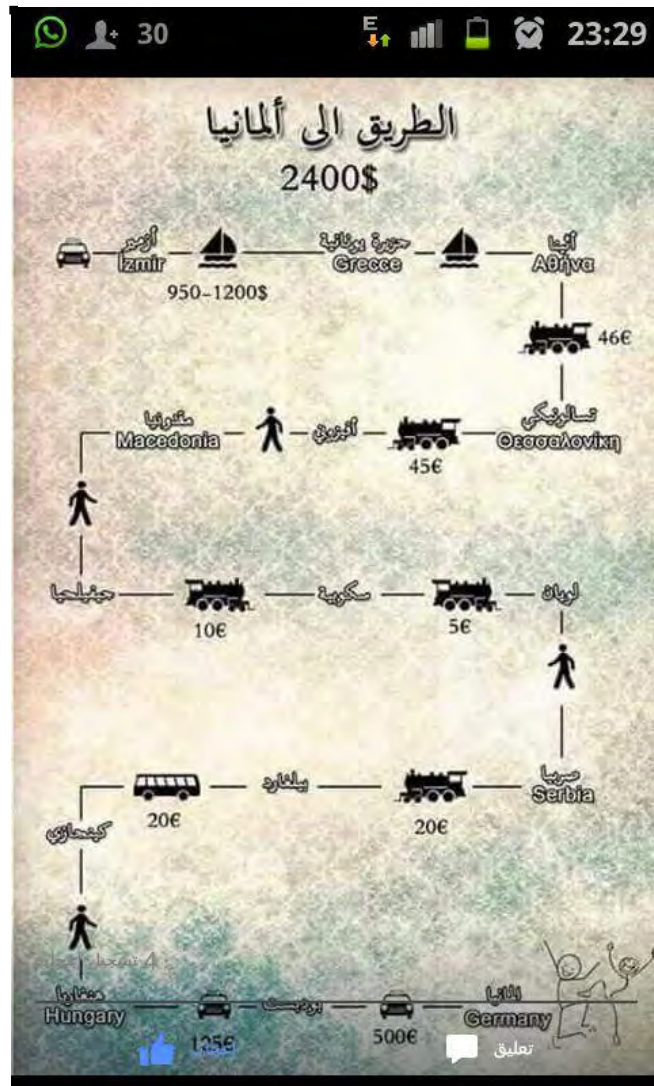## Smartphones and Social Media Networks

Research Report

Authors: **Marie Gillespie, Lawrence Ampofo, Margaret Cheesman, Becky Faith, Evgenia Iliadou, Ali Issa, Souad Osseiran, Dimitris Skleparis**

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Towards effective digital provision for refugees

For refugees seeking to reach Europe, the digital infrastructure is as important as the physical infrastructures of roads, railways, sea crossings and the borders controlling the free movement of people. It comprises a multitude of technologies and sources: mobile apps, websites, messaging and phone calling platforms, social media, translation services, and more. The smartphone is an essential tool for refugees because it provides access to a range of news and information resources that they depend on for their survival. Access to digital resources plays a crucial role in the planning and navigating of their perilous journeys, as well as in their protection and empowerment after arrival in Europe. But despite their utility, mobile phones have a paradoxical presence in the lives of refugees – they are both a resource and a threat. The digital traces that refugees' phones leave behind make them vulnerable to surveillance and other dangers.

The research on which this report is based was conducted collaboratively by The Open University and France Médias Monde between October 2015 and April 2016. Our aim was to assess whether the provision of news and information *for* refugees was adequate to their needs. So much is written *about* refugees but little *by* or *for* them. Their voices often get drowned out in the cacophony of media and political debate about how to tackle "the refugee crisis".

The problems are exacerbated by the lack of a pan-European approach to the provision of reliable, relevant and timely information. Policy and practice are uncoordinated and ineffective. There are many initiatives using apps but the field is fragmented and there is little or no collaboration. It is our common European problem. European member states alongside international news media need urgently to work together to find solutions to the worst humanitarian crises in recent history.

There are significant ethical and practical difficulties in researching refugees, including privacy, security, trust, and informed consent. Our research team was very mindful of these problems. Most of us have had direct experience as researchers and/or workers in NGOs and refugees' support groups. The research was carried out on a shoestring budget offered by Centre for Research on Socio-Cultural Change at the Open University. We are very grateful to the researchers who gave their time generously, some on top of already heavy workloads. Professor Heaven Crawley and her colleagues generously shared with us a database of some 500 interviews conducted as part of the MEDMIG project.

As a multi-disciplinary team we are skilled in using a range of different research methods. Mixed methods enable us to offer diverse perspectives on the problem and to seek effective solutions to the information gaps that refugees face, and which often make the difference between life and death. We also involve refugees themselves in participatory research practices. We want to ensure that understanding the actual uses of technological, news and informational resources will direct any initiatives to create new resources and so contribute to their success. Refugees are not a homogenous group. The experiences of men, women and children in different places are profoundly different, as are their demographic characteristics and ideological positions as well as linguistic, social and cultural competences and digital literacy. All these factors need to shape the development of any resources for refugees.

This report summarises the first of three planned phases of research. We hope this work will lead to the provision of valuable resources for refugees. This first phase feeds into plans to develop digital resources for refugees in Europe and to make recommendations to support such plans. The second and third phases will involve developing resources and monitoring and evaluating progress.

Please get in touch if you wish to share information or comment on the report.

Contact: marie.gillespie@open.ac.uk

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Summary of findings and recommendations

Smartphones and digital connectivity are essential for refugees seeking protection and safety in Europe, but they also carry risks for them.

This research identified a huge gap in the provision of relevant, reliable and timely digital news and information for refugees on their journeys and upon arrival in Europe.

There is a growing number of digital resources designed for refugees. Most are inadequately resourced and unsustainable. They can do more harm than good if they disseminate misinformation. Quick 'tech fixes' do not work.

Governments and newsrooms in Europe are failing to provide what refugees need, because they fear that they may be seen to be facilitating attempts to seek asylum in Europe.

This is forcing refugees to rely on alternative, often unverified and unreliable sources of news and information circulated on social media, particularly by smugglers and handlers. This is endangering them and exacerbating an already dire situation.

We hope that this report will encourage the European Commission to seize the initiative and help states and organisations to fulfil their obligations to provide vital and timely information under the UN Refugee Convention.

We urge states and news organisations to work together with tech companies, NGOs, and other stakeholders, in order to develop sustainable partnerships which in turn can orchestrate a coherent news and information strategy *for* and *with* refugees: in their home countries, on their journeys, and when they arrive in Europe. This is also important for the digital management of migration.

This report concludes with best practice principles for such a strategy.

News and information deficit

Despite the high level of media reporting *about* refugees, there is inadequate provision of reliable news and information *for* refugees.

Smartphones are **an essential tool and also a threat** for refugees. They are essential in that they allow them to navigate their journeys, use translation tools, access vital services (legal, medical, food and shelter, support networks) and to keep in touch with friends and family, especially those refugees who have already made the journey. But smartphones are also a threat because the digital traces that they leave behind make refugees vulnerable to surveillance by state and non-state actors, and intimidation by extremist groups.

Most of the Syrian refugees we worked with were well educated and digitally literate. Yet they still do not know who or what information to trust. **Misinformation is rife.** They are constantly worried about staying connected, finding access to wifi and phone charging, and most of all about staying safe both online and offline. Fears about safety and criminalisation by the authorities force them to go 'underground' digitally to get the information they need. But this exposes them to additional dangers, not least to exploitation by smugglers and other unreliable sources on social media.

Our report highlights the ways in which refugees are being **endangered by the failure of European governments and news media** to provide adequate, reliable and timely information and news for them as they make their journeys from places like war-torn Syria and Iraq to

Europe. As a result they are forced to depend on information circulated by smugglers and handlers on social media networks that may end up criminalising them.

The report expresses concern that this **news and information deficit** is in breach of the United Nations' 1951 Refugee Convention, because refugees are no less entitled to accurate and relevant information than anyone else. The problem is that the so-called 'refugee crisis' is such a politically hot issue that news organisations and government agencies are shying away from fulfilling their responsibilities, for fear of being seen to facilitate refugees coming to Europe. Paralysis has set in – a paralysis that only an organisation like the European Commission can help to break.

Key background information about the research

This research on 'Mapping Refugee Media Journeys: Smart Phones and Social Media Networks' was led by Professor Marie Gillespie at the Open University in partnership with France Médias Monde.

The research was carried out between September 2015 and April 2016. It is an interdisciplinary project drawing on a range of academic and practitioner expertise inside and outside the OU. Some researchers contributed to the research pro bono.

The team used mixed and mobile methods: serial interviews with Syrian and Iraqi refugees about their uses of smartphones and social media along their journeys, an analysis of refugee social networks (Facebook and Twitter especially) by computer scientists, and interviews with staff at the European Commission, international broadcasters and NGOs.

The report concludes with a best practice guide for organisations seeking to provide digital resources for refugees on smartphones.

This report summarises the first phase of research. There will be two subsequent phases that will similarly adopt the 'journey methodology' in order to track the rapidly changing nature of refugee experiences, their news and information needs, and the confused and confusing differences in policy implementation.

Research team

Project Leads

Professor Marie Gillespie (Centre for Research on Socio-Cultural Change, The Open University)

Claire Marous Guivarch (France Médias Monde)

Researchers

Lawrence Ampofo was awarded a PhD in social media, security and online behaviour at the New Political Communications Unit at Royal Holloway University of London. He is the director of Semantica Research, an analytics consultancy that uses insights from digital data to inform communications and marketing strategies.

Margaret Cheesman studied English and Classics at King's College London. She has contributed to several projects at the Centre for Research on Socio-Cultural Change including a citizen journalism training initiative in partnership with the BBC World Service. She was a researcher on the British Council's UK-Iran Season of Culture. Currently, she is Research Assistant on CReSC projects which include *Mapping Syrian Refugee Media Journeys: Smart Phones and Social Media Networks* and a cultural value assessment of the British Council's *Shakespeare Lives* project. Margie also works as Production Assistant for The Observer.

Marie Gillespie is Professor of Sociology at the Open University and a co-director of Centre for Research on Socio-Cultural Change. Her key research focus is on media and migration and she has published widely in this field. Most recently she has been working on European Cultures of Diplomacy.
http://www.open.ac.uk/socialsciences/main/staff/peopleprofile.php?name=marie_gillespie

Becky Faith is a Research Officer at the Institute of Development Studies. She was awarded a PhD in the Department for Computing and Communications at the Open University. Her PhD looks at mobile phones use by homeless and unemployed women. She has fifteen years' experience in research and development in uses of technology for human rights and development organisations.

Evgenia Iliadou studied Sociology at the University of Crete and Social Anthropology and History at the University of the Aegean (Greece). She is currently a PhD student at the Open University. Her research focuses on issues of irregular migration, racism, visible/invisible violence, borders and human rights. She worked as a humanitarian worker in detention centres for border crossers mainly in Lesvos Island (Greece), but also in other regions in Greece.

Ali Issa is a PhD candidate in Political Science and International Relations at Sciences Po Paris. He's currently a research analyst for the MENA region at France Médias Monde.

Claire Marous-Guivarch is Director of Research at France Médias Monde.

Souad Osseiran is a PhD candidate at Goldsmiths College in the Anthropology Department. Her thesis focuses on the ways Syrian migrants/refugees, wanting to move on to Europe, experience and mediate enforced waits in Istanbul. Prior to starting the PhD, Souad worked with the International Catholic Migration Commission in its Beirut office as an interviewing case worker.

Dimitris Skleparis is a Postdoctoral Research Fellow at the Hellenic Foundation for European and Foreign Policy (ELIAMEP). He completed his PhD in Political Science in the School of Politics and International Relations at Queen Mary, University of London (UK). His research focuses on

irregular immigrants, asylum seekers and security. He has published papers related to the securitisation of migration and asylum, migrant activism, far-right extremism, and migrant- and refugee-serving civil society actors in international journals and collective volumes.

Acknowledgements

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Key findings by chapter

Chapter 1. Refugees and smartphones: media content and discourse analysis

The findings in this chapter are based on an analysis of 342 English-language news media items found in a Lexis-Nexus search of "refugees and smartphones" and related terms.

- The smartphone is represented in news media as a 'migrant essential' for navigating their journeys, accessing practical information, and keeping in contact with family and friends, as well as smugglers and coastguards.

- The phrase 'smartphone-wielding refugee' (used in an *Irish Times* article) encapsulates a deep ambivalence in the coverage of "smartphones and refugees" – a vital tool for refugees and also a potential threat for European citizens due to its power to mobilise refugees.

- After the Paris attacks in November 2015 the smartphone became a 'terrorist essential' instead of a 'refugee essential' in some reports.

- Stories of way-finding and witnessing dominate the media coverage, but these tropes also mask the differences in refugee experiences of smartphone use: the instability of connections and the poverty that leaves many refugees without smartphones.

- Gendered and generational differences in access and use are rarely touched upon but hugely important.

- Staying connected with family en route is important: news is shared with them mainly through WhatsApp and Viber, because these apps are not subject to surveillance.

- The mobility which smartphones afford refugees also makes them vulnerable to unwanted state surveillance that, in turn, can curtail their movement.

- Smartphones are a living, expanding photo album and an archive that documents the digital passage to Europe.

- Phone cameras are used for 'citizen witnessing' of violence and harassment by authorities, smugglers, and combat forces, including Islamic State militants – as such they can be dangerous objects.

- The archive of refugees' photos, texts and data and their digital traces make them vulnerable to a variety of risks and threats including unwanted state surveillance. See Chapter 4 on Social Network Analysis of Facebook and Twitter.

- Phones are also a form of 'currency' – they can be bought and sold, traded and upgraded, exchanged for goods, stolen, lost and found.

- The smartphone's navigation and wayfaring functionality relies on refugees having data access in each new country they arrive in; not all have smartphones or can make use of this functionality.

- Coverage is dominated by young, male Syrians who appear to be physically fit, well-educated and digitally literate. Via smartphones, they pass tips to refugees that follow them about routes, how to approach authorities, cross borders, and cope with everyday challenges on the way: e.g. "wear smart clothes and use hair gel". Afghans and some Iraqis in contrast appear to be less well resourced: they use a basic, cheaper mobile phone.

Chapter 2. Academic literature review

This chapter discusses research on refugees and the communications, social networking, navigation and multi-media capacities of mobile phones – in academic terms, their 'affordances', i.e. the possibilities for action which they offer various kinds of users. It also discusses the widespread narrative of the mobile phone as a 'solution' to the refugee crisis.

- Mobile phones provide 'network capital' to refugees and also facilitate the work of traffickers and smugglers

- Network capital creates a stratified 'mobility regime' within which some individuals are rendered more mobile than others, and some individuals are completely immobilised

- Surveillance technologies are also weapons at the disposal of state and non-state actors, which enable them to distinguish the 'desirable' refugees from the 'undesirable' irregular migrants at the borders.

- Surveillance technologies make migrants' journeys even more dangerous and precarious, as those cast as 'undesirables' try to remain invisible to the gatekeepers, while at the same time these technologies can act as a kind of defence mechanism and means for survival.

- Watching, monitoring and rendering visible are not inherently securitising, exclusionary, or repressive practices and can be used to serve those in need.

- Activist groups and NGOs take advantage of smartphone technology and surveillance techniques on refugees' behalf in order to offer them protection.

- The mass production and wide availability of new technologies has 'democratised' surveillance and has undermined traditional hierarchies of visibility. The 'watched' and those who stand in solidarity with them can make human rights claims through acts of digital witnessing, as well as maintain their identities and life narratives.

- Acts of digital witnessing come at the cost of increasing the risks of exposure to control and coercion.

- Smartphone technologies have offered the opportunity to professionals and volunteers to reach out and provide 'digital care' to refugees and migrants in need

- Techno-optimism and its narrative that sees the mobile phone as the 'solution' to the refugee crisis can also disempower refugees by always assigning them the role of the powerless victim and not the empowered agent.

- The social divisions that mobile phones create mean that grave human rights violations can occur in instances where refugees are deprived of access to technology.

- In many instances where access to smartphones is limited or unavailable, posters, stickers, leaflets and other non-digital means of communication offer some of the help that refugees need.

- Migrant deaths occur in areas with no mobile phone coverage, and most rescue operations are initiated by migrants using their mobile phones

Chapter 3. Refugees' media journeys: interview analysis

Interviews were conducted with mostly male Syrian and Iraqi refugees in their 20s in Paris and Cherbourg between November 2015 and April 2016. They were asked to report on their media journey – the role that digital technologies played in their homeland, on their journey and upon arrival in Europe. They were asked to identify gaps in their news and information needs. Further interviews have been conducted with refugees in London and Swansea and we will complete these and report on them in the next phase of the research.

Back home

- Refugees watch international news channels but in some conflict zones, mainly those under ISIL's control, people suffer from regular power cuts: they don't have easy access to TV and the internet so mobile phones are a more important technology of news consumption.

- They decide to leave because of the civil war and violent conflict, fear for their lives and their future – not because news stories or information inspire hopes and dreams of a better future in Europe.

- Some leave with their family; most men leave alone and hope to catch up with their family later on. They may have to sell and later buy a phone once they cross the border as it can be risky carrying a mobile if caught by the authorities.

- Women and children are particularly vulnerable to threats and risks to health and safety but lack access to reliable and trusted news sources once. This is a very important gap to plug.

En route

- Refugees, when resources are available, use mobile phones like most of us do - to keep in touch with friends and family but they are even more essential for refugees en route.

- Refugees rely on their smartphones as an essential navigation and communication tool – many say that the smartphone is 'more important than food or shelter.'

- They use their phones mainly on Wi-Fi when available via WhatsApp and Viber.

- They use them to get informed by those who left before them and to contact those who can help them, for example, the coastguards.

- Access to information about where to seek help and a phone call can often make the difference between life and death (for example, for an entire boat of people or a family).

- They use phones to navigate their chosen routes via services such as Google Maps.

- They also use them to get informed about relevant news events at home and in Europe that might affect their journeys.

- Refugees mainly consume international news that is shared on personal social networks.

- News is trusted when it is vetted and shared by respected friends, family and individuals through social media, mainly Facebook, Twitter the International news channels' apps.

- Refugees face many problems in accessing reliable news and trusted information.

- If they do not trust their smuggler, they take a huge risk on the boat trip but they also use navigation tools to check whether the smuggler is taking them to the agreed destination. Sometimes, they don't even know where they are going.

- They face many technical problems related to their phones (battery and SIM card), and get extremely anxious about which road to take in order to avoid the police because safe and legal means of travel and escape to safety are limited as border controls tighten or close.

- They buy one or several SIM cards if they can afford it. If not they keep their phone number and connect to Internet when they have Wi-Fi access, which is not often.

- They make good use of translation tools at borders which can be of great assistance, for example, explaining if a member of the family is ill and needs urgent medical care. In one dramatic case reported to us, a refugee woman was able to give birth safely due to the use of the translation tool on her husband's smartphone.

On arrival in Europe

- They face many problems including: housing and shelter, food and clothing, access to social services, legal problems about asylum seeking, health issues (first aid, insurance or emergency), language problems (they don't speak French and find it hard to communicate with locals) and practical difficulties (how to take the metro, buy a new SIM card or buy food from the supermarket).

- Refugees report that they are disappointed by the treatment they have received from the French government. They believe that promises made to them by French authorities were broken.

- They stress the need for better provision and resources by French authorities and news media.

- They need faster and easier access to information about the support systems and organisations available to them.

- Their journey does not end on arrival. Rather a new journey begins. Their mobile phones could be a tool that helps them navigate their journeys through European systems, institutions, culture, language and way of life

- Refugees recognise that their phones can provide information and protection.

- They believe that news organisations have a very important role to play in their protection and could do a great deal more.

Chapter 4. Refugee uses of Facebook and Twitter: social network analysis

The findings in this chapter are based on a social network analysis of the Facebook groups that were identified by the refugees interviewed as most popular and frequented by themselves and their social networks.

- 3463 tweets based on the main Twitter accounts followed by the refugees interviewed in Paris formed the basis of the Twitter network visualisations presented in the chapters. These indicate the key influencers and flows of information among refugees.

- There is a notable fear both of surveillance and sousveillance among refugees which results in them shrouding their identities on social media and online via use of avatars and pseudonyms.

- This makes refugees online and on social media, especially those in transit, a particularly difficult group to research.

- Despite this, if mobile phones are lost or damaged, Facebook accounts enable a permanent if intermittent perpetual presence.

- Engagement with news is driven by curiosity and need to uncover the facts around major events or news of most direct personal or local relevance.

- They access international news sources via social media and news feed apps shared among friends and family.

- Refugees connect to Facebook sites mainly in order to communicate with family, friends and influential figures in their social media networks - from prominent and respected activists and NGOs to investigative journalists, political commentators, public intellectuals and participants in controversial debates.

- Individuals are perceived to be trustworthy when they give a clear commitment to supporting to the interests and welfare of refugees.

- Although it is not easy to discern the identities of refugees online, our qualitative content and discourse analysis (though limited in scope) suggested that when refugees were confident about privacy and/or anonymity, they expressed their political views without restraint and often in highly emotional registers and hyperbolic tones.

- Relationships in social media networks are shaped not only by kinship and friendship but also by pragmatic and ideological factors. The spaces of social media discussion and debate among those we identified as refugees tended to be fractious, intensely politicised and polarised.

- Influential figures direct the flow of engagement and information within the social media network and this reinforces and maintains insular ideological enclaves.

- Ideological insularity was a common feature of interactions and flows on social media.

- We observed constant commuting between open/public and private/closed Facebook spaces.

- The most trusted and influential people on Twitter are those who are close to the ground in Syria and other conflict zones. They have friends, fans and followers who amplify their message content and opinions.

- Key influencers can mediate between cultures, languages and groups and perform the role of cultural diplomat and broker.

Chapter 5. Digital resources for refugees: best practice

The findings in the first part of this chapter are based on an analysis and synthesis of the principles of good practice in the provision of digital resources for refugees as the UNHCR, the UK Department for International Development and the University of Oxford Humanitarian Innovation Project.

The findings in the second part of the chapter are based on three case studies that were selected as models of good practice by our researcher based on her experiences over htelast seven years as a social worker for an NGO in Lesvos.

The chapter focuses on those principles that refugees find relevant to producing high quality, user-focused, sustainable, trustworthy, secure resources that can help them. The provision of resources for refugees should seek to have the following **components of value**:

- *User-centred***:** User involvement in design, implementation and evaluation is vital and research led: all involved from designers to content producers should be culturally and ethnographically informed

- *Secure and private*: Crucial

- *Checked, curated and collaborative***:** Consider reusing/repurposing of existing resources rather than creating from scratch

- *Add value:* Ensure effective field scanning to ensure that the project does not replicate an existing resource and has a Unique Selling Point (USP)

- *Trusted and credible:* Resources must be trustworthy, credible and regularly updated

- *Accessible:* must be easily accessible – cost, technology, language and literacy

- *Sustainable*: long term planning and resourcing is vital to ensure that an initiative is not launched and then abandoned.

- *Public Purpose*: Aligning organisational goals with the project is a must as is ensuring that the resource produced has a clear purpose

In preparing resources for refugees one needs to consider their utility value and function for particular groups of refugees at different stages. The main gaps in information are outlined below but a selective approach is required as no one digital resource can cover all of them. They include:

- travel advice/mapping/visas,

- finding people,

- managing donations and requirements,

- access to electricity and wifi,

- access to healthcare,

- Airbnb-for-Refugees type projects,

- finding employment,

- education,

- data security and standards,

- tackling violence against women,

- communication solutions,

- long term solutions to refugee problems.

Three initiatives were assessed on the basis of the components of value identified above. All three provide crucial resources and information that refugees might not attain in any other way. The second part of the chapter offers detailed description of the resources and their advantages and disadvantages. The value of these and other initiatives needs to be monitored and evaluated from multiple perspectives: refugees, NGOs, funders, locals as well as official and government agencies. They include:

- ***Crisis Info Hub Google app*** is a high profile, well thought out, funded and well-maintained and therefore sustainable project – a good example of how new technologies with relevant content can provide help and useful information to people in need and in danger.

- ***Infomobile - Welcome 2 Europe*** is one of the first, and longest-running, networks of activists focusing on the arrivals to the Greek islands, and has contributed in helping refugees with avoiding dangers in their journeys practically and with various tech resources and relevant information.

- ***The Village of All-together*** is a network of local people. They have direct local and personal experience and physical contact with arriving migrants, and they are the first initiative to show in practice that an open, self-organised reception camp for migrants can work. We include this example to show that quick technological fixes don't always work and that solutions have to be based on local conditions, personal experiences and often local networks of support from which we can draw out best practice.

- The case studies offer vital insights gleaned through years of experience among the aid workers and lawyers on our team and interviewed and are invaluable.

- We should not underestimate the value of resources and apps developed and produced by refugees that are completely user/community-driven and trustworthy. For example, **Gherbetna** ('Our Exile' in Arabic) provides information for refugees seeking jobs or further study – "small" dreams, which big initiatives might not consider?

Recommendations for new digital provision

Refugees and smartphones

- Smartphone-focused solutions to the refugee crisis, such as Hackathons, are frequently mobilised by the technology and non-profit community but there is a real danger that quick tech fix initiatives are not viable or sustainable.

- A sustainable resource of the kind that international news organisations might provide would offer a more viable alternative. The news organisations could collaborate with and harness the best imaginative efforts of the creative tech community.

- Although quick tech fixes may be trumpeted by the press and across social media, limited attention is paid to whether they are responsive to the actual needs of migrants.

- In terms of provision of information and media sources to refugees via smartphones, these findings demonstrate the need to respond to the instability of connections and the threats to personal security caused by the data trails left by smartphones.

The refugees' media journeys

- Refugees need a range of digital resources in order to have access to relevant information to which they don't currently have access. They need a simple one stop service that is easy to use and provides them with regularly updated information about what they might need, whether during their journey or once they reach their destination.

- Information on such a service need not be created from scratch, but must include:

  - **Legal:** asylum seeking procedures in the different European countries: how to apply, and details of, for example, the fingerprints procedure in the EU

  - **Practical:** how to buy a SIM card, where to find a free Wi-Fi, how to buy staple good from supermarkets.

  - **Transportation:** which means of transport to avoid or take during their pathway across Europe, costs, how to use public transports, such as metro. It should be directed at their safety and security, health and well-being and avoid being seen to encourage refugees to take the journey.

  - **Translation and communication:** languages required to survive on the journey and to communicate with locals, doctors, administration representatives, etc.

  - **Health**: information including insurance, first aid and emergency care.

  - **Social services:** how to access to shelter, food and clothing.

- The service should have a broad vision, and not a parochial or locally specific one; it should assemble and curate the best of what's available BUT also bring something new – have a Unique Selling Point (USP) to attract refugees to use it and help them wherever they are in Europe.

- It could offer a comprehensive resource with parallel strands of "official information" but also access to relevant news and information on social media platforms: information **about, by and for** refugees.

- This service should inform refugees about the hard realities and difficulties of making a life in Europe but also provide hope and support. There are many welcome and support groups: one aspect of the new resource could be to put refugees in touch with grass-roots help. Life in Europe isn't as easy as they might have thought before departure. They should be prepared via accurate news reporting to the homelands of refugees.

- News organizations have a duty to fully inform overseas audiences about the complicated and dangerous nature of the journey, so as to allow people to make better informed choices and have more realistic expectations about what they can afford and where and how they should travel. For example, life in Paris is more expensive than other European cities: the service could indicate the basic monthly living cost in Europe's main cities.

- The service should also respect people's privacy and ensure their security. Refugees assert that they are afraid of surveillance and want to keep things as private as they can. The service must not allow those they are running from (whether governments or non-state actors) or anyone else to locate them.

Learn from refugees' uses of Facebook and Twitter

- Create Safe Spaces: Refugees will not share personal information online, preferring to remain anonymous for fear of reprisals, surveillance, detention and/ or deportation. It is vital that any digital resources created with the intention of supporting refugees in Europe respects the need for privacy and takes into account the security concerns of refugees.

- Communicate via trusted intermediaries: Refugees do not tend to interact with institutions, preferring contact with trusted individuals. Digital outreach needs to be highly personal via trusted intermediaries and known influencers, not branded as the product of a national or state-funded organisation.

- Multilingual engagement: Our research notes the main languages in use were English, Arabic, Spanish, Portuguese, German – but also many others.

- Drive social media activity and information around relevant events being reported in the news

- Find ways of breaking ideological insularity and exposing refugee users to as wide a range of political viewpoints as possible.

- Invest in research to ascertain how to build bridges between private enclaves and public debate fostered by news channels that develops the principles of democratic communication in the public sphere: equality, diversity, plurality and reciprocity

- Find ways of making best use of key influencers in refugee social network to express solidarity and build trust, plug communication and information gaps and in so doing contribute to a more effective settlement process for refugees in their new homes.

Digital resources for refugees: best practice

- Quick technological fixes don't always work. As the Village of All-Together exemplifies, successful solutions can be rooted in local communities and bottom- up organically evolving approaches based on understanding shifting local conditions, drawing wisdom from on-the-ground experience and the strength of sustainable existing networks.

- The situation changes almost every day in border areas: any resource must be frequently updated in order to avoid it doing more harm than good with misinformation.

- Long-term planning for the continuous physical and digital presence of staff at key sites is crucial in order for the everyday situation to be monitored, so that the resource can be kept up-to-date. On-the-ground individuals or organizations must be closely coordinated (a tech initiative could also help in this domain) for the resource to be sustainably maintained.

- Initiatives must harness the power of existing resources available to refugees. For example, refugees can be encouraged to ask for help and counseling from NGO staff.

- New resources could include both digital and non-digital resources - a hard copy as well as a digital map illustrating the exact addresses of the various NGOs and solidarity networks that support refugees at entry points in Athens and elsewhere.

- To ensure trustworthiness, an initiative needs to involve refugees directly: its design and implementation, and its monitoring and evaluation must include refugees.

- Refugee security must be a central principle. Lack of trust and fear of surveillance drives refugees towards unofficial, potentially dangerous and exploitative resources.

- The digital tools and resources that help, guide and comfort refugees are also used to exploit, monitor and track them. Security must be upheld in terms of set up (e.g. by not asking refugees to disclose any information about themselves, as with Crisis Info Hub and Infomobile) and content (e.g. these resources should provide warnings regarding the dangers of financial exploitation by certain groups such as taxi/private drivers and smuggling networks).

- Help for the many illiterate refugees could come in audio and visual formats; video or sound resources would be appropriate and useful. However, there could be an option for whether or not somebody wishes image/video/audio content to be provided: for someone who has no problem understanding written information, the choice to not open image/video/audio content would help them conserve mobile battery.

- An initiative could easily include more – and more up to date – legal advice than these case studies – relevant high quality legal information appears to be lacking as are sources of information about language learning facilities. These are key areas that any new digital resources could focus on.

- The resource must be accessible. Crucially, it is free access to the Internet that gives refugees the means to discover helpful information through websites, apps, Facebook communities and volunteer/activist networks. Indeed, certain forms of information could protect refugees' lives from danger and exploitation.

Introduction to this research project

98% of the population in the Middle East and North Africa use a mobile phone, 84% use a smartphone, 81% use internet connections, 51% use a 'high-end' device (i.e. over $500).

Facebook is the most popular app, then Twitter, Instagram, Google Plus. Motives to use smartphones are having fun, staying in touch with friends and family, staying in touch with events, etc.

Samsung has nearly half the market, followed by Nokia and only then Apple. Average daily time on social media: at least one hour.[1]

Our project investigates the parallel tracks of the physical and digital journeys of Syrian and Iraqi refugees. It documents the media and informational resources that refugees use from the point of departure, during their journeys across different borders and states, and upon arrival (if they reach their desired destination). By identifying the news and information resources used by refugees, and where they experience gaps or misinformation, we intend to make recommendations to European Commission, to European Member states and their state funded international news organisations about what resources might they might provide not only to help refugees make better-informed decisions but to offer protection as required to fulfil their obligations under the UN Refugee Convention 1951. As signatories to the Convention they are obliged to provide information about national legislation relating to refugees and to cooperate with the United Nations High Commission on Refugees in its timely and ordered dissemination.

This is a collaborative project between researchers at The Open University and France Medias Monde. Our preliminary research on resources provided by UK agencies suggests that most investment in (print and video) media resources is channelled into refugee camps close to conflict zones in Syria and neighbouring countries. This is in line with Britain's policy on providing support in the region. Women, children and older people often get stuck in camps while young men move. Among the most urgent issues to address are the markedly different gendered and generational experiences of refugees in the camps and in the hands of traffickers. UNHCR reports that over one third of unaccompanied Syrian refugee children are lost without trace, many are trafficked. The situation is changing rapidly. Now some 60% of arrivals in Europe are women and children. The second phase of the report will focus on these more recent arrival and the family reunification process.

Social media networks provide a lifeline for refugees on their journeys to Europe. Some arrive with only a smartphone anxious to find a place to recharge it. Facebook is used to crowd source information— refugees share, maps, contacts and advice in both public and private groups. On Twitter they exchange news from trusted sources – mainly friends and family who send links to outputs of some of the large international news agencies BBC and F24 and DW. But trust in media and information is in short supply among refugees. They also fear surveillance of their social media activities on Facebook and Twitter not just by the Syrian and Iraqi states but by Islamic State. WhatsApp is used because it affords greater privacy and they use it to recruit fellow travellers, contact smugglers, report on their journeys and highlight opportunities and dangers.

It is vital to get a better grasp of how social media both empower and endanger refugees – making them vulnerable to surveillance. We need to identify how best and at which points and places in their lives and journeys news organisations like France Medias Monde, Deutsche

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[1] Source: Athana Jamo (IPSOS Connect, UAE), conference presentation on 'MENA [Middle East and North Africa] Digital Trends', at the Conference of International Broadcasters' Audience Research Services (Zeuthen, Germany, 8-11 May 2016) – www.cibar.org.

Welle and BBC can offer relevant information and news resources to the most vulnerable refugees. Many suffer serious health issues and injuries and require information about where they can receive legal or medical assistance. Others need to know which cities may provide most security, food and shelter, job opportunities, appropriate language teaching. The task is immense. But we know very little about the media journeys of refugees and what their precise informational needs are, from the point of losing their home to the point of claiming asylum in a safe state, and beyond. Our research set out to answer the following questions.

Research questions

- What media, news and information resources are being provided **for** refugees in general / civil society initiative by international news organisations, NGOs and other relevant actors?

- What information and news media are being created and exchanged by refugees about and on their journey?

- Which media and informational sources and social media do refugees trust?

- How do refugee communication networks operate? (e.g. What evidence is there to suggest that friends on social media are the main source of news and information – as the big news media organisations are not trusted?)

- How do English and Arabic news media resources compare? To what extent are multi-lingual patterns of use evident? How might multilingual media work better together?

Research context

The research builds on prior research on media *for, by and about* refugees, knowledge of diaspora media and communication networks, and research on crisis communication and conflict resolution. However most this research fails to take into the account the intersections between big media (international news broadcasters like France Medias Monde, BBC World Service and BBC Media Action and Deutsche Welle) and social media platforms(Facebook, Twitter, Whatsapp, Instagram, YouTube among other apps). Nor does it take into account the remarkable role of the smartphone in journey planning, communicating with family in the home country, fellow refugees on similar and different pathways, and connections with the diaspora.

This project takes into account the wider digital infrastructure and media ecology in which refugee journeys are made order to better understand emergent relationships between big and social media in refugee communication and information networks. It also seeks to take a critical approach to the technooptimism which is rampant in this field. Technology alone can never be a solution to a human crisis of this nature.

Objectives

The research sought to

- Undertake a review of media coverage of the refugee communication and digital environments to contextualise our mapping of refugee media journeys.

- Carry out interviews with refugees and NGOs on resources used and mobilised and gaps in information provision.

- Conduct social network analysis of Facebook and Twitter uses among refugees.

- Present recommendations to the European Commission and Member states, their state funded international media organisations tasked with offering services to

overseas publics, and NGOs and policymakers as to models of good practice and how best to help the most vulnerable refugees.

Digital routes

- When and where is most info provided – in the Middle East before they leave, or in camps, or on arrival in Europe?

- Follow the geographical and media journey in parallel, dominant routes, points of pressure/health and security dangers. Where is there greatest lack of information?

- Interview data has potential to elicit stories.

- How can research feed into citizen journalism and production (e.g. F24's Les Observateurs)?

Content

Information covered:

- Situation in Syria – go on or go back home?

- Information on camps – safety, movement, legal advice, citizenship, access to social and health services; information and links to back home.

- Situation in Lebanon and Jordan – will they face discrimination?

- Health, food, living conditions: key issues to be solved.

- Who can offer help: e.g. UNHCR, Amnesty International, Red Cross?

- The fate of their fellow refugees on different parts of the journey – communication from those who have arrived? But what of those who die on the way?

Methodology: mixed and mobile methods

Each chapter gives full details of its methodology. We used mixed and mobile methods to triangulate different perspectives and forms of evidence. Our methods included:

- Interviews with over 50 Syrian and Iraqi refugees in Paris, Cherbourg, London and Swansea about uses of smartphones and social media along their journeys

- Interviews with staff at the European Commission, with international broadcasters and with NGOs.

- A content and discourse analysis of 342 English Language news items to assess the shifting nature of public and media discourse on refugees

- An analysis of refugee social networks (Facebook and Twitter especially) by computer scientists

- A survey of existing resources available and a critical analysis of a best practice in providing digital resources for refugees on their smartphones.

Research with and for international broadcasters

Public Service International broadcasters are aware of their responsibilities to their audiences wherever they may be and feel it is important not to abandon them in time of need. But they are equally aware that they must remain impartial, balanced and objective and cannot be seen

to be facilitating irregular migration. So the following questions were in the forefront in this partnership with France Medias Monde:

- What are we already doing and what more can we do (France Medias Monde, Deutsche Welle, BBC World Service, BBC Media Action)?

- What's missing, based on research on what people use and what they need?

- How can digital and non-digital best work together? (E.g. will an app work or are text alerts better?)

- Is the aim to provide news and political info about security or focus on how to live, which places to avoid, conditions in some European camps, health, etc?

The research aimed to feed into discussion and plans at France Medias Monde, Deutsche Welle and BBC World Service and BBC Media Action to provide appropriate resources for refugees at key points their journey – from departure to arrival in Europe. The resource could:

- aggregate best big/international news media information about the situation on refugees FOR REFUGEES in different countries;

- provide social media platforms and one stop shop to access information about support and other resources.

The main aim would be to provide independent (as far as is possible) information about the legal, social and political contexts in which refugees find themselves, where they can find relevant support.

We also aimed to assess the implications of our research for the role of the European Commission and Member States and their responsibilities under the UN Refugee Convention.

1. Refugees and smartphones in the media

Smartphones feature prominently in the media coverage of the refugee crisis. This analytical review offers an overview of how smartphones figure in news reports about refugees' journeys. Using the LexisNexis news database, we used the search terms "refugee" and "smartphones", and variations thereof, to look for patterned responses in mainstream news media and current affair magazines. A total of 342 English language mainstream newspaper sources were analysed plus 35 sources from news and current affairs magazines and journals. The sources that referred directly to smartphone use by refugees were extracted and then analysed inductively; with the intention of bringing to the surface significant themes and patterns which emerged repeatedly in these stories. This chapter identifies and examines the key recurring themes that appeared in the newspapers and magazines identified by LexisNexis over a 12-month period (November 2014 to December 2015). Websites and newswires were excluded. All quotations from news sources derive from this search.

1.1. The 'migrant essential'

The smartphone as a 'migrant essential' dominates the news sources that we examined. The unprecedented significance of the smartphone as a navigation device in the current refugee crisis is regarded as a new departure. Here, a *New York Times* journalist points to the key role of mobile devices in refugee journeys:

> *Yet the same forces that have shrunk the world for people in its wealthier precincts - instantaneous, pocket-size communication, mundane air travel, globalized culture - have also been an invitation, or perhaps a taunt, to those in less fortunate circumstances. Confronted with war, persecution and poverty, the migrants are well aware that people are living far better in a not-too-distant place, and that their smartphones and social networks can help guide them there.* (Bennhold, K. et *al.* 2015, p.1)

However, the refugees interviewed in Chapter 3 dispute the notion that media images of a 'promised land' in Europe or the forces of globalization triggered their journeys. Rather, all the interviewees reported that news media played no role whatsoever in their decision to leave. Their main reason was fleeing the civil war in Syria and Iraq.

Many articles point to the empowering aspects of smartphones. Clearly, they are used to access new forms of information and news on the internet or via social networks that make refugees more aware of and imagine alternative ways of living. They are also essential tool in helping them arrive at their destination. An article in the *Irish Times* draws attention to the power shift that mobile phones have enabled between 'smartphone-wielding' migrants who can get up-to-date information about borders opening and closing, and the authorities and police struggling to control the crowds who flock to those borders.

> *Previous generations of police held a huge advantage over the crowds they sought to control in the speed at which they could communicate and co-ordinate action; that advantage has been all but lost to these smartphone-wielding migrants with fast internet, large networks of contacts, and free, or very cheap, wifi.* (McLaughlin 2015, p.9)

The militaristic connotations of the phrase 'smartphone-wielding' imply that refugees deploy their smartphones as one might brandish a weapon. This ambivalent attitude toward both refugees and technologies is pervasive: refugees are empowered by their technological devices but this empowerment encourages and facilitates migration and may even threaten civic order. So while an essential tool for refugees, the subtext of much press reporting is that this technological device becomes an active agent in the refugee crisis.

1.2. Mobility and portability

The smartphone is represented as uniquely influential in shaping the movement of migrants and helping them navigate across unfamiliar territory. Brunwasser in the *International New York Times* describes how this small piece of technology has created a kind of digital passage to Europe along certain routes that prove effective:

> *transformed this 21st-century version of a refugee crisis, not least by making it easier for millions more people to move. It has intensified the pressures on routes that prove successful* (2015, p.1).

The portability of the mobile phone sets it apart from previous communication devices such as the landline telephone because of its multi-sensory, multi-functional, all- encompassing nature that constructs a new kind of self and sense of perpetual communication and connectivity. Turkle, a prominent academic and public commentator on new media, argues that the mobile phone:

> *compels us to speak of a new state of the self, itself* [in which we are] *tethered to our 'always-on/always-on-you' communications devices and the people and things we reach through them* (Turkle 2008, p.121).

This kind of perpetual connectivity is something that many of us will be familiar with but for refugees it takes on new dimensions. Take Whatspp, for example. It is amongst the most widely used apps by refugees largely because the data traces it leaves are not subject to kind of monitoring as Facebook and Twitter and other encrypted. In the Chicago Daily Herald one Syrian refugee interviewed in Greece describes how he is able to use WhatsApp to maintain contact with other refugees. He uses a Greek sim card for the purposes of "*constantly exchanging information about the journey ahead*" (Hendawi 2015 p.4). This is consistent with our interview data that Whatapp is hugely popular for communication among small groups, private and easy to send pictures with but requires internet or wi-fi connection.

In the Japanese current affairs magazine, The Nikkei Asian Review, a 43-year old Syrian fisherman reports that he uses WhatsApp on his phone to maintain contact with his transnational family (Tavsan 2015). He exchanges messages with relatives in Germany, Greece, Qatar, the United Arab Emirates and Turkey, who are *"sharing information and congratulating him for his family's safe passage to Greece".*

The Washington Post highlights the use of Facebook on smartphones to crowd-source information. It is harnessed as a live tool for:

> *sharing tips, maps and contacts in public and private groups now established across the site. They have recruited travel companions, connected with smugglers, documented their travel and urged others to flee* (Cunningham, 2015 p.A12).

The navigation and the location-finding functions of the smartphone are crucial in refugee journeys. One Afghan woman, for example, who had recently arrived on the Swedish-Finnish border, is reported in The Washington Post to have asked a border guard about her whereabouts. On hearing the place name given to her by the guard she subsequently read it out aloud into her smartphone in order to use the GPS and map function. Such skills and competence are vital for refugees to navigate their journey across land and sea (McCrummen 2015, p.A01).

1.3. Power and resources

The enhanced mobility of migrants enabled by access to the free flow of information on the internet dominates news reports. But these capacities rely on refugees having sufficient resources to buy a fresh sim card in each new country in which they arrive. Moreover, using the navigation function may compromise the refugees' safety because they are trackable and traceable by the authorities. And when a smartphone stops working due to some fault or is lost or damaged by water during a boat trip as frequently occurs, refugees are at the mercy of locals for information and may become exposed to significant dangers. One article in *The Washington Post* describes the situation reported by some refugees arriving in Croatia:

> *Our problem now is that our smartphones aren't working, so we don't know exactly where we are or where we're going," said Bassam, 38, a lawyer from Aleppo, Syria, who left home a month ago with his wife and two daughters, ages 3 and 5, in hopes of reaching Germany.* (Birnbaum and Booth 2015, p.A11.

This points to the detrimental effects that interrupted or no access to Google Maps, Facebook and WhatsApp (the three tools that most refugees use) might have. The report describes how Bassam became reliant on getting travel advice from locals whom he did not trust and could not rely on to provide accurate information. For some refugees making dangerous journeys, their only trusted information source is that which they themselves access on their smartphones – information shared among friends and familt and smugglers, and when it goes wrong their chances of a safe journey and even survival diminish.

1.4. Multi-media and digital witnessing

The concept of multi-mediality is used in academic work on mobile communication (Schrock 2015) to refer to the capacity of the smartphone to capture and display images and videos as well as text in interactive formats. This concept is often referred to in coverage of refugees' relationships with smartphones if not the term itself. Two aspects are key. Firstly, the smartphone as a living, expanding photo album or an archive of each stage of their journey; a way of sharing images with groups of people like distant family and friends, and in this way helping to maintain transnational family and friendship connections when living in the diaspora. In a story, not untypical of Syrian refugees, Fouad, as reported in the International New York Times, as soon as he arrived safely in California shared images of his sons with relatives living in Turkey, Belgium, Saudi Arabia and others in the growing Syrian diaspora (Brunwasser 2015, p.1). One can share images in real time and elicit commentary and create a powerful sense of connection and intimacy.

Secondly, refugees can act as 'citizen witnesses', a term used to describe how *"citizens act as first-hand responders on the scene of human rights violations, documenting [them] for potential evidentiary value"* (Gregory, 2015 p.1378). There are numerous press reports of Syrian refugee being abused physically and/or verbally by people smugglers in an effort to extort more money. One report describes how one refugee surreptitiously filmed smugglers attacking him, acknowledging that *"If they had seen that I was filming, I would have been killed"* (Squires 2015). Another report describes how a refugee took video footage of Islamic State militants beheading a family friend on his smartphone and his terrible fear of being caught doing so (Linthicum 2015, p.1). Such reports point to the powerful possibilities of the smartphone as a bank of recorded evidence of crimes against humanity. They do not, however, go on to describe how these acts of 'digital witnessing' might be transformed into acts of justice, by bringing smugglers or violent militants to account.

Journalistic acts of digital witnessing feature largely too in news reports that try to get ever closer to the inside stories of Syrian refugees. For example, one German journalist Dredge uses Twitter's Periscope app to live broadcast the journey of a group of Syrian refugees between

the Greek island of Kos and Germany. One of his videos was played and replayed more than 90,000 times. The platform allows viewers to comment on the videos and refugees to respond directly to their comments. Although not a refugee himself, Dredge provides the means for refugees themselves to give voice to their experiences by bypassing big media corporations and enabling them to engage directly in dialogue with their followers:

> *It was very interesting: a lot of the critical comments on Periscope came from the UK. 'Why do they all have smartphones if they are refugees? Why are they wearing sunglasses?' and so on," says Ronzheimer. They could directly respond: 'These are two-Euro sunglasses' or 'I need my smartphone to communicate with other refugees'. One even had to use his smartphone with GPS to navigate the boat to Kos with 30 people on it. So the most important thing for refugees is a smartphone, and he was able to explain that.* (Dredge 2015).

Smartphones appear to have almost limitless uses. For example, one report documents how smartphones are helping well-educated, well-resourced refugees to continue their education while en route. One young man who was previously a student at the University of Aleppo continues his studies by reading an engineering manual on his phone and learning German on YouTube (Slater 2015, p.A1). But there are limits too to smartphones.

1.5. The limits of 'app-ology'

A common theme to emerge in our analysis of news reports is the increasing recognition given by international organisations and NGOs to the significance of smartphone technologies in the refugee journey. And with this recognition come attempts at quick techno-fixes for deep-seated problems. One *International New York Times* report describes how international agencies such as the UNHCR, having recognised the importance of mobile phones, distributed 33,000 SIM cards to Syrian refugees in Jordan, as well as 85,000 solar lanterns which can be used to charge mobile phones (Brunwasser 2015, p.1). It is also pointed out that agencies are using Facebook to publicise relevant information to assist refugees: e.g. Facebook maps of safe water distribution sites in Aleppo. In this case one map was reported to have been used by 133,187 people. This suggests that some quick techno-fixes do indeed work well. But we should be cautious.

The myriad uses and functions of the mobile phone have inspired the technology community to collaborate on finding innovative smartphone-focused solutions to the refugee crisis, a response described as 'solutionism' by the internet researcher and critic Evgeny Morozov:

> *Recasting all complex social situations either as neatly defined problems with definite, computable solutions or as transparent and self-evident processes that can be easily optimized – if only the right algorithms are in place! – this quest is likely to have unexpected consequences that could eventually cause more damage than the problems they seek to address.* (Morozov 2013, p.5).

Writing in the *Atlantic* about what she describes as "*the limits of app-ology*", Horn (2015) praises the efforts of the technology community in *"greasing the wheels of the larger aid effort"* through initiatives which connect refugees with resources and provide useful tools for language learning. However, she also points to the failure of some high profile initiatives. For example, the "My life as a refugee" app, launched by UNHCR in 2012 proved of little use to refugees who were either unaware of it or did not find it useful and did not share it: "*Three years later, the app has fewer reviews in the iOS App Store than Houzz Interior Design Ideas*" (Horn 2015). Such quick fix app responses are limited by their failure to keep up with complex emerging situations and the rapid development of events. As Horn suggests, it is difficult for an app, unless extremely well resourced, to keep up to date with problems such as *"closed borders in Hungary, arson at Swedish refugee centres, or widespread isolationism among the*

*French in the face of humanitarian crises" (*ibid.)*. Horn sees apps as powerless in the face of intractable political issues.

Clearly, it is very important to be aware of the huge challenges and the limitations of providing digital resources to assist refugees. Sometimes and in some places leaflets and public information maps might provide the best solution. In a report in the *Guardian*, a spokesperson for the NGO *Internews* describes the limits of what smartphones can do, discussing how the lack of basic information - such as maps for refugees on the island of Lesbos - inspired them to erect banners there, displaying maps of the island with simple information about distances and destinations. The article concludes with the reflection that *"sometimes your smartphone just doesn't have what you need*" (Bourgault 2015).

We examine models of good practice later in this report (Chapter 5). For now, any app or informational resource initiative needs to be accompanied with relevant research. Our review of press reports suggests that there is some, albeit limited, awareness of failure in this domain and therefore limited learning from prior mistakes. New initiatives may be trumpeted by the press and the PR departments of large international organisations as they are launched, but it seems that not enough resource is invested in evaluating whether they actually do what they set out to do – or indeed whether their aims are appropriate and responsive to the actual needs of migrants. The needs of refugees vary a great deal depending on so many factors – point in the journey, resources available to them, technological and media literacy, social networks of support, health and well being, and language, to name but a few.

1.6. Disrupting mainstream media narratives about refugees

Press coverage is dominated by the experiences of the more well-educated and affluent Syrian refugees who are able to afford smartphones and credit. But this does not by any means represent the whole refugee community in Europe – and stands in stark contrast to the plight of Afghans for example. What's more, the indissoluble connection via a smartphone between the smugglers and refugees is a significant theme, and integral to the demonisation of the figure of the 'smartphone-wielding' migrant that appeared in the press, especially in the wake of the 2015 Paris attacks.

1.7. 'Not all migrants have smartphones'

McLaughlin describes the differing financial status of migrants on the Balkan route:

> *Not all migrants have smartphones and virtual, online lives, however: Syrians tend to have the most money and best kit on the Balkan route, while Afghans, Pakistanis, Bangladeshis, Eritreans and Somalis are among the poorest, and their journeys are usually the slowest and toughest, with little help from internet resources* (2015 p.9)

Reporting on African migrants in Italy, Yardley in *The New York Times* (2015 p.1) found that they were unlikely to own smartphones: none of the Gambian refugees interviewed for his story had a cellphone or had been able to contact relatives in Africa. This is consistent with findings based on interview data which we will present later on in this report. Smartphones among economically poor refugees may be collectively owned and used. Trilling in the *New Statesman* explores these differences in some depth, finding that young men would pool resources to buy smartphones and explore their functions collaboratively and creatively. They are described as *"trying to catch a wifi signal"*, as they do not have sufficient funds to buy credit to pay for data connectivity in order to share photographs.

> *There were several dozen teenage boys living at the school when I visited. Most came from West Africa; there were smaller groups from Egypt and Bangladesh. The boys pooled their money to buy cheap smartphones, and in*

the evenings, some of them would sit in a row on tiny primary-school chairs outside the school gates, trying to catch a wifi signal from the pizza shop opposite. They chatted on Facebook with friends and family back in their home countries, and posted photos of themselves pretending to buy expensive clothes and electronic goods in the shops on Augusta's main street. (Trilling, 2014)

1.8. Smugglers and fake passports

The widespread use of Facebook on smartphones by smugglers and people traffickers disrupts the more positive media narrative about the empowering aspects of refugee smartphone uses. Starr in the *Toronto Star* reports on how smugglers are using Facebook to recruit migrants. This is the case even though Facebook has officially banned the use of its site as a platform to facilitate and/or to organize criminal activity that might cause physical harm to people. The article describes how migrants then use VOIP and messaging apps on their phones to contact the smugglers.

> *The smugglers, writing in Arabic, provide phone numbers, charges, route and vessel details, and even a "book now" tab on their Facebook page walls. In an attempt to counter the growing fear among migrants of drowning at sea, one Facebook page run by smugglers has added the term "travel in a safe way" to its title, while another boldly uses the word "smuggle" and openly quotes boat sizes and smuggling costs. "They (the smugglers) are easy to contact on Facebook," said Abed from Damascus, the Syrian capital, who recently arrived in Austria after landing first in Greece. "You can find their number and then contact them through Viber," a free instant messaging and VOIP smartphone app.* (Starr 2015, p.A1)

Facebook is also being used by migrants to 'disrupt' the smugglers' business model: discussion groups provide information that allow individuals to circumvent the need for smugglers.

> *Syrians are helped along their journeys by Arabic-language Facebook groups like ''Smuggling Into the E.U.,'' with 23,953 members, and ''How to Emigrate to Europe,'' with 39,304. The discussions are both public and private, requiring an invitation from a group administrator. Migrants share photos and videos of their journeys taken on their smartphones. The groups are used widely by those traveling alone, and with traffickers. In fact, the ease and autonomy the apps provide may be cutting into the smuggling business…. But as tens of thousands completed their journeys, they shared their experiences on social media - even the precise GPS coordinates of every stop along their routes, recorded automatically by some smartphones. For those traveling today, the prices charged by traffickers have gone down by about half since the beginning of the conflict.* (Brunwasser 2015, p.1)

Facebook is also being used to sell fake Syrian passports. After the fatal attacks in Paris in November 2015, one paper reported on how this can be done relatively easily through a Facebook page.

> *Who was Ahmad al-Mohammad? Was he one of the suicide bombers in Friday's attacks on Paris who was found with his passport near his body? Or was he a man with the same name-and same passport details-who was arrested Saturday at a Serbian refugee center? The Telegraph reported that for migrants looking to enter Europe, a "quick tap on their smartphone takes them to The Travellers' Platform, a Facebook page that provides the answers to all their needs." The cost of a false passport and a trip from Turkey to Greece: about £2,000 ($3,000).* (Calamur 2015)

1.9. Smartphones and personal data

The amount of data that smartphones carry about individuals can also make individuals vulnerable to threats, as noted by Taylor in a recent journal article:

> *This emerging ability to track movement in real-time offers both the possibility of improved responses to conflict and forced migration, but also unprecedented power to surveil and control unwanted population movement* (Taylor 2015 p1).

This was certainly the case for one individual featured in a story in the *International New York Times*:

> *Once he left Syria, he said one of the first things he did was get a new smartphone, because it was too dangerous to travel with one in Syria. Soldiers at government checkpoints, as well as at Islamic State checkpoints, commonly demand Facebook passwords, he said. They look at Facebook profiles to determine one's allegiance in the war. ''If you didn't give the soldiers your Facebook password, they would beat you, destroy your phone or worse,'' Mr. Aljasem said.* (Brunwasser 2015, p.1).

In the wake of the Paris attacks in November 2015, the Australian Prime Minister placed smartphones at the centre of the terrorist's narrative. In this context the smartphone goes from being a 'refugee essential' to being a 'terrorist essential' – forging a potent semantic connection between refugees and terrorists:

> *By most measures, Islamic State was in a fundamentally weak position, Mr Turnbull said. "We must not be fooled by its hype," he said. "Its ideology is archaic, but its use of the internet is very modern. ISIL has many more smartphones than guns, more twitter accounts than –fighters. (Nicholson, 2015 p.2)*

1.10. Key findings and recommendations

- The phrase 'smartphone-wielding refugee' used in the *Irish Times* article cited above encapsulates the ambivalence in the English press coverage of the role of the smartphone in the current refugee crisis. We can discern contradictions in the discourse: the smartphone can both rescue an individual and also make him a terrorist. After the Paris Attacks the smartphone became a 'terrorist essential' instead of a 'refugee essential' in some reports.
- For the refugees themselves the mobility that is enabled by the smartphone can also make them vulnerable to unwanted state surveillance, which in turn might curtail their movements.
- Stories of wayfinding and witnessing dominate the coverage, but these tropes also mask the complexities of structural differences in refugee experiences of smartphone use: the instability of connections and the poverty that leaves many refugees without smartphones, as well as the gendered and generational differences in access and use which are barely touched upon.
- The English-language and mainly American press coverage that came up in our search portrays the device as a 'migrant essential': for navigation, accessing practical information, keeping in contact with networks of support and also for connecting with smugglers.
- News of each stage of a journey is shared with families through WhatsApp and smartphones also function as living, expanding photo albums and an archive of each stage of refugee journeys. We also saw how phone cameras are used for 'citizen witnessing' of violence by smugglers and Islamic State militants.

- Yet there are limits: the smartphone's navigation and wayfaring functionality relies on refugees having data access in each new country they arrive in and not all migrants have smartphones.

While coverage is dominated by the experiences of Syrian refugees, the press review also showed that refugees from other countries, especially Afghans don't usually possess top end smartphones. Rather they use a basic mobile phone that doesn't cost so much money to pay for credit.

For refugees the amount of photos, texts and data stored and the digital traces that are left by use, make individuals vulnerable to a variety of risks and threats [see Chapter on Facebook and Twitter]. The mobility which is enabled by the smartphone can also make them vulnerable to unwanted state surveillance.

Recommendations

- Smartphone-focused solutions to the refugee crisis such as hackathons have been mobilised by the technology and non-profit community but there is a danger that quick tech fix initiatives may be trumpeted by the press and across social media with limited attention paid to their sustainability and whether they are responsive to the actual needs of migrants.
- In terms of provision of information and media sources to refugees via smartphones, these findings demonstrate the need to respond to the instability of connections and the threats to personal security caused by the data trails left by smartphones.

2. Refugees and smartphones: academic literature review

2.1. Introduction

A recent study conducted in Zaatari camp, Jordan's largest facility for Syrian refugees, shows that 86% of youth own a mobile handset and more than 50% use the internet at least once a day (Koons, 2015). Similarly, the internet seems to play an important role during the journey to Europe, as the majority (53.5%) of refugees state that they had been using a smartphone in its course, according to a recent survey of refugees hosted in camps in the region of Attica (KAPA Research, 2016). Moreover, almost all (96%) refugees in Uganda use mobile phones, which shows a much more widespread use than the one observed in the general population (Betts, 2014, p.6). Indeed, "the mobile phone is a technology of everyday life" for most of these people (Gifford and Wilding, 2013, p.560).

Mobile phones offer certain affordances – or possibilities for action – in the hands of refugees, and key affordances dominated press coverage. The *communicative* and *networking* affordances that enabled refugees to connect with and maintain networks, the l*ocatability* or navigation affordances for wayfaring and finally the *multimediality* affordances that allows for the capture and sharing of images. But we can see in each of these aspects of mobile phone use a tension which reflects broader discursive tensions in the coverage of the refugee crisis: between *"deserving refugee and the undeserving immigrant, both always being other, potentially threatening, and suspicious"* (Holmes and Castañeda, 2016 p.9). All in all, digital technologies can affect one's feelings, sense and state of (in)security, and the ways in which s/he deals with different states of (in)security (Aouragh, 2011; Collyer, 2007; Gifford and Wilding, 2013; Horst and Miller, 2006).

For example, the same communicative affordances which allow refugees in transit and destination countries to maintain network capital and communicate with families and friends, are also seen as playing a role in enabling terrorist acts, while they are also exploited by traffickers and smugglers in order to increase their profits. Moreover, the same locatability affordances which enable state and non-state actors to monitor and exclude migrants and refugees, can also act as a kind of defence mechanism and means for survival for the 'others', and as a means of protection of the 'others' by activists and NGOs.

Furthermore, the very same multimediality affordance of mobile phones which enables refugees to make rights claims and narrate their personal stories, and makes it possible for a number of professionals to reach out to them to provide care, can also create risks of exposure for refugees, while they are not always counter-hegemonic and anti- hierarchical. Finally, the narrative of the mobile phone as a 'solution' to the refugee crisis, can also disempower refugees by always assigning them the role of the 'saved' and never the 'saviour', can cover up the social divides that in many instances the mobile phone creates, and it often fails to address grave human rights violations that occur in instances where subjects are entirely deprived of access to technology.

This chapter provides a brief review of relevant academic material, which attempts to shed light on broader discursive tensions in the coverage of the refugee crisis. It is structured around six thematic areas, which address the tensions present in the three key possibilities for action of mobile phones – communicative, locatability, and multimediality affordances – as well as the narrative of the mobile phone as a 'solution' to the refugee crisis. This chapter draws on qualitative semi-structured interviews conducted with migrants and refugees for the purposes of MEDMIG project in Athens and Mytilene in September-November 2015.[2]

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[2] 'Unravelling the Mediterranean Migration Crisis' project (MEDMIG) is part of the 'Mediterranean Migration Research Programme' established through the Economic and Social Research Council's (ESRC) £1 million 'Urgency

2.2. Mobilities and network capital

Mobile technology has often been described in terms of the 'mobile lives' it affords; the 'network capital' it makes available to a ruling elite "*who roam the planet with multiple careers and homes, overseeing vast capital investments, transnational operations and organisational restructurings*" (Urry, 2012 p.24). Urry describes network capital as "*the capacity to engender and sustain social relations with those people who are not necessarily proximate and which generates emotional, financial and practical benefit*" (*ibid.* p.27). But this network capital is unevenly distributed and accumulated (Cohen and Gössling, 2015).

The notion of mobility is also linked by de Souza e Silva and Frith to the locatability affordance of mobile phones: the fact that these devices can locate their position in space means they can connect people to physical places forming *"locative mobile social networks [LMSNs]"* (2010 p.485). Whilst this affordance has literally saved the lives of refugees by allowing them to be found by coastguards the authors also argue that it calls for new ways of understanding privacy and surveillance.

> We argue that what we are perhaps seeing with the development of LMSNs is a shift in the current model of surveillance: no longer the traditional top-down surveillance – as in the disciplinary societies – or even sousveillance – where individuals are able to control corporations – but rather a model of co-surveillance in which all individuals in the network know the position of all others. (de Souza e Silva and Frith, 2010, p.496)

As we see in this report, refugees are seen in the press coverage as leveraging network capital through their smartphones: whether this is contact with families or other networks who are able to help them. Along the same lines, a number of academic studies have emphasised the importance of mobile phones in assisting migrants in: the maintenance of relationships with their home countries (e.g. Thompson, 2009; Vertovec, 2004); remittance transfers (e.g. Singh, 2010; Sundararajan et al., 2015); or job networking (e.g. Fortunati et al, 2008; Ngan and Ma, 2008). But when Urry describes the eight elements of network capital we can see how this 'mobility' might be experienced unevenly:

> It consists of the following eight elements: an array of appropriate documents, visas, money, qualifications that enable safe movement; others at-a-distance that offer hospitality; movement capacities; location free information and contact points; communication devices; appropriate, safe and secure meeting places; access to multiple systems; and time and resources to manage when there is a system failure. (Urry, 2012. p.27)

Within this context, migrants and refugees experience a stratified 'mobility regime' (Shamir, 2005), according to which all people on the move depending on the amount of network capital that they possess are identified and categorised as wanted or unwanted, risk-free or risky, and, by extension, admissible or inadmissible. In this respect, access to the territories and societies of Western states constitutes a key axis of global inequality (Bauman, 1998).

In the context of smartphone use by refugees one aspect of 'system failure' is the way that their connectivity can be seen in the context of technology maintenance theory (Gonzales, 2016), in which access to technology is unstable and characterized by frequent periods of disconnection. When refugees do not have access to local Sim cards, or reliable power supplies this technology maintenance impacts negatively on their network capital. Urry (2012) points out the significance of inequalities in network capital: taking as an example Hurricane Katrina

in New Orleans in 2005, when the network capital-rich communities of predominantly white rich people, were able to escape in advance because of their access to cars and communications.

> And finally it is possible to argue that people smugglers are also leveraging network capital in their activities. Traffickers are able to recruit, advertise, organize, and communicate primarily—or even exclusively—via mobile phone, effectively streamlining their activities and expanding their criminal networks. In short, human traffickers and criminal networks are taking advantage of technology to reach larger audiences and to do illicit business more quickly and efficiently across greater distances. (Latonero, 2012, p.iv)

Hence, very often, smugglers use new technologies for marketing purposes, in similar ways to travel agencies. Indeed, as one of the MEDMIG project interviewees described it: "In order to gain our trust, [the smuggler] gave us the phone numbers of all those people who would be travelling with us".[3]

2.3. Refugee as 'other'

In their analysis of media coverage of the refugee crisis Holmes and Castañeda point out the tensions which demarcate the "deserving" refugee from the "undeserving" migrant and *"play into fear of cultural, religious, and ethnic difference in the midst of increasing anxiety and precarity for many in Europe"* (2016 p.1). They look at the ways that media reports morally delineate between 'deserving' refugees and 'underserving' trespassers, which they suggest are formed by European political contingencies of austerity, debt and the disassembly of social systems. In this way the refugee is 'othered' in a process by which fears are projected onto the refugee and he or she becomes a 'threatening double' *"or an essential enemy, when the self receives its identity from the relationship established with the other, or simply constitutes itself as the other's other"* (Balibar, 2005).

The securitization responses (i.e. the tightening of security controls and the consequent erosion of certain rights and freedoms) which we also saw described in the previous chapter on the press review also frame the portrayal of the refugee and smartphone, especially in the wake of the Paris attacks which Holmes and Castañeda (2016, p.7) suggest manifest the emergence of the "criminal"/ "terrorist" as another figure along the refugee–migrant spectrum. Derrida sees these threats to the 'traditional conditions of hospitality' as triggering

> a privatizing and even familiar reaction, by widening the ethnocentric and nationalist, and thus xenophobic circle: not directed against the foreigner as such, but, paradoxically, against the anonymous technological power (foreign to the language or the religion, as much as to the family and the nation), which threatens, with the "home" the traditional conditions of hospitality (Derrida 2000 p.53).

In this context Whitlock (2015, p.247) describes new technologies as a threshold where the possibility of offering hospitality to refugees collides with violence, coercion and control: *"new technologies initiate transformations of public space at those borders between public and private, citizen and non-citizen, foreign and non-foreign"*. Surveillance is 'thick' (Torpey, 2007) for undocumented/irregular migrants and other 'unwanted' at the borders and functions as a 'banopticon' (Bigo, 2002) by excluding/banning the 'undesirables' from crossing them. In this respect, new technologies transform borders into sites of intensive scrutiny, closure and trauma for the 'others' (Walsh, 2010). In the words of one of the MEDMIG project interviewees: "200 metres before entering Turkey the Iranian army caught us. They are doing

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[3] Interview with Syrian refugee conducted for the purposes of MEDMIG project, Athens, 27/09/2015.

everything in order not to let us cross to Turkey. They are using drones and night vision cameras".[4]

Whilst these 'securitization' responses can be seen to have worsened after the Paris attacks, Harney (2013, p.2) identifies securitization and control as key features of migration regimes in Europe, ranging from enhanced spaces of deportation to "*an increased technological surveillance presence as an overall European strategy towards 'risk management', with concerns about terrorism and crime putatively linked to irregular migration*". But he also shows how mobile phone use by migrants in Naples can act as a kind of defence mechanism and means for survival: "*A mobile phone for migrants in Naples serves as an indispensable 'space-adjusting' technology, enabling them to establish a network to enact a strategy for communicative defence in the face of existential, juridical and political insecurity*" (ibid).

States no longer monopolise the control of 'the legitimate means of movement' (Torpey, 2000). Border control and surveillance are also carried out by a multitude of non-state actors, such as supranational organisations, municipalities, private security and airline companies, travel agencies, far-right parties and vigilante groups (Guiraudon, 2001; Lazaridis and Skleparis, 2016; Walsh, 2008). A blog post from the Data & Society Research Institute describes the way that surveillance technologies are embedded in control and monitoring of refugees:

> National border police and the UN Refugee agency use biometric technologies to take digital fingerprints and eye scans. Some European governments and military contractors use advanced tools such as satellite imagery, drones, and big data analytics to track and monitor individuals crossing borders. (Latonero, 2016).

Latonero argues that this surveillance, and that practices such as monitoring of social media for people smugglers and terrorists might lead to refugees seeking unauthorized routes to European destinations, which can make them invisible to officials and more susceptible to criminal enterprises. He raises the possibility that disproportionate surveillance might affect refugees' ability to settle in Europe long term and argues for the need to put in appropriate safeguards around data collection.

> Data collection on refugees should balance security and public safety with the need to preserve human dignity and rights. Governments and refugee agencies need to establish trust when collecting data from refugees. Technology companies should acknowledge their platforms are used by refugees and smugglers alike and improve user safety measures, and we should ask what it means for companies to have such politically charged data. (Latonero, 2016,)

2.4. Protection

However, there is more to surveillance than meets the eye. Walsh (2010, p. 128) points out that *"observing, locating, and classifying may be conducted in the interest of protecting rights, redressing injustices, enabling democratic participation, buttressing moral criticism, and advocating for alternative practices"*. Watching, monitoring and rendering visible are not inherently securitising, exclusionary, or repressive practices and can be used in the service of those in need (Walsh, 2010, p. 113). A number of surveillance techniques and tools used for the deterrence of migrants and refugees at the borders can and have been appropriated by civil society actors, such as NGOs, volunteers and activists for the protection of the very same subjects. As we see in the press review, not all refugees own a smartphone, and in many cases, refugees may collectively own and use a single low-tech mobile phone. In this respect, activist groups, NGOs and solidarity initiatives can take advantage of smartphone technology and surveillance techniques on refugees' behalf.

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[4] Interview with Afghan refugee conducted for the purposes of MEDMIG project, Athens, 9/10/2015.

For instance, the activist project 'WatchTheMed Alarm Phone' has been launched in autumn 2014 by a coalition of human rights and migrant activist groups, including WatchTheMed, Boats4People, Welcome to Europe, Afrique Europe Interact, Borderline-Europe, No Borders Morocco, FFM and Voix des Migrants (Stierl, 2015). Various activists, groups and solidarity initiatives came together to practically support precarious mobility in often deadly spaces, by drawing on the experience of individuals in migrant communities who had been for years in contact with persons in distress at sea (ibid). The project functions as a hotline for migrants in distress at sea. 'WatchTheMed Alarm Phone' is operated 24/7 by volunteering shift teams and supporters located in various European and North African cities (ibid, p. 4). Its shift teams offer advice and information to migrants at sea, and raise public alarm to pressurise coastguards to conduct rescue operations in cases of emergency, since the project does not possess independent means of rescue (ibid).

In 2008 a similar initiative was undertaken at the US-Mexico border by Humane Borders. The organisation argued that the vast majority of migrant deaths had occurred in areas with no mobile phone coverage, and that more than half of all rescue operations were initiated by migrants using their mobile phones (Humane Borders, 2008). In this respect, the organisation had advocated for the expansion of 'an electronic umbrella of safety' across the US-Mexico border (ibid).

Along the same lines, three organisations at the US-Mexico border, the American Civil Liberties Union (ACLU), No More Deaths, and Humane Borders, have utilised surveillance techniques and technologies for the protection of people on the move. More specifically, these organisations have used digital photography and video recording equipment in order to monitor state agents and vigilante organisations operating at the border; they have organised and coordinated citizen foot patrols in order to locate and assist migrants in distress; and they have used Geographic Information Systems (GIS) in order to provide water and high resolution border maps to migrants (Walsh, 2010). During 2004-2006, ACLU trained more than 500 volunteers in the proper use of video surveillance equipment, including digital cameras, mobile phones and camcorders, to monitor the activities of state and non-state actors at the border, or else, to 'watch the watchers' (ibid, p.124). The aim of the initiative, known as 'Legal Observers Project', was to prevent or document misconduct and brutality by border guards and vigilante groups (ibid). In this regard, the documentation of violence and abuse had the potential to provide witnesses and facilitate prosecution, while the act of monitoring per se had the potential to prevent future similar events from happening, thereby creating a deterrent effect.

All in all, surveillance technology has been and is being used by various activist groups and solidarity initiatives as a means to promote transparency and democratic accountability, as a mechanism of empowerment, and as an ethical and practical way of assisting people on the move, by recasting the official securitising discourse, and by challenging border arrangements.

2.5. Digital witnessing

Surveillance technology is being used by refugees and those mobilising on their behalf alike as a means of digital witnessing. The mass production and availability of new technologies, such as smartphones, has 'democratised' surveillance, since anybody who possesses the essential purchasing capital can access mechanisms of social monitoring (Marx, 2003; Pecora, 2002). "*Traditional hierarchies of visibility are being undermined*" (Haggerty, 2006, p.29), as the possession and utilisation of smartphones empowers the 'watched' and those who stand in solidarity with them. Sometimes, digital witnessing is also used by smugglers in unexpected ways. In the words of one of the MEDMIG project interviewees: "*[the smuggler] video recorded us with his mobile phone camera. He said that often the coastguard apprehend people, beat them up and drown them. He said that*

he needed a video of us in case this thing happened, in order to use it as a proof when he reports the incident to the police."[5]

We see in the press review (Chapter 1) how the multimediality affordance of mobile phones – of image capture and screen sharing - has a dual function for refugees: the phone camera is a means to preserve an archive memory of difficult journeys, and share images with families. In their work on digital citizenship Isin and Ruppert argue that acts of witnessing are also making rights claims "in the sense that they enact a right to witness an injustice and share it" (2015, p.140). As one of the MEDMIG project interviewees put it: "I went to Damascus, Aleppo and Homs. I started taking photos and recording videos of the regime's atrocities. I wanted to send these photos to news channels".[6] Acts of citizen journalism performed by refugees figure in the press review, as smartphone cameras are used as a tool for witnessing and sharing images of human rights violations and acts of terror but Isin and Ruppert see that these acts are not necessarily counter-hegemonic owing to the presence of gatekeepers and hierarchies (ibid, p.136). These gatekeeping pressures might take the form of risks of exposure, as described by Gregory in an article about the use of popular consumer platforms for the dissemination of human rights footage:

> After recording your video you are faced with choices about how your video should be used. You can upload your footage to a popular consumer platform like YouTube or Facebook. This option offers the capacity for rapid dissemination, which might help secure timely media and public attention; but these platforms also pose a risk, as they are readily accessible to the police and military. Because of this, the faces of the people you have filmed and the metadata describing the location and timing contained within the image might incriminate both you and them. Metadata captured by your mobile carrier and by the real-name-based social media service you have used, will likely add to this risk. This option means thinking through risk and the precautions you might take—like blurring faces and attempting to remain anonymous. These different choices illustrate one of the many frictions that emerge when we use contemporary consumer communication technologies in an expanding activist ecosystem that involves new participants, new approaches and new technologies: the friction between staying hidden and being found. (Gregory, 2015, p.269)

The second function of the multimediality affordance of mobile phones sees the phone camera as a means of sharing images with families. This function is described by Tomaszewski, Mohamad, and Hamad (2015, p.42) as 'refugee situation awareness', or else the ways in which refugees maintain awareness of factors related to their own personal wellbeing as well as the situation in their home country. In her work on refugee lives in a Jordanian Refugee camp in Forced Migration Review, Khoury describes how Smartphones are used to share images from a wedding and provide a link to life inside Syria.

> Refugees from the same village in Syria marry one another, and bring children into the world. One woman shows me pictures from her daughter's wedding celebration held in Irbid; most of the 300 invited guests were other refugees from her home town in Dara'a. Those wedding shots were presented to me on a smartphone. Such devices are lifelines to the outside world, and more importantly to inside Syria. News and updates stream in on rocket attacks and daily casualties. With little else to occupy people's time and much anxiety to fill their minds, these devices are consulted often and eagerly. (Khoury, 2015, p.94)

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[5] Interview with Iraqi refugee conducted for the purposes of MEDMIG project, Mytilene, 1/11/2015.
[6] Interview with Syrian refugee conducted for the purposes of MEDMIG project, Mytilene, 30/10/2015.

The process by which this woman is sharing the wedding pictures is a form of storytelling. This is seen by Schaffer and Smith as a way of making human rights claim; of maintaining identity and life narrative in the face of loss.

> It can also become a way of maintaining communal identification in the face of loss and cultural degradation. Or it can be enlisted in witnessing to the failures of democratic nations to realize and live up to their democratic principle of inclusive citizenship, making visible rents in the social fabric that undermine unified narratives of national belonging. In all cases, storytelling functions as a crucial element in establishing new identities of longing (directed toward the past) and belonging (directed toward the future). (Schaffer and Smith, 2004 p.6)

2.6. Care

Drawing on similar insights, Lyon (2001) argues that surveillance can be understood as an open and processual field characterised by the rationale of care, which refers to humanitarian and care impulses. He doesn't, however, ignore the fact that in certain instances, types of care surveillance can be hegemonic and can establish hierarchies by operating as tools of legitimation.

In this regard, Talhouk and her colleagues (2016, p.4) argue that mobile phones enable refugees to facilitate their access to healthcare and humanitarian aid. Moreover, they note that previously identified high levels of use of smartphones by the refugee population offers the opportunity for using digital technology to support access to certain types of healthcare and health advocacy, and affords an opportunity to empower refugees in their health. In the same manner, Gaebel and his colleagues (2016, p.126) maintain that the rising numbers of refugees in Europe offers the opportunity for providing 'tele-health' services (i.e. health services from a distance) to patients. These services are provided in the own language of the refugee, they are easily accessible, guarantee anonymity and are less expensive, while they eliminate social cues and distinctions, such as race, disability and facial expressions through the use of text-based communication. Similarly, Mucic (2010, p.237) states that transcultural patients, such as refugees, asylum seekers and migrants, very often encounter difficulties in accessing satisfactory health services tailored to their needs. This gap can be bridged by tele-health services, he argues.

Indeed, a number of digital healthcare projects, specifically designed to deal with the needs of refugees, have been developed during the past years. A 'tele-psychiatry' project has been designed to deliver 'culturally appropriate mental health care from a distance by the use of videoconferencing in real-time' to transcultural patients (ibid, p.238). Baranoff and her colleagues (2015) have developed an app, which enables refugees to learn and navigate within their new surroundings in the host country, including hospitals. Talhouk and her colleagues (2016) advocate for the utilisation of digital technologies to support refugees' antenatal care. They argue that any such designs "should account for contextual and cultural understanding of refugee health beliefs and experiences; literacy; refugees' negative perceptions of their healthcare providers; as well as community hierarchies and current communication practices" (ibid, p.1). Moughrabieh and Weinert (2016, p.165) provide an overview of a tele-intensive care unit project utilised in Syria since December 2012. The project draws on inexpensive video cameras, free social media applications, cloud-based electronic medical and medication administration records, and a volunteer network of Arabic-speaking intensivists in North America and Europe.

On another level, Techfugees, a recently established organisation, and a number of other similar organisations and groups have been set up in order to find ways for the tech community to support refugees. The organisation has given rise to a number of ideas for online services that promote the care for refugees. 'CHIN', for instance, is an app for locals to connect with refugees in need; special versions of services like LinkedIn and Airbnb have been

designed for refugees; 'Refugees on Rails' is another service that teaches refugees coding in order to give them an edge in the job market; 'TEXTING' is an app that sends people on the move alerts in different languages about medical and legal assistance, or how to find a job in their destination country (Rutkin 2016). The latter app has been already been taken up by various French NGOs, including Action Emploi Réfugiés (ibid). Similar initiatives to Techfugees have been developed across Europe: 'Gherbetna' is an app that provides information to refugees about settling in Turkey, while 'Kiron University' is a Berlin-based effort to offer refugees free online university education (ibid). Finally, 'refugeeinfo.eu' provides information to refugees with regards to housing, medical services, family reunification and local asylum rules in their host countries. Rutkin (ibid) notes that some of these apps collect personal data from refugees, and a careful read of their terms and conditions reveals that there is room for the monetisation of the data.

2.7. Techno-optimism

A final tension is in the role of the mobile phone itself as a 'solution' for the refugee crisis. We see in the section on the 'limits of app-ology' how mobile phone app is seen as playing a role in 'solving' the refugee crisis. Indeed, Chib and Aricat (2016, p.1) state that mobile phones constitute 'one of the few uplifting narratives within the migrant crisis'. Mobile phones emerge as a necessity in academic literature in all stages of the journey: Talhouk and colleagues (2016, p.7) emphasise the importance of mobile phones for refugees in transit, as registered refugees can receive text messages from UNHCR about the availability of humanitarian aid, including food vouchers, diesel for heating, and blankets during the winter. Chib and Aricat (2016) highlight the life-saving properties of smartphones during the journey, as people on the move can gain access to information regarding route-maps, border restrictions, transportation and accommodation, even real-time updates on parliament proceedings regarding legislation. Finally, Harney (2013) sheds light on the role of mobile phones in mitigating or resolving uncertainties of everyday life in destination countries.

However, Holmes and Castañeda dissect this narrative. They show how this narrative makes the subject position of 'hero' (or 'technosaviour') only open to Europeans or North Americans. "*This heroic subject position obscures the imbrication of such powerful actors in international capitalism in many of the political-economic asymmetries that produce displacement in the first place.*" (2016, p.9)

Moreover, Schmitt and his colleagues (2016) in their community-level mobile network analysis in the Za'atari Syrian refugee camp in northern Jordan explain how dependency on mobile phone technology creates 'digital divides'. Mobile phone carriers, together with those in charge of camp infrastructure, are failing to meet the demands for bandwidth and connectivity for refugees and their service providers alike, creating, in this way, social divisions within the camp's refugee community. Finally, Briskman (2013) in her study of Australian immigration detention centres brings to the fore the often exaggerated usefulness of mobile phones in destination countries. She notes that migrant detainees in these facilities have been denied adequate access to technologies that would enable them to communicate with each other and families and friends. Within this context, migrant detainees have consistently relied on low-tech solutions, such as letters and notes, in order to fill the communication void.

2.8. Conclusion

This chapter provided a brief academic literature review, which attempted to enlighten broader discursive tensions in the academic literature on the refugee crisis across the three key possibilities for action of mobile phones – communicative, locatability, and multimediality affordances – as well as the narrative of the mobile phone as a 'solution' to the refugee crisis.

It was argued that mobile phones constitute important network capital in the hands of refugees as they enable them to communicate with their loved ones during their journey. However, network capital can also facilitate traffickers and smugglers to increase their profits. Moreover, network capital operates in complex ways, since it is unequally distributed among people on the move. This creates a stratified 'mobility regime' within which some individuals are rendered more mobile than others, while other individuals are occasionally completely immobilised as they run out of their already limited and precarious network capital.

Furthermore, it was suggested that smartphones are treated in some cases like weapons in the hands of migrants and refugees. This depiction colludes with the coercion, control and violence often wrought against them. Surveillance technologies are also weapons at the disposal of state and non-state actors, which enable them to distinguish the 'desirable' refugees from the 'undesirable' irregular migrants at the borders. Surveillance technologies make migrants' journey even more dangerous and precarious, as potentially 'undesirables' try to remain invisible to the gatekeepers, while at the same time these very same technologies can act as a kind of defence mechanism and means for survival for the very same individuals.

It was argued that watching, monitoring and rendering visible are not inherently securitising, exclusionary, or repressive practices and can be used in the service of those in need. A number of activist groups and NGOs take advantage of smartphone technology and surveillance techniques on refugees' behalf in order to offer them protection. Indeed, the mass production and availability of new technologies has 'democratised' surveillance and has undermined traditional hierarchies of visibility, as the 'watched' and those who stand in solidarity with them can make human rights claims through acts of digital witnessing, as well as maintain their identities and life narratives. However, these acts are not necessarily counter-hegemonic, and they come with the cost of increasing the risks of exposure to control and coercion. Moreover, these technologies have offered the opportunity to a number of professionals and volunteers to reach out and provide 'digital care' to refugees and migrants in need. Yet, this does not mean that these acts are always counter-hegemonic and anti-hierarchical.

Finally, it was argued that the narrative that sees the mobile phone as a 'solution' to the refugee crisis can also disempower refugees by always assigning them the role of the 'saved' and never the 'saviour', can cover up the social divides that in many instances the mobile phone creates, and it often fails to address grave human rights violations that occur in instances where subjects are entirely deprived of access to technology.

Mytilene: hand-drawn map
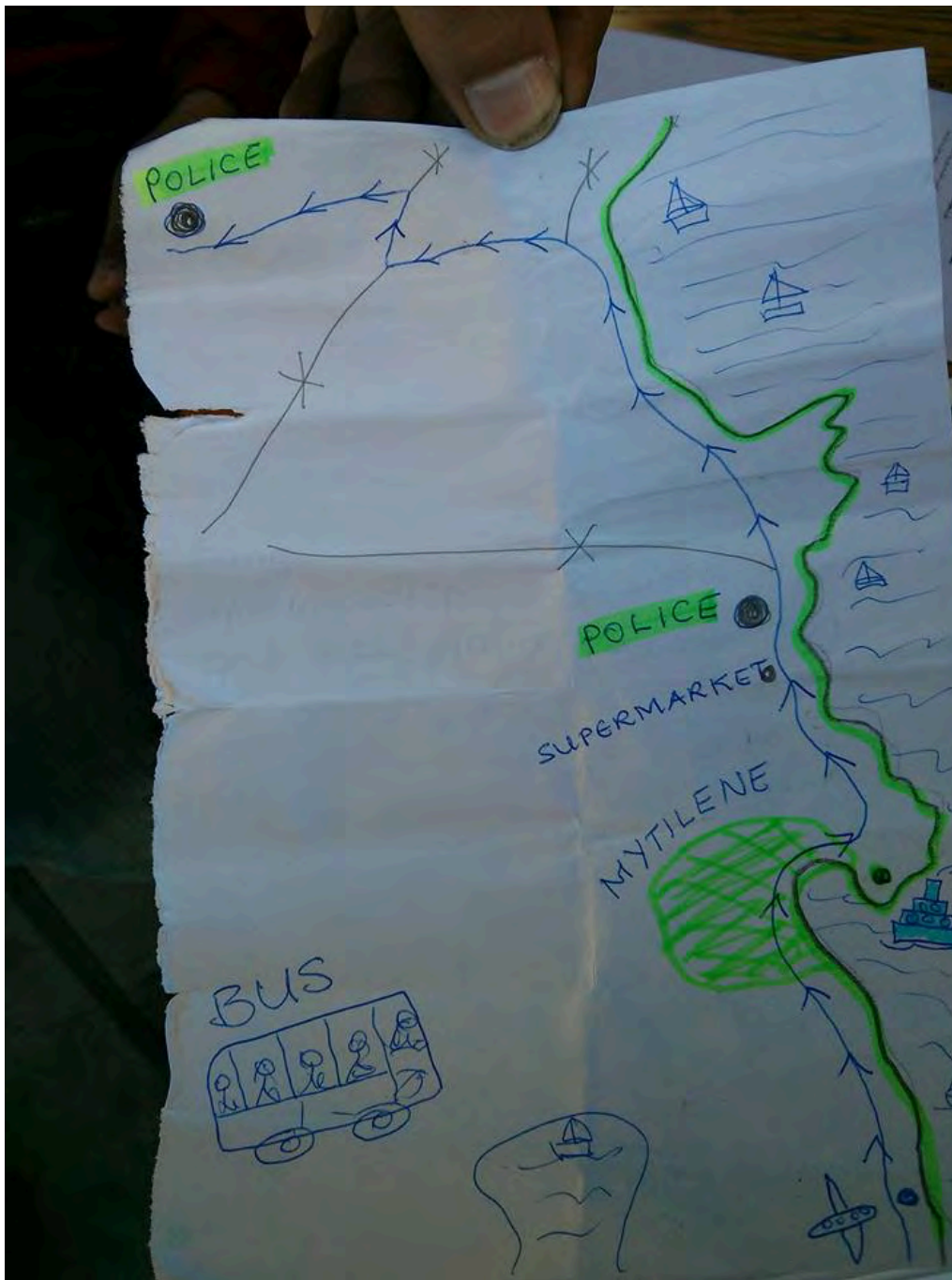
Hand-drawn map given to Afghan refugee by volunteer. The photo was taken by Dimitris Skleparis during his fieldwork in Mytilene. Many Afghan refugees have no smartphones or access to digital maps.

3. Refugees' media journeys: interview analysis

Figure 1. Image source: *http://www.france24.com/en/20150916-france-syrian-refugees-await-asylum-makeshift-camp-porte-saint-ouen-paris*

This chapter uses interviews with refugees conducted in France between September and April 2016 in order to provide first person insights into their media journeys. It examines how the refugees interviewed use mobile phones to access relevant information and news media, and highlights some of the main gaps in provision that they identify. The personal testimonies of refugees and their narratives add valuable perspectives to the insights gained from our analysis of media coverage in the proceeding chapter, echoing many key themes.

The first set of interviews was conducted in Porte de Saint-Ouen, Northern Paris, on September 10th, 2015. At the time of the interviews, over a hundred refugees were living in makeshift tents in squalid conditions while awaiting asylum. St Ouen has become a crossroads for Syrians fleeing the civil war at home and looking for asylum in Europe. The camp is located by the motorway, and has the largest number of homeless refugees in the Parisian area. A report by F24 highlights the desperate situation of men, women and children who have little shelter or protection, have to beg for food and urgently need help in applying for asylum which is not available[7]. They have no address to use to correspond with the authorities. Douania, a 19 year old Syrian women with two children, who is reported to have planned her journey using Facebook says:

> *Everyone knows that there are Syrians at the Porte de Saint-Ouen… For the moment, we live here however we can, and one day our situation will improve.*

Access to the refugees was facilitated by Association Revivre which is committed to helping refugees[8]. Four of the five Syrian refugees interviewed were male and mainly in their 20s and were living in tents in the street. They were stressed and afraid. It was very difficult to find refugees who were willing to be interviewed due to fears of surveillance but women in particular were most difficult to access. It is important to note that among the women who we approached who were accompanied by their husbands, none were allowed to talk to our male

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[7] http://www.france24.com/en/20150916-france-syrian-refugees-await-asylum-makeshift-camp-porte-saint-ouen-paris accessed 03.02.16
[8] http://association-revivre.fr/

researcher or indeed to any other unknown male. The woman who we did manage to interview was alone in the camp and was very keen to talk so that she could expose her desperate situation and get help. Also, so as not to be overly intrusive, we didn't probe beyond what the interviewees were willing to divulge about themselves (see details below). Clearly there are very difficult ethical issues associated with researching vulnerable groups and we were mindful not to raise expectations that as researchers we could provide the kind of assistance that so many were seeking. At the same time many found the interviews therapeutic to have a conversation with someone sympathetic in a context were many felt very poorly treated by the French authorities.

We have used pseudonyms to identify all interviewees in this chapter and across the report.

The first set of interviews included the following people:
- **Saad** was a shop owner and a technology student in Baniyas, Syria and openly declared his anti-regime ethos.
- **Hassan** left Syria with the intention of reaching Europe but at first did not have any particular country of destination in mind. He passed through Turkey, Greece, Macedonia, Serbia, Albania, Romania, Hungary and Italy before arriving in France.. He doesn't want to apply for asylum in France. Hassan's aim is to get to Sweden or one of the other Scandinavian countries as he thinks he will receive better treatment there.
- **Jamil** had already travelled widely for work and pleasure before leaving Syria to destinations including Brazil, Iran, Saudi Arabia. In Aleppo, he worked in acrylic teeth manufacturing. He also worked as an international salesman buying items of clothing, for example, from Turkey and reselling them in Syria.
- **Dib** is an 18 year old man who is fleeing compulsory military service in Syria. He arrived in France in June 2015. He dropped out of school and left Syria and passed through Algeria, Morocco and Melilla, in Spain before arriving in France.
- **Nawal** is a 23-year old female. She was a high school student before leaving Syria, arriving in France in May 2014. She managed to find asylum during that time, and unlike the other males now lives in a hotel provided for her**.** Her parents are in Belgium.

The second set of interviews took place on 13th November 2015 at the Emmaus Association which is housing refugees[9]. Thirteen male refugees, all of them new arrivals, were interviewed. At the beginning of the interview there were 10 refugees sitting on one table, three others joined them later. They all participated and were happy to talk about their experiences, their feelings of dejection and deception at being promised asylum in Europe but also their hopes to build a new chapter in their life. During the first phase, two refugees, Ziad and Nabil, were afraid and didn't want to talk, but once they experienced the friendly and fearless ambience, they too decided to participate and talk about their own experience. The majority are Syrian but two are Iraqi and they range from 15-40 years old. They are calm, laughing, and claim that they need to talk about their tough journeys because they have not done so before. It is often the case that when interviewing vulnerable groups, if trust is established, they have therapeutic value. Again, we use pseudonyms to protect identities and respect confidentiality. The second round of interviews included the following people and, again, we use pseudonyms:
- **Abou Islam** is a 34-year old Syrian man who used to work as a car mechanic.
- **Raed** is a 40-year old Syrian man who has a Law degree. He was formerly an administrator.
- **Ziad**, 30, also Syrian, was an English teacher.
- **Abdel Kader** has a Law degree from Syria.
- **Abdel Rahman**, 21, is a Syrian philosophy student.
- **Abdu**, a 45 years old Syrian refugee, used to work in sanitation.

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[9] See http://emmaus-france.org/

- **Aktham**, 33, used to be a surgeon's assistant in Syria. Adnan, 30, is a Syrian accountant.
- **Ammar**, a 25-year old Iraqi refugee, was a freelancer who used to work in many different fields. He doesn't want to elaborate more about his work.
- **Nader**, the youngest refugee at just 15, is a student.
- **Nabil** is an Iraqi from Mosul.
- **Samir** is an Iraqi from Salaheddin.
- **Amir** is Iraqi.

The third set of interviews took place in Cherbourg on March the 22nd 2016, in the refugees' temporary apartments. Most of the interviewees in this set were also interviewed in Paris in November; the others decided to go to other French agglomerations such as Saint-Etienne and Lyon. One of them, Samir, from Iraq, returned to his home country. As for the Paris, November interview set, 4 of the 9 interviewees were present last time but didn't participate to the conversation. 3 other refugees were in Cherbourg but weren't able to attend the meeting.

Name	Age	Job
Raed	40	Administration, Law
Ziad	30	English teacher
Abdu	45	Sanitary
Adnan	30	Accountability
Abdel Rahman	21	Philosophy Student
Imad	45	Construction
Nidal	35	Mechanics
Wassim	30	Cook
Badry	28	Freelancer (without details)

In addition to the interviews with refugees, insights have also been drawn from interviews with scholars and volunteers in order to triangulate data and arrive at a more comprehensive and accurate understanding of refugees' uses of smartphones and their news and information needs.

It is important to underline that, during the interviews with refugees, issues of trust and confidentiality were of paramount importance. Fear of being under surveillance and exposure – even by other refugees and not just the French authorities - was a key stumbling block when refugees were answering interview questions as well as in the more informal conversations that took place around the interviews. Tensions between refugees were directly related to differences in political views. One cannot assume that all Syrian refugees are necessarily on the same political side. For example, in one of the group interviews, one refugee accused another of being one of Bachar Al-Assad's men. He answered that he was proud to be one. One cannot underestimate the difficulties of researching such vulnerable groups or the ethical issues involved. The interviewer, a native Arabic speaker of Lebanese family background, was very sensitive to these issues and was able to inspire trust and strike a good rapport with the interviewees. We use pseudonyms to protect our interviewees' identities.

3.1. Mobile phones as a lifeline

Refugees use their mobile phones just like most of us to keep in touch with their families and friends, take photos and videos, access information of the internet and via social media. But mobile and smartphones are used for highly specific purposes by refugees - above all, to get informed, plan their journeys, and stay in contact with smugglers and those who help them. All the interviewees agreed that mobile phones ensured their physical mobility. It is unlikely that the refugee journey would be possible at all without possession of a mobile phone at least by

one person in a family or group of friends not least to communicate with fellow refugees and their smugglers.

Television and radio sets are of limited use to refugees. In their home countries, ISIL prohibits or restricts access to external sources of news and information in their controlled zones, and power cuts are life limiting access to technologies. Refugees are also unable to make use of TV or radio during their journeys, except in some refugee camps, and their access to and uses of their smartphones, as we will see, depends on the resources available to them at different moments. Although the refugees interviewed use international news channels like F24, DW and BBC via different platforms (TV, radio, Twitter and Facebook) to get news and information when in Syria and Iraq, they do not necessarily trust these sources. In general, all state funded and even commercial news media are seen as partial. They trust news and information coming from family, friends and significant others including 'people in the field' (other refugees that they know and trust, volunteers, activists and NGOs rather than official state channels) most reliable. According to Raed:

> *We believe ourselves, what we're seeing, what we receive from our parents. We can't rely on the news media channels. Sometimes they say the truth, and sometimes the opposite. There's distortion. We can consult Facebook's pages because [activists] they're more active on the ground, and they say what's happening, unlike the reporter, who's hiding in the hotel and waiting to receive information. Activists are the basis [of our news and information sources], they're risking their lives. Many of them died, they're the real heroes. They cover zones controlled by both Daesh and the regime. You, as a guy in Syria, using your camera and filming what's happening, you're risking your life, to be killed by any party that doesn't like what you're filming, you're risking your life and a lot died because of it. Daesh went to Turkey and executed them; they cut their heads and showed them. The same goes with the Syrian regime, if you film something against it, you disappear; many people disappeared.*

The above quote summarises a patterned response among refugees:
- State media are not trusted but are used for breaking news and interpreted via the lens of prior political views.
- The most trusted media are refugee activist groups, volunteers of refugee aid organisations, friends, family, other refugees.
- The mobile phone may ensure mobility but it can also get refugees into trouble if they record or film material that might be interpreted as anti-regime or anti ISIL.
- When refugees travel they take with them their prior political views and prior news media habits.
- News via social media and online accessed via the smartphone is displacing conventional platforms.

Facebook is used by refugees mostly use it for its Messenger application in order to communicate with relatives, it is also used for its Pages function because the different news channels and many activists are active on Facebook. The Messenger application is the Facebook chat service that allows people to send messages to each other. Messages can be sent between two or more people and so group conversations are possible.

Uses of news: reading between the lines

Given the small number interviewed, it is not possible to draw any conclusions from the lists that the refugees that we interviewed in Paris drew up of their preferred news website pages and twitter but they are indicative and suggestive. We draw on our research of press reviews and online behaviour to elaborate the data analyses provided by interviews.

Page / Account & Order of Preference
Al Jazeera
Al Arabiya
France 24 Arabic
BBC Arabic
Al Mayadeen
Russia Today
Al Hayat
CNN Arabic
Deutsche Welle
Al Manar TV
New TV
LBCI Lebanon
Future TV
Orient
Souria Moubachar سوريا مباشر
Syria Breaking سوريا عاجل
SouriaHouria.com
Syrian Observatory for Human Rights
Syrian News
Dr. Fayssal Al Kassem الدكتورفيصل القاسم

Despite a general lack of trust in European international news channels like BBC F24 and Deutsche Welle, their Facebook pages and Twitter accounts are often consulted because they are more trusted that Arabic news channels which are believed to be monitored by both the government's and ISIL's surveillance teams. International news broadcasters like F24 and BBC and CNN Arabic social media accounts.

Middle East news consumers they are astute and can read between the lines of news channels and make their own 'jigsaw of truth'. Al Manar TV, New TV, LBCI Lebanon and Future TV are Lebanese channels. Al Manar TV speaks for Hezbollah and fought in the Syrian war next to the governmental forces. Future TV is a Sunni channel, representing the Future Movement in Lebanon which is financed by Saudi Arabia, and thus supports the revolutionary movements. LBCI Lebanon is also anti-regime. New TV represents both points of view. Orient is an activist Syrian pro-revolution channel. When it comes to the different Facebook pages mentioned above, only Syrian News is pro-regime; the others, Souria Moubachar, Syria Breaking, Souria Houria.com and the Syrian Observatory for Human Rights are all pro-revolution.

Dr. Fayssal Al Kassem is a Syrian revolutionist activist who comments on politics and news via his Facebook page. He is followed by many Syrians whether they're pro or anti-regime, his posts being mostly polemic because attacking the different actors in the conflict (see next chapter on Facebook and Twitter for more details). Al Jazeera unlike Al Arabiya is followed by people across the political spectrum and from the different countries. Al Arabiya has a particular target audience (mainly anti-regime given its Saudi origins and the crisis coverage and editorial line of the channel). Al Jazeera has managed to create a transnational news culture and is still the most popular channel even after refugees settle in Europe, according to the refugees interviewed.

The refugees interviewed also use Lebanese news social media outlets because they believe that, although they are politically biased, they are close to the conflict zones and give accurate on the ground coverage and adopt a comparative approach, contrasting the different editorial and ideological lines of diverse news sources. Al Manar for example is pro-regime, LBCI is anti-regime and refugees read between the lines of the channels that they see as providing the most accurate and truthful coverage at any one time.

The reasons behind refugees' decisions to leave their home countries at any one moment are complex but the dire situation in Syria is the main driving factor linked to opportunity and resources. News and information are not the immediate trigger but an important element in the background. Raed argues that all Syrians treat official news sources with extreme scepticism:

> *Although there are a lot of channels, they only diffuse 10% of what's happening. To tell you, they're all politicized, you, as a source present in the field; you're stronger than them. […] All the persons in Syria know it because they see the truth being modified; it's either diminished or exaggerated, or even according to the interests of one of the parties.*

Refugees leave home, according to Ziad, because of threats and intimidation:

> *Fear, threats, each person with their situation. For example I was at Deir el Zor, eastern Syria, I live in the regime's area, we were surrounded by Daesh, we didn't receive food. Even the big generals were using us as merchandise.*

All the refugees interviewed complained about threats and intimidation they were receiving in their home countries and how their rights as humans were forgotten.

> *We decided to leave because of the threats. We were afraid. I left with my parents, my parents went to another city, and my brother and I we went to Turkey and came to France.*

Most of the refugees interviewed took the route from Turkey and Greece. In the next section, we trace the refugees' media journeys.

3.2. Refugees' media journeys: from departure to arrival

Refugees are using their smartphones for many purposes, but mainly for survival during their journeys. In this section, we summarise the key findings relating to how the mobile phones is part of the wider digital and physical infrastructure that shapes their routes, experiences and destinations. A smartphone is a vital lifeline: once refugees leave their home country, the possession of a smartphone is crucial for staying in touch, getting informed and located, and using online translation services. Smartphones are also map tools and contacts providers.

Abou Islam reported that one refugee who was elected by the group because of his English and Web knowledge. According to Aktham:

> *We were in the rubber boat, all the phones were in bags, he was the only one not to put his phone in a bag so he could stay in touch with coastguards and send the location to his brother in the Netherlands. Each 2 minutes, he used to tell him where we were.*

The ability to communicate and to send details of one's location is extremely important for refugees. Nader adds that: "*Someone used his mobile and had the number of coastguards, he called them: his group was saved because of one key contact number.*"

Whatsapp map: Izmir to Germany
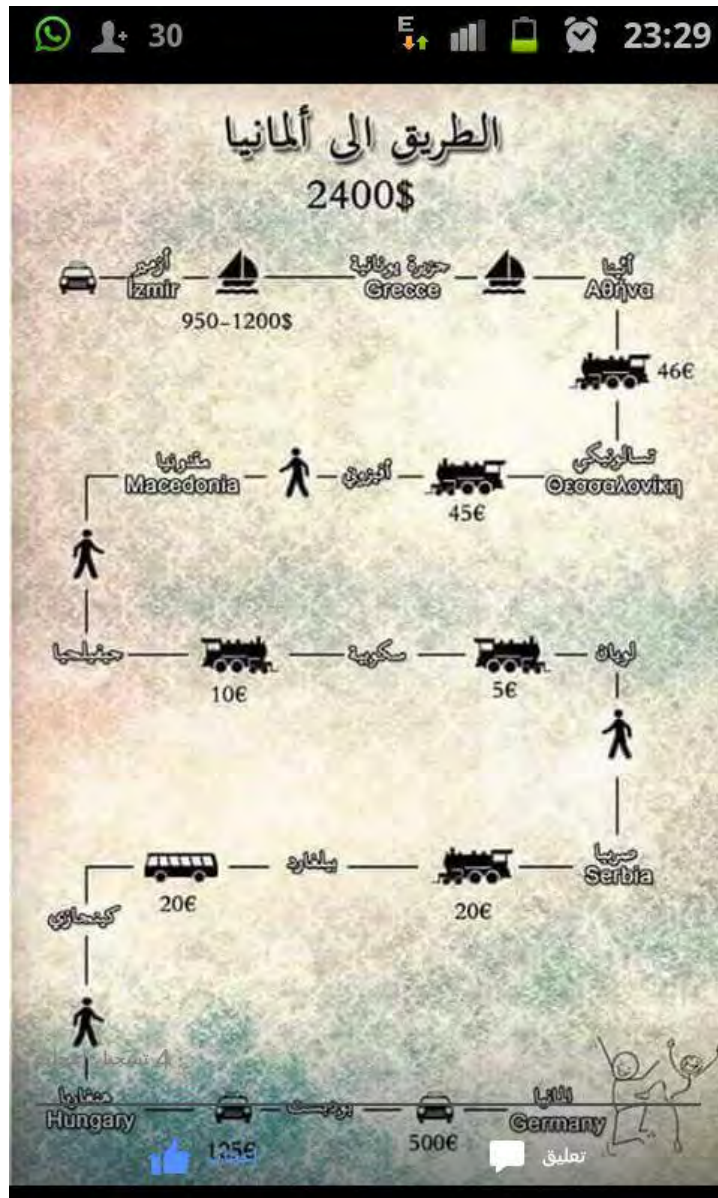
Figure 2. Map sent via Whatsapp by refugee interviewed in Paris

The title of this image (Fig. 2) in Arabic is "The Road of [to] Germany". It shows place names in Arabic, English and Greek. This map is circulated widely via Whatsapp among Syrian refugees. It shows the route that they can take from Izmir in Turkey to Germany costs 2,400 dollars approximately. It shows the means of transport and cost of each leg of the journey and the currency to be used as well as those parts of the journey that refugees need to make on foot.

It was shown to us by one of our Syrian interviewees and discussed in subsequent interviews. All the 53 interviewees in Paris told us that they knew this map and used it.

These are the translations into Arabic of the country and city names on the route: **Izmir** to **Greek Island** to **Athens** to **Thessaloniki** to **Evzonoi [Evzoni]** to **Macedonia** to **Gevgelija** to **Skopje** to **Lojane** to **Serbia** to **Belgrade** to **Kanjiža** to **Hungary** to **Budapest** to **Germany**.

Whoever came up with this map was very careful to give precise details. It is elegantly simple, and its creators were meticulous in providing all the essential information required to make the journey.

In translating place names they have taken great care so that those using the map would be able to pronounce the names of the places they needed to get to. The translators clearly wanted to make sure the names were spelt as accurately as possible to avoid any confusion. They wanted to equip people for the journey and make sure that when they sought to buy a train ticket that they were able to pronounce the name properly. For example, in formal Arabic the equivalent of the letter "V" (ڤ) is not a part of the commonly used Arabic alphabet, so you won't find it on most Arabic language keyboards. More often than not, to put the sound V into Arabic writing, another letter (ف) is used because it closely resembles the letter V. Whoever converted the name Gevgelija into Arabic took great care to use the V (ڤ) letter, rather than the easier and readily available (ف) which sounds closer to F.

The level of graphical detail is impressive. The figures of the ships and trains suggest that someone took their time to put together - hours went into it. Someone thought it was worth the time to copy and paste and arrange these icons. The person has some skills or may even be a graphic designer - they put a lot of thought into it. They used a computer to put it together. The stick figures at the bottom, jumping for joy, appear to have been added to a hard copy that was then scanned: this map has been through cycles of digital and non-digital reproduction and re-use.

The map also differentiates between currencies: the price tag for the trip to the Greek Island is in dollars, while everything that follows is in Euros. This can be read as a warning, almost: those following the map needed to take that into consideration. The cities which are featured on the map are either capital cities or border towns. The information is succinct, so as to help refugees get to the best place for them to make the various crossings they need. This all suggests that a number of refugees and handlers or smugglers were involved in the production of the map. They are aware of which places offer the possibility to cross borders that may have been closed, making journeys extremely dangerous because they have been rendered illegal. The map acts as an incentive, directing people to those specific cities and places where they can access the services of smugglers or hired drivers in the process of irregular migration. This map is not the work of one person. There is a lot of knowledge in here that had to be collated from several sources who are familiar with all these different geographical locations, specific methods of transportation between locations, the costs of transportation, and the best possible routes. The information was put together and then handed to someone who did the art work.

Keeping in Touch with Relatives via Smartphone

Refugees use their smartphones to maintain communication with their families and friends. They follow the news mainly on Whatsapp as they trust that it is not under surveillance as are Twitter and Facebook accounts. Their relatives send them relevant links throughout the journey. Some refugees, even if they have a smartphone, aren't able to communicate with their families because of the situation in their home country. In Samir's case:

> *I wasn't able to communicate with my family, Internet access is cut there, and the phone is cut. I haven't spoken with them since I left.*

Sourcing Information

Refugees do not only communicate with their relatives at home; they also seek information from people who left before them so that they can follow their path. Ziad says:

> *We kept in touch with them on the road. You speak to the person who left before you. My brother left a week before me; I followed his steps, through Whatsapp and Messenger. I mainly used Messenger, I lost Whatsapp.*

Raed adds:

> *When we don't have Viber, we use Whatsapp. When Whatsapp stops working*
> *we use Messenger, et cetera et cetera.*

Refugees inform other refugees about the different countries to go to, informing their decisions about which country to choose for refuge. Nabil asserts that he received information through other refugees on the road*:*

> *Where are you going? I'm going to Finland, you can have this, this and this.*
> *[Another refugee:] Where are you going? I'm going to Germany I can have my*
> *fingerprints taken there…*

Such applications like Viber, Facebook Messenger and Whatsapp – are important to refugees because they allow them to stay informed about their relatives' situation, and crucially to be informed and advised by those who have gone before. But they require internet access.

Translating and communicating with locals on the journey

Refugees use their mobiles to communicate with the local people, volunteers in refugee camps and officials in each country they pass through using Google's translating service. Discussions with interviewed refugees confirm that they use Google Translate to help phrase questions to ask locals about directions, about where they can find a cheap restaurant or hotel, where they can have access to Wi-Fi and power to charge their mobile's battery. Moreover, the service helps them to translate road signs and other informational resources.

Technical Problems with the smartphones

Some refugees are victims of fraud. They buy a SIM card in Greece after they have been informed by the seller that the line works across Europe, but it stops working once they cross borders. In Abou Islam's case, he bought a number that was supposed to be international from Greece and thought that it would allow him to reach Germany. The suppliers lied: once he reached the next country, it stopped working.

Another problem with smartphones is the necessary dependence on a charged battery. Without power, phones are useless. Abou Islam reports:

> *Everyone had 2-3 batteries with him, and a charger*

Abou Islam, who has a Samsung. Those with iPhones cannot change their mobile's battery and so depend on having a charger. Aktham asserts that when:

> *You find a place to charge the phone, you see 50 persons around it. […] In*
> *Greece, we slept a night next to the Macedonian borders. There was a man who*
> *had a car with his wife; he had an engine from which there was a wire, so we*
> *gathered around it. You'd say a spider's web. I stayed 2 days without a phone*
> *because of battery.*

Phone charging services are not free: Nader paid 5 Euros in Macedonia to charge his iPhone's battery.

3.3. Using smartphones on arrival and beyond

Refugees need their smartphones during their journey to Europe until they arrive, hopefully, at a safe destination, but the digital journey does not end here.

Diasporic communication

Refugees use social media applications to keep in touch with their transnational families and relatives who may be scattered across the Syrian or Iraqi or Afghan diaspora once they have arrived in a new place. Again, communication might be prevented or impeded depending on the situation in their home country. For instance, Abdel Rahman, one of the interviewed refugees says:

> I *barely talk to my parents, after 2 am, because ISIL prohibited the Internet and the satellite.*

Communicating with volunteers and professionals

One Kurdish-Iraqi refugee staying in the Place of the Republic in Paris uses his phone to keep in touch with volunteers and associations engaged in helping refugees. His mobile phone allows him, as well as other refugees, to ask for help whenever he needs a particular piece of information or practical guidance. For example, this refugee kept in touch with an active volunteer to receive medical help and shared contact details with a doctor.

Following the news

Refugees also use their smartphones stay informed by connecting to Facebook, Twitter, international news channels and activists' pages, accounts and platforms. They can watch online the same channels they used to watch in their home countries. Raed says he also downloaded their application on my mobile. He showed the interviewer his iPhone where the apps of different international news channels' appeared: Al Jazeera, Al Arabiya, Al Mayadeen, BBC Arabic and France 24 were identified. As for TV, refugees say they only watch Al Jazeera because it's the only channel they receive which is in a language they can comprehend. Amir confesses refugees in the centre only watch Al Jazeera because they understand what the channel] says.

Issues associated with SIM cards

Refugees encounter great problems with their SIM cards. Often, they are unable to use the number they have when in possession of Internet access thanks to applications such as Viber and Whatsapp but they can't make calls using this number. Some of them decide to try and buy a local number, but become either victims of fraud or suffer from a lack of technical help. Abdel Rahman says:

> [r*efugees in France] go with someone who speaks French; [they] take him to the supermarket. [The SIM card lasts for] 2-3 days and it stops.*

Nabil adds:

> *I was advised to buy an Orange line, I bought it for 20 Euros and I added 20 Euros for credits. I provided the seller with my information but each 2-3 days, the company calls me to tell me they'd stop my number if I'm not registered. I went back to the shop and he told me he's already sent the information; the problem is the company's. Then the number stopped working, he should at least have told me I had to use the credits within 15 days. Nothing, they help us in nothing. I went to the company; they told me they needed a residence permit or a passport. I don't have a passport; I have a copy of it on my phone. And I didn't buy another number because it's all lies. Once I have a resident permit I'll have a monthly contract, it's safer.*

Information Gaps and Broken Promises

Refugees report that they are suffering from an information gap mostly because of language barriers. According to Abdel Kader:

> *Language, language is the most important thing if you need to move.*

Moreover, they confess they are disappointed by the care they're receiving from the French government and think they did not receive what they were promised before coming to France. They say they never thought about settling in France, but the French government's offers and promises made them change their mind. The refugees interviewed reported that while in Germany, they heard on public loud-speakers the voice, reportedly of the French government, asking them to come to France. In fact, although the refugees interviewed say they decided to leave their country without the help of any particular information trigger, they declared that once they start their journey, they count on those who left before them for information and news. However, none of the interviewed refugees would admit to knowing another one who left to France before them – such is the fear of exposure. Ziad declares:

> *Germany is the best country for asylum, but given the huge number of refugees, people try to avoid it. We're here [in France] because they (the French government) told us we will have our families with us soon.*

Bridging the gaps in reliable, trusted news and relevant information

The Refugees' interviewed proposed various solutions. Raed for example, says refugees would benefit from have an application or resource that:

> *contains some laws concerning foreigners, immigrants and refugees; the social organizations like the CAF, health, insurance; what are the required documents to register to organizations and insurance; what are the services they provide. [They'd like] the social organizations to be mentioned in the application, or links leading to them. Geographically, [refugees would like to have] their locations in all the French territory, [and to know] whom to address if [they] need help of any kind.*

Ziad adds:

> *They need to know how to pursue their studies first, how [they] should walk and move, how to go the supermarket and buy things, and [what are the] touristic places.*

Abdel Kader believes that:

> *Language is the most important thing if you need to move. We need everything, we are reborn now. We want to know everything on this country: studies, work, driving license, transportation card, we need to know everything; metro, buses, touristic places.*

3.4. From Paris to Cherbourg: Aspirations, Expectations and Realities

This section is based on follow up interviews conducted in Cherbourg in Northern France with some of the same refugees who decided to continue their lives there.

Suffering from a civil war for more than 5 years, many Syrians and Iraqis decide to leave their home country, having Europe and the 'European dream' in their mind:

> *"Fear, threats, each person with their situation. For example I was at Deir el Zor, eastern Syria, I live in the regime's area, we were surrounded by Daech, we didn't receive food. Even the big generals were using us as merchandise. We decided to leave. I left with my parents, my parents went to another city, and my brother and I we went to Turkey and came to France"* (Ziad, November 13, 2015).

Therefore, refugees decide to leave their country and take the dangerous path towards Europe. They say that Germany is the main country they're seeking. Nevertheless, given the huge number of asylum seekers there, they also decide to look elsewhere, depending on what they hear or receive as offers:

> *"we received information through other refugees on the road. Where are you going? I'm going to Finland you can have this, this and this. Where are you going? I'm going to Germany I can have my fingerprints taken"* (Nabil, November 13, 2015).

As for their choice to choose France as a final destination, *"we were surprised by France's offer and they told us we won't be housed in tents, [we will have] a fast family gathering, a fast paper settlement"* (Akhtam, November 13, 2015).

The interviewees report being disappointed at the beginning because they believe that the French government didn't fulfill its promises: *"the speech was something and the reality another thing"* (Akhtam, November 13, 2015).

However, things seemed to change after being relocated. The interviews conducted on March 22nd 2016 showed that these refugees are much happier in Cherbourg: step by step, the legal procedure is taking place. First, they're getting their papers and the family gathering process has begun:

> *"Here, you live on your own, as you wish, like anyone else living his day. And of course, our day here starts in the morning, we have our coffee, we then go to take care of our things in some national and local institutions, we are still in the process of getting our papers, one after another, our medical examinations, the family allocation fund 'CAF', the OFPRA (Office Français de Protection des Réfugiés et des Appatrides), the OFII (Office France de l'Immigration et de l'Intégration), the family gathering process because now it's time for it. They promised us when we arrived in France that it would take place within 6 months and now it's becoming true, some of us have already our families here, the others on our way if God wants. We have also to follow-up with the associations specialized in the refugee and migrant issues, we go and see them too, we check what's new and if they could help us whether it's for the language and the translation, to reduce the time for the papers, and if we have rights we don't know about, they tell us about them"* (Raed). Second, they say they're receiving a better help from local associations and their neighbors: *"I know refugees here are distributed to different associations and there's the social guide who guides the refugee whenever he's lost and acts like an intermediate between the refugees and the institutions. And to be honest these associations are doing well their job when it comes to the papers, the social aids etc. They help us, give us appointment with doctors, and tell us how to buy medicine. We also have French neighbours who also help us"* (Raed).

"Guys, congratulate me for having the French travel document!" One refugee published this post on Facebook. The cover text: European Union / French Republic / Travel Document for Refugee / July 28th 1951 Convention"

The refugees we worked with say they have taken the right decision to go to smaller cities, and while walking next to his apartment, Raed says:

"it was a good decision to come to Cherbourg, look around you, you have schools everywhere, and it's easier to raise a family here than in Paris, it reminds me a lot of my hometown, the kids won't feel disoriented".

This last section sketched a general pattern of response as refugees moved to Cherbourg but more interview research is required to gain a broader picture of the very diverse experiences and of family reunion. This will be covered in the next phase of our research. We will also in our next report complete our interviews in London and Swansea. For now we offer an overview of findings to date.

3.5. Key findings

This chapter was based on interviews with over two dozen mainly male Syrian refugees in their 20s in Paris in November 2015. They were asked to report on their media journey – the role that digital technologies played in their homeland, on their journey and upon arrival in Europe. They were asked to identify gaps in their news and information needs. The qualitative interviews offer fresh insights into their plight but at the same time raise difficult ethical issues round trust, security and privacy.

When in their home country:
- Refugees watch international news channels but do not trust them because the information provided is not always seen as accurate: they trust the activists on the ground because they are closer to the field.
- In some conflict zones, mainly those under ISIL's control, regular power cuts obstruct access to TV and the internet: mobile phones assume great importance.
- They decide to leave because of the civil war and conflict, fear for their lives and their future – not because news stories or information inspire hopes and dreams of a better future.

- Some leave with their family; others leave alone and hope family will catch up later.

On their journeys:
- Refugees rely on their smartphones to have access to news and information sources and services.
- They buy a SIM card or several different SIM cards if they can afford it. If not they keep their phone number and connect to the Internet when they have Wi-Fi access which is not often.
- They use mobile phones as most of us do to keep in touch with relatives, to get informed by those who left before them and to contact those who can help them, for example, the coastguards. A call can make the difference between life and death of an entire boat of people.
- They use their phones on Wi-Fi mainly via Viber and Whatsapp.
- They also use them to get informed through social media, mainly Facebook, Twitter and the international news channels' apps.
- They use them to navigate their chosen routes via map services such as Google Map.
- Refugees face many problems if they do not trust their smuggler and they take a huge risk in the boat trip. They face technical problems related to their phones (battery and SIM card), and worry about which route to take in order to avoid the police.

On arrival in Europe:
- Refugees report that they are disappointed by the treatment they have received from the French government because promises were broken.
- They face many problems such as legal issues about asylum seeking, health issues (first aid, insurance or emergency), language problems (they don't speak French and find it hard to communicate with locals) and practical difficulties (how to take the metro, buy a new SIM card or buy from the supermarket).

3.6. Recommendations for digital resource provision

- Refugees are in need of a range of digital resources in order to have access relevant information that they don't currently have access to. They need a simple one stop service that is easy to use and provides them regularly updated information about what they might need, whether it's during their journey or once they reach their final destination.
- Information on the service need not be created from scratch but must include:
  - Legal: asylum seeking procedures in the different European countries: how to apply, and details of, for example, the fingerprints procedure in the EU
  - Practical: how to buy a SIM card, where to find a free Wi-Fi, how to buy staple good from supermarkets.
  - Transportation: which means of transport to avoid or take during their pathway across Europe, costs, how to use public transports, such as metro. It should be directed at their safety and security, health and well-being and avoid being seen to encourage refugees to take the journey.
  - Translation and communication: language required to survive on the journey and to communicate with locals, with doctors, with administration representatives.
  - Health information (insurance, first aid and emergency cases) in as many countries as possible.
  - Social services – how to access to shelter, food and clothing.
- The service should have a broad vision and not a parochial or locally specific one; it should assemble and curate the best of what's available BUT also bring something new – have a Unique Selling Point (USP) to attract refugees to use it and help them wherever they are across Europe. This might be that it offers a comprehensive one stop shop resource.

- This service should inform refugees about the hard realities and difficulties of making a life in Europe but also provide hope and support as there are many welcome and support groups so one aspect of the new resource could be to put them in touch with help. Life in Europe isn't as easy as they might have thought before departure. They should be better prepared via accurate news reporting to the homelands of refugees.
- News organization have a duty to fully inform overseas audiences about the complicated and dangerous nature of the journey which might allow them to make the better informed choices and set more realistic expectations about what they can afford and where and how they should travel. For example, life in Paris is more expensive than other European cities: the service should indicate what is basic the monthly living cost in Europe's main cities and destinations for refugees.
- This service should also respect their privacy and insure their security: refugees assert they're afraid of the surveillance and want to keep things as private and simple as they can. It should not allow those they're running from (whether it's their government or non-state actors such as ISIL) to find them: the service should not show the refugees' location to the others.

4. Refugee uses of Facebook and Twitter: social network analysis

This chapter is based on social network analyses conducted on the Facebook groups used, and Twitter accounts followed, by refugees that we interviewed. We draw on insights from the interviews documented in the previous chapter to interpret the maps produced which document networks of information and influence. The first section offers an analysis of the Facebook groups used while the second section focuses on Twitter. The final section offers a summary of the main findings and some recommendations. This research suggests refugees are hard to reach, distrustful of Western media, NGOs and authorities, and look for safe spaces and trusted intermediaries who are close to the ground who understand and can respond to their experiences and needs.

4.1. Facebook group analysis

This research builds on our interview data analyses that showed that Facebook is one of the most popular platforms used by the refugees that we interviewed alongside other apps especially that are not subject to surveillance, like WhatsApp and SnapChat. This is consistent with findings of our press review that Facebook Groups have a large membership base among refugees. Our interviews gave an indication of the particular Facebook groups and pages preferred by the refugees interviewed. Initial analysis revealed that these Facebook groups hosted important discussions amongst refugee groups on a range of topics relevant to their lives. The groups focused on news in Syria or are spaces where refugees exchanged news about asylum processes in Europe or elsewhere, asked questions related to their experience, or shared news about routes and journey experiences. Facebook's popularity as a platform is partially attributed to the ways it connects refugees with significant others elsewhere. In addition, Facebook has certain advantages while on the move, as a recent high-level report outlined that Android users can save 20% of their battery life by uninstalling the Facebook application. Facebook actively decreases battery life (Guardian 2016)[10].

The following list of Facebook groups was created following the interviews in France from September to November 2015. These were the groups that our interviewees said they used and our own content analyses found to be most the frequented by Syrian refugees on the journeys to and after their arrival at their destinations in Europe.

In order to extract data from Facebook groups, public data was gathered using the Netvizz tool, a Facebook application that extracts digital information from public Facebook Groups. The data were aggregated from the groups under the following categories:

1. Post ID (the unique identity of the post assigned by Facebook to a given post)
2. Post text
3. Commentator ID (The unique numeric identifier assigned by Facebook to an individual user)
4. Comment body
5. Date of published comment
6. Like count (the number of likes attributed to a particular post)

Facebook group	URL
Syrian Observatory for Human Rights	https://www.facebook.com/syriahroe?fref=ts

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Syria News	https://www.facebook.com/syrianewsofficial
Syrian Truth	https://www.facebook.com/Syrian.Truth?fref=ts
Iraqi refugees in the world اللاجئين العراقين في جميع انحاء العالم	https://www.facebook.com/KrwbMhafztAlnjfAlashrf?fref=ts
Syrian refugees in the Netherlands (different but the alternative) اللاجئيين السوريين في هولندا(مختلفون ولكن البديلة	https://www.facebook.com/groups/1697182103836910/
Iraqi refugees in Turkey اللاجئيين العراقيين في تركيا	https://www.facebook.com/groups/740614279393786/
Deir Wartan – The Jesuit Commission to serve refugees دير وارطان الهيئة اليسوعية لخدمة اللاجئين	https://www.facebook.com/JRS.Aleppo.Syria?fref=ts
The Iraqi refugees group in Samsun. كروب اللاجئين العراقين في سامسون	https://www.facebook.com/groups/632513486865843/
UN & IOM, Iraqi refugees in Jordan اللاجئين العراقيين في الاردن	https://www.facebook.com/jordan.iom.un.iraqi?fref=ts
Syrian refugees in the world اللاجئون السوريون في دول العالم	https://www.facebook.com/groups/568808176470929/
Sweden today… Refugees' News and information in Sweden. السويد اليوم.. اخبار ومعلومات اللاجئون في السوي	https://www.facebook.com/groups/khaled.web/
Syrian refugees in Italy اللاجئون السوريون في إيطاليا	https://www.facebook.com/groups/263890500466365/
Syrian refugees 2011 2011 اللاجئون السورين	https://www.facebook.com/groups/131971436882270/
Nawa's children taking refuge in the Netherlands أبناء نوى اللاجئون في هولندا	https://www.facebook.com/groups/1621643764747721/

Figure 3. The Facebook groups found to be most frequented by Syrian refugees.

Data were collected from 1 June 2015 to 30 November 2015 using Netvizz for Facebook Pages and Facebook Groups. The process of data collection was as follows: (i) Preparation of the application. (The application extracts likes, comments and users cyclically); (ii) Raw data are collected until the extraction process is complete or is stopped; (iii) Data is then structured in GraphML format. After extracting social media data from Netvizz, a short date range (six months) was chosen to ensure the smooth, uninterrupted functioning of the application. In addition, the call limit on the Facebook Graph Application Programming Interface ensures that the researcher has access to 600 posts in a given year that it determines to be the most relevant according to the search criteria. This particular date span was chosen to coincide with a critical point in Europe's Refugee crisis while maintaining the correct functioning of the Netvizz application. Once the data was aggregated from the various Facebook Groups, they were then visualised using the social network analysis tool Gephi using the Force Atlas algorithm as a directed graph (meaning produced by our specific search criteria). The visualisations of the online social networks of refugees using Facebook public (not private) groups are represented below as graphs, with nodes representing particular Facebook users, and edges representing likes. Facebook Groups in particular are characterised by membership schema that can be represented through a weighted, undirected graph.

Upon extracting social media data from Netvizz, documentation from the application recommends that care be taken to elect a short date range as this will ensure the smooth, uninterrupted functioning of the application. In addition, the call limit on the Facebook Graph Application Programming Interface ensures that the researcher has access to 600 of the most relevant posts in a given year, which Facebook determines to be the most relevant. This particular date span was elected in order to gain the most data possible for the issue of the European Refugee crisis while maintaining the correct functioning of the Netvizz application.

The social media research was conducted in three separate phases. The first phase of research used, as its basis, behaviour in Facebook Groups that were suspected of containing refugees that had now settled in Europe. The second phase of research focused on the Facebook Groups and Twitter influencers that were indicated to be popular sources amongst refugees currently residing in Paris, France. The final phase of research examined the follower networks of influential individuals identified in the secondary phase of research.

The research used social network analysis to map the behaviours of the members of groups and the information that was shared amongst them. Network graphs visually display the relationships between clusters of information, in this case specific online group members, the information shared within them, and the degree of influence a specific user has within a group.

The following data were extracted from Facebook groups:

Source	Data
Syria News	Extracted 1278 posts, and 6289 users and 49209 comments
Iraqi Refugees in the World	50 Posts with 1807 users liking or commenting 3,214 times
Observatory for Human Rights	50 posts, with 55 users liking or commenting 121 times
Syrian Truth	50 posts, with 1539 users liking or commenting 2856 times
Syrian Refugees in the Netherlands	Extracted data from 1421 posts with 28,721 users liking or commenting 189,213 times
Iraqi refugees in Jordan	Public Group. 600 posts, with 3090 users liking or commenting 17,233 times
Iraqi refugees in Turkey	Closed Group, inaccessible
Jesuit commission for refugees	Open group. 260 Users' liking or commenting 372 times
Iraqi refugees in Samsun	Closed group. Inaccessible
Syrian refugees in the world	Closed Group – Inaccessible
Sweden Today Refugee News	EXPIRED Link
Syrian refugees in Italy	Public Group: Inactive since September 2014
Syrian refugees 2011	Public Group. Inactive since October 2014
Nawa's Children taking refuge in the Netherlands	11 posts, 68 users, liking or commenting 116 times

Fig 4. Facebook Groups Identified as relevant to refugees in Europe (Source F24).

Refugees reported in our interviews that they actively strive to conceal their identities. Therefore, any interpretation of refugee social media behaviour will be indicative rather than conclusive as, without the necessary access to the data that comes from behind the 'walled garden' of closed social media sites, such research is difficult. The resulting charts from the study demonstrate the flow of information between individuals within various Facebook Groups related to the issue of refugees in Europe. Interactions are recorded when one individual either 'likes' or comments on a new post.

There were technical problems arising from the analysis of the data that restricted our unfettered access to refugee information on social media. Commentaries on content posted within the Facebook Groups was analysed in the form of a social network analysis. However, identification of member's identities was not possible as the Facebook API provides only anonymised numerical identification of the group members to protect privacy. This meant that it was impossible to accurately identify whether participants were actually refugees or identify their nationality. In addition, in an effort to protect the privacy of its members, the Facebook Social Graph API does not permit the downloading of information from closed groups. Therefore, a great deal of information was inaccessible to researchers.

We used a social network analysis graph to determine which specific users were the most influential within a particular group. The InDegree layout in a social network analysis graph refers to the number of edges that are directed towards a particular node, or in this case, user. Therefore, the InDegree layout was used to decipher the degree of influence a particular user had attained within the community.

The InDegree layout was used to identify which users and information were the most liked or referred to within the group, thereby highlighting the impact of a particular node. The modularity for each network was run in order to decipher the key communication communities that exist within each Facebook Group and how they interacted with the information shared. The modularity of an online community refers to the extent to which the various data can be recombined into specific identifiable groups. Various communities within the networks are each represented by different colours.

During the refugee crisis in Europe various online communities became increasingly popular as a means of sharing critical information. The analysis below of interactions among these groups represents the communities of Facebook users of Syria News and the Syrian Observatory of Human Rights and their behaviours from 1 June 2015 to 30 November 2015.

In the summary of the Syria News Facebook group, the moderator indicated that group members utilise the site to share their opinions on news stories affecting the region and its politics. It is noticeable however that more practical information related to quotidian life while in Europe was not shared, suggesting that this community is structured more as an ideological community, rather than a pragmatic community. To that end, commentary and engagement within the group is multilingual with posts being recorded in English, Arabic, Spanish, Portuguese, German, and others. While there is linguistic and ethnic diversity within the posts, the level of activity and information into the attitudes and behaviours of user groups is shallow, emotional and driven by the events that happen to occur within the news. This same occurrence appeared in the following community analysis for the Syrian Observatory on Human Rights.

The graph below, Figure 5, represents a network with data from the Syria News Facebook Group from 1 June 2015 to 30 November 2015. It identifies the content (links and videos shared, and subsequent discussions) most responsible for generating engagement within the Syria News Facebook Group. While stories and engagement is analysed, the identities of the users within the group have been anonymised to protect privacy.
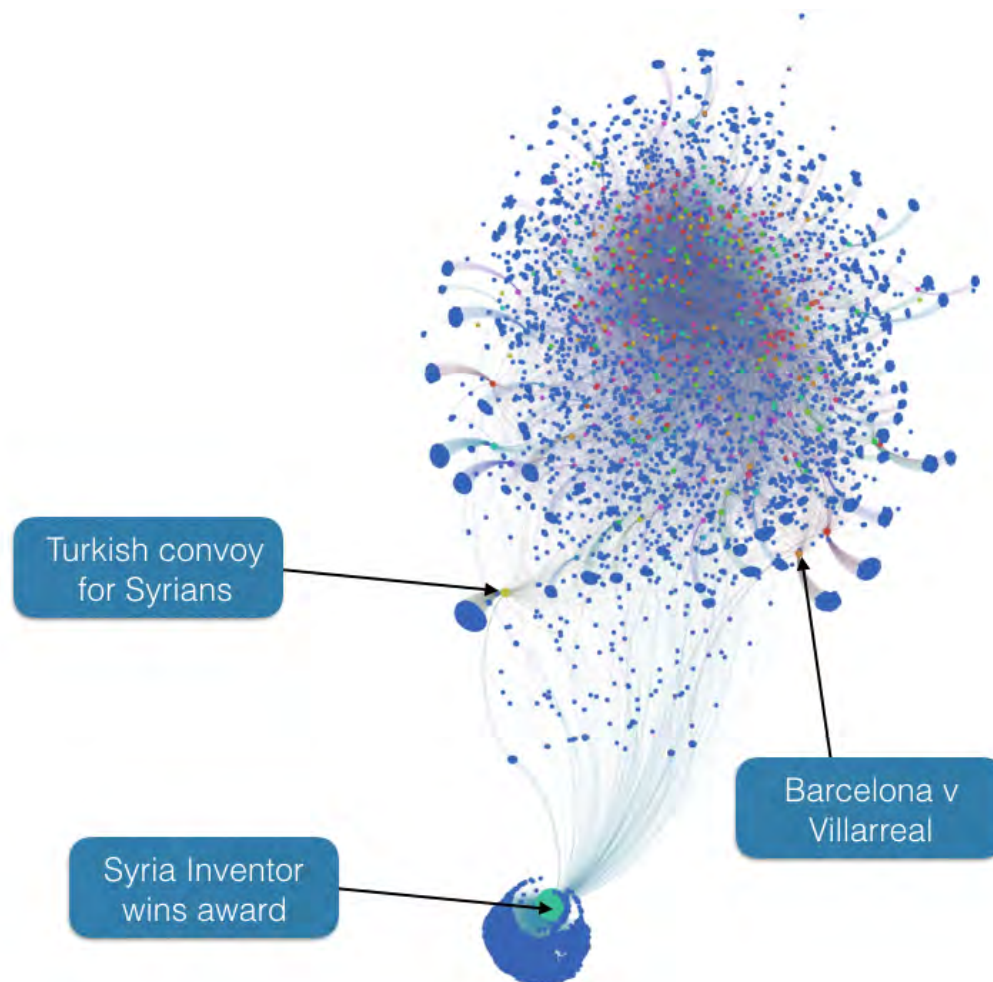
Fig 5. Facebook Group Network Analysis Map for Syria News 1 June 2015 to 30 November 2015

The map above, Figure 5, represents a network analysis for Syria News Facebook group and shows the sources of information most responsible for generating engagement within the group. Although the identities of users within the group have been anonymised to protect privacy, the content of the information shared within the group demonstrates that that the majority of people within this community are focused on sharing their outrage on emotive stories related to news from Syria or the issue of terrorism.

The clusters of various colours represent different discussions conducted by the members of the group related to a specific article or user. The clusters have been coloured to more clearly depict the various discussions that occurred over the six-month period. The nodes coloured blue are content or group members that have one reference related to them, such as a like or a comment, and comprise 92% of the total nodes in the network. This highlights that during the time period of analysis, the vast majority of stories within the Syria News group did not receive high engagement figures. An analysis of why this happens to be the case is presented further along.

The content of the information shared within the group demonstrates that that the majority of people within this community are focused on sharing their responses to a mixture of popular culture stories. The Facebook group members of Syria News, focus their engagement towards general interest stories such as European football matches, and other stories directly affecting Syrians, such as a story about a Turkish convoy transporting aid into Syria. The central node in Figure 5, indicates users engaged the most with a popular article from Syria News concerning a Syrian scientist who won an international award. It is only possible to speculate why these cultural stories are engaged more than others news stories. Other examples of the main stories as indicated by the InDegree score are listed in the table below, Figure 6.

The table below, Figure 6, highlights the top five most influential links shared by the Facebook Group moderator for Syria News between 1 June 2015 to 30 November 2015. The table draws attention to the influential links rather than influential users given users identities are anonymised by Facebook to protect privacy. The stories' influence has been calculated by analysing the in-degree score. This score calculates the number of references made to a particular link by each user within the group in the form of a comment or a 'like'.

In-degree Score	Story Shared
41	Regular army lifting the siege on Nubl and al-Zahraa in Aleppo countryside after gaining control of the neighbouring Ma'rasit al-Khan news link on… #Syrianews
39	Iran's Revolutionary Guards killed announce a new leadership in Syria #Ssayas_Syrianews
37	A day ahead of a conference of donors for Syria. Lebanese official calls for $ 12 billion to meet the refugees' _earthquake_ link to the news on… # Syrianews
35	Thousands of displaced people gathered at the border safety crossing... and activists are demanding Turkish authorities to open it # Ajian_Syrianews
30	Good morning # # Here Is Syria, Here is Damascus, al-Buzuriyah Market[11]

Fig 6. In-degree score and the most influential stories shared on Syria News Facebook Group (Source Facebook Groups).

The villages of Nubl and al-Zahraa are Shia villages in Aleppo's countryside. They are pro-government and the opposition forces have besieged the areas since 2012[12]. The regime launched an offensive in October 2015 to regain control over areas in the countryside of Aleppo. The regular army has slowly been moving towards the villages, gaining ground in a bid to break the siege. The Iranian Revolutionary Guard have sent officers to give technical assistance to the regular army[13]. For the opposition, the death of a high ranking Iranian officer in the Revolutionary Guard is considered a victory. The conference for donors for Syria brings together countries in the Middle East that are hosting Syrian refugees and wealthy (mainly western) countries. Lebanon hosts just under 1 million 500 thousand Syrian refugees according to UNHCR[14]. The Turkish-Syrian border has been closed since early 2015. During the research timeframe, Syrians faced ISIS fighting, NATO and Russian airstrikes. People in northern Syria repeatedly headed for the Turkish border seeking refuge. Al-Buzuriyah market is a spice market located behind the Umayyad mosque in Damascus, a historical landmark. For Syrians it may be an emotionally charged symbol.

The graph, Figure 7, represents a network analysis map with data from 1 June 2015 to 30 November 2015. It identifies the sources of information most responsible for generating engagement within the between 1 June 2015 to 30 November 2015. In total for the period of time of the research, 5230 posts were analysed as part of the network analysis on the Syrian Observatory on Human Rights. The stories' influence has been calculated by analysing the in-degree score. This score calculates the number of references made to a particular link by each user within the group in the form of a comment or a 'like'.

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[11] Image of al-Buzuriyah Market in Damascus.
[12] http://www.syriahr.com/en/2016/02/11/aid-convoy-enters-nubl-and-al-zahraa-towns-after-breaking-the-siege-and-russian-warplanes-kill-16-nusra-fighters/ (accessed 07.05.2016)
[13] http://uk.reuters.com/article/mideast-crisis-syria-iran-guards-idUKKBN0U50MB20151222. The article notes that since October 2016 100 Revolutionary Guard fighters and military advisors have been killed in Syria. (Accessed 07.05.2016)
[14] http://data.unhcr.org/syrianrefugees/country.php?id=122 (accessed 06.05.2016)
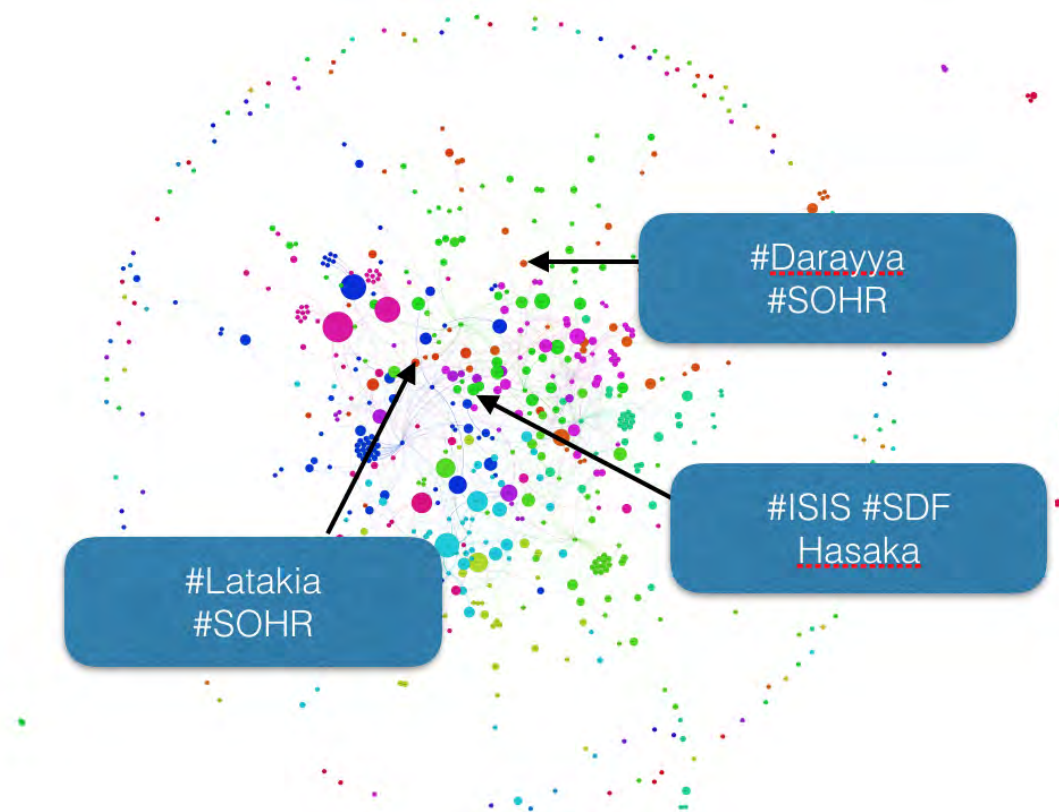
Fig. 7 Facebook Group Network Analysis Map for Syrian Observatory for Human Rights (SOHR) from 1 June 2015 to 30 November 2015.

The Syrian Observatory for Human Rights is a documentation centre based in the UK that records violations of human rights in Syria which it then publishes and disseminates using news outlets and social media. It is connected to activists on the ground in Syria and it has been documenting regime and other groups' human rights violations against civilians since the start of the revolution in Syria. In the graph above, Figure 7, the SOHR Facebook group network analysis showed that the most commented upon content came from a user-generated video on the aftermath of an attack by Russian warplanes in Syria. This cluster has been coloured in pink. Other influential posts which are depicted in the clusters coloured green and blue relate to images shared by the SOHR relating to the aftermath of bombing raids by Russian planes. It was noticeable that there existed a 'long tail' of shallow engagement for content posted within this group, meaning that many of the posts that were made achieved only one or two instances of engagement. This shallow engagement was indicated by the number of posts that circled the periphery of the main cluster of posts in the middle of the graph. However, the data suggest that while there was frequent recurring activity within the group, no one user or item of content received a sustained level engagement over time. Regarding group members' identities, it is important to remember that Facebook automatically removes much of the identifying information extracted to protect the identities of its users. In addition, group members are automatically hesitant to post identifying information about them on to public forums to reduce the chance of identification.

The graph, Figure 7, for the SOHR Facebook Group highlights that there are several influential communities within the overall structure of the Group. The graph indicates that this is a fragmented group with several influential articles and items of content attaining predominance within the overall structure and this is further indicated in Figure 8 below. Activity within the SOHR group was high as this anti-Syrian regime group included a wide range of users who frequently voiced their disapproval of current political events in Syria. The SOHR group is also an ideological community - it is possible to understand the range of ideological positions from the comments and content liked. The political nature of the group was highlighted by the use of hashtags to accompany the information shared. Popular hashtags within the community focused on terrorist organisations such as ISIL, and updates on conflict

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within regions in Syria such as Latakia province, the city of Daraya and Hasaka province. It is impossible to decipher whether the users are actual refugees or not, due in part to the technical limitations imposed by Facebook and partly the lengths that refugees, and particularly Syrians, will go to protect their identities. The open Facebook groups, such as SOHR or Syria News while highly politicised ultimately did not reveal any useful information as to the behaviours of refugees on Facebook more generally. Ultimately, without any substantive knowledge on the true identities of the people within these different group, it was very difficult to know exactly how declared refugees were using social media. The SOHR Facebook group did illuminate that online users within the group use it to keep up to date with the occurrences in mainstream media, particularly that media which focuses on political and terrorist developments within Syria. The group also highlighted that specific influential core users direct the flow of engagement and information within the community, such as user_934755789908516 and user_817102268372858 in Figure 7 of the above SOHR network. Core users directing the flow of engagement and information within the community suggests insular ideological enclaves online.

The table below, Figure 8, highlights the top five most influential links shared by the Facebook Group moderator for the Syria Observatory for Human Rights between 1 June 2015 to 30 November 2015. The most influential users have been omitted from this table as their true identities have been anonymised by Facebook to protect privacy. The stories' influence has been calculated by analysing the in-degree score. This score calculates the number of references made to a particular link by each user in the form of a comment or a 'like'.

In-degree Score	Story Shared	
157	Syrian deaths in Latakia	20/10/2015
140	US Coalition bombings lead to over 3700 deaths	23/10/2015
132	Islamic fighters' break in the vicinity of the towns of Kafrayya and al-Fouaa [in Idlib province]	18/09/2015
116	Syrian child refugee dies en route to Europe	02/09/2015
113	Aleppo province fighting	October 2015

Fig 8. In-degree score and most influential stories shared in the Syrian Observatory for Human Rights Facebook Group (Source Facebook Groups).

The articles listed in the table, Figure 8, are further proof of SOHR's role in documenting the human rights violations of various actors participating in the conflict in Syria. The Russian airstrikes in Syria began on 30 September 2015 and in that video posted by SOHR 120 deaths due to Russian airstrikes were documented. The large number of dead, many of whom were civilians according to SOHR, explains the high InDepth score the article attained. The US offensive on ISIL controlled areas led to the death of 3700 persons. Kafrayya and al-Fouaa are two besieged Shia villages in Idlib province. As the villages are pro-Assad opposition factions have besieged them. The fourth article included in the graph, Figure 8, concerns Alan Kurdi a child whose death in the Mediterranean sparked a global response. While there have been different periods of fighting in Aleppo province since 2012, in October 2015 the regime launched an offensive in Aleppo's countryside to regain control over parts of the province[15]. The InDegree scores of the stories shared support the themes explored above that this group is a space for Syrians to consume news about events in Syria. It is also an ideological enclave as members participate politically by vocalizing their criticism about events in Syria albeit while maintaining their anonymity by using pseudonyms.

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[15] http://www.al-monitor.com/pulse/originals/2015/10/syria-aleppo-conquest-regime-armed-rebels.html#
(accessed 06.05.2016)

Membership in Facebook Groups serves different purposes. The Groups focused on news about the situation in Syria are ways of remaining up to date about events on the ground. The choice of group membership, also serves as an indicator of a member's political stand. Group members while maintaining their anonymity by using pseudonyms enact a form of political participation online by sharing, commenting, or liking particular news on these groups. On the other hand, the other the Facebook groups mentioned by the interviewees focus on moving to Europe or refugee presence- Syrian and Iraqi- in Europe or in the world. These groups are sources of information about routes, news about regulations or asylum policies, and may include posts from refugees' who have arrived to their destination about their journey or the situations they are facing. In preparing to move, refugees use these online groups to gather information about the ways others moved and keep up-to-date about changes in official regulations in Syria, Iraq, Turkey or Europe related to refugees[16]. The information may pertain to routes, asylum processes in different EU states, or how to renew Syrian or Iraqi passports outside of those countries[17]. For those who want to move to Europe these groups are a place to ask questions, gather information whether warnings or guidance. Once at their destination, these groups are a way for refugees to gain information about asylum processing or reach out to others to help them understand official documents or processes given language barriers. In using either type of Facebook group, refugees maintain their anonymity as they believe the open Facebook groups are too public and monitored by organizations, governments or institutions who would be harmful to them.

4.2. Second phase research methodology

The lack of conclusive insights into refugees' behaviours on open Facebook groups inspired a second phase of research in order to gain a deeper understanding of refugees' potential engagement on other popular social networks. In addition, a second round of research was necessary to understand whether social network analysis of other groups would yield similar results and emphasis on security and ideological insularity. It was therefore decided that a secondary phase of qualitative research and subsequent social media research should be conducted by interviewing refugees in France and understanding from them directly what their online behaviours were. This would then give the social media research greater direction and more focus.

The face-to-face interviews confirmed findings from the initial round of social media research; that many refugees do not generally use open Facebook Groups to share information as they believe them to be too public and monitored by organisations that would be harmful to them. For the most part, refugees reported using closed and encrypted mobile applications to exchange information, such as WhatsApp, Facebook Messenger and Telegram. In addition, closed Facebook Groups were reported as being more trustworthy than open groups. While refugees did report using encrypted social media for information exchange, it was hypothesised that refugees would use avatars or digital pseudonyms to interact with issues pertinent to them online when using popular social media sites for information exchange and gathering. Once they have obtained the information they require, they then use private or encrypted social media whether Facebook messenger or WhatsApp or Viber to exchange personal information. Additionally, once the information is gathered, it is corroborated with trusted persons, such as family and friends. We observed a constant commuting between open public and private closed Facebook spaces[18]. Refugees then move from consuming content from Groups or sharing it to incorporating it in to their decision making processes. Further research is intended to ascertain how refugees consume information within social networks and how they incorporate it into their decision making processes.

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[16] See Sons of Nawa in Holland Facebook Group.
[17] See Iraqi Refugees in the World Facebook Group.
[18] Users comment on posts asking the user posting or someone else offering information to add them or send a private message to communicate further. See Iraqi Refugees in the World Facebook Group.

The use of these Facebook groups suggests that while refugees are moving, online groups such as those mentioned in this study are a useful way of gathering important information related to the potential issues faced while crossing. Once the refugee has arrived, the online group can become less important and more emphasis is placed on face-to-face interactions which are facilitated within state-run transit camps. While some users reduce the amount of their engagement with news posted on groups, other refugees invest in sharing information and their experiences on groups as a form of reciprocity. They warn or pass on updates about the situation in their country of asylum or answer questions about processes.

As this social media research intends to identify a small group of refugees to ascertain the point at which they begin to use private social media and how they consume information within social networks. It was therefore determined that Twitter, a social network that allows the aggregation of declared personal identifying information, would be the most appropriate platform from which to identify refugee behaviour. This means that Twitter allows the aggregation of identifying information that the user has chosen to share with the network, unlike Facebook. As refugees from Syria were predicted to obscure their true identities, it was hypothesised that manual verification of potential refugee accounts on Twitter would yielded more accurate information into the identities of refugees online as they strived to follow influential accounts on the social network, and keep up to date with the most current news affecting their personal situations.

4.3. Twitter analysis

Twitter allows the aggregation of personal identity information that the user chooses to share (unlike Facebook) and so the next step was to use this platform to see if we could glean better insights into refugee uses of social media. We presumed that manual verification of refugee accounts on Twitter would yield more accurate data about refugees' online behaviour as they sought to follow influential people and accounts in their social network, and keep up to date with the most current news affecting their personal situation.

The Twitter aggregator and analysis tool Netlytic was used to gather the raw data to be used for the second phase of the analysis. Using the Twitter Search API, a maximum of 1,000 tweets are aggregated per request based on the specified keyword or account name used for the search in question. The Twitter API has specified that Tweets older than one week will not be returned and therefore the number of Tweets used within the analysis was not exhaustive for this pilot research. The resulting data is then exported in GraphML format and subsequently analysed in the Gephi social network analysis tool. The GraphML format is used because it is the format most widely interpreted by Open Source network analysis tools.

Following the second round of qualitative interviews with refugees in Paris, we were able to identify the main news sources used by refugees and relevant Twitter accounts. The keywords selected for the research were the account names for the media outlets and the names of influential individuals given during the second round of qualitative research. It was agreed that given the time constraints of the research, that it would be more expedient to identify refugees from Arabic language sources including the following:

- Souria Moubachar سوريا مباشر
- Syrian Observatory for Human Rights
- Dr. Faisal al-Kasim الدكتور القاسم فيصل

1. Syria Moubachar (Mubasher, @syriamubasher) is a media and news source focusing on news emanating from the region.
2. The Syria Observatory for Human Rights (@syriahr) documents the human rights situation in Syria by reporting violations of human rights across social media platforms.

3. Dr. Faisal al-Kasim is a popular television news presenter on Al Jazeera who is based in Doha, Qatar.Dr. al-Kasim is known for presenting the live debate show Opposite Direction on the channel.

It was deemed to be more effective to focus on Arabic-language sources with fewer members as the mainstream audiences listed above have follower communities running into millions of people. The social media analysis tools Gephi, NodeXL, Netvizz and Netalytic were used to aggregate and map discussions relating to the attitudes and behaviours of the refugees first on key discussions followed and participated in by refugees. A series of graphs depicting the relationships between key individuals and discussions related to the issue of refugees in Europe were subsequently created to reveal the attitudes and behaviours of refugees in general online in Europe.

Syria Moubachar Twitter Network Analysis

The graph below, Figure 9, for Syria Moubachar represents a network of 1,049 tweets. The graph's vertices were grouped together by cluster using the Force Atlas algorithm creating a directed graph.
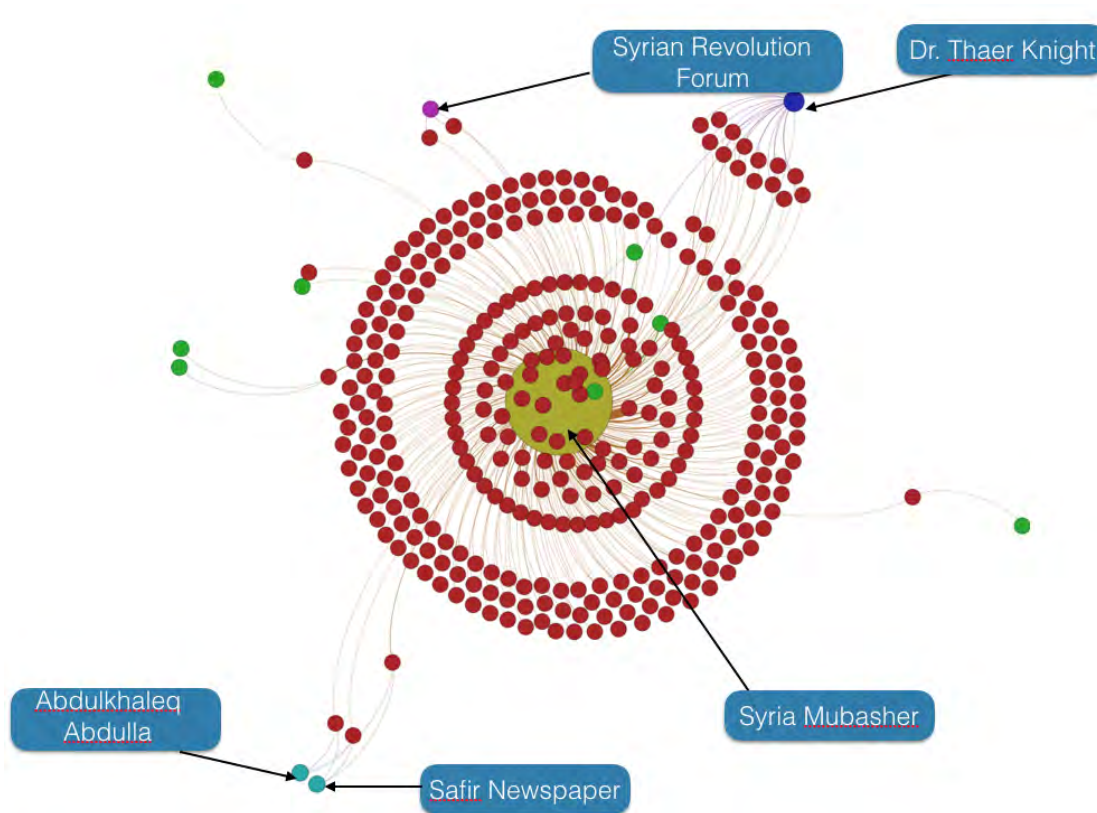
Fig 9. Twitter Network Analysis Map for Syria Moubachar 1 – 2 November 2015

The nodes are coloured according to the number of tweets mentioning the user. The nodes coloured red are accounts that have one tweeted reference related to them and comprise 96% of the total nodes in the network. As the subject of the analysis, the central node, Syria Mubasher (@syriamubasher), is coloured in gold and has the most mentions. Interestingly, other influential users have attracted a comparatively small degree of influence. For example, Safir Newspaper (@assafir) is included in this network and with 293 thousand followers on Twitter and over 500,000 followers on Facebook, influences discussion. It is an activist newspaper based in Lebanon focusing on Middle Eastern politics. Next to Safir Newspaper is Abdulkhaleq Abdulla (@abdulkhaleq_uae) a Professor of Political Science in Dubai with 82,000 followers. The Syrian Revolution forum (@syria7ra), which claims to publish the suffering of

the Syrian people online, has more than 140,000 followers and is the third most influential actor within this network. Dr. Thaer Knight (@thaersory) is a self-professed activist and analyst, focusing on the daily occurrences in Syria. This group of the most influential users within the Syria Mubasher network are individuals and organisations that have a strong anti-regime bias, similar to Syria Mubasher itself.

Syrian Observatory for Human Rights Twitter Analysis
The network analysis below, Figure 10, highlights the most influential accounts discussing Syrian Observatory for Human Rights on Twitter. The colours of the map represent the specific references made to a particular user.
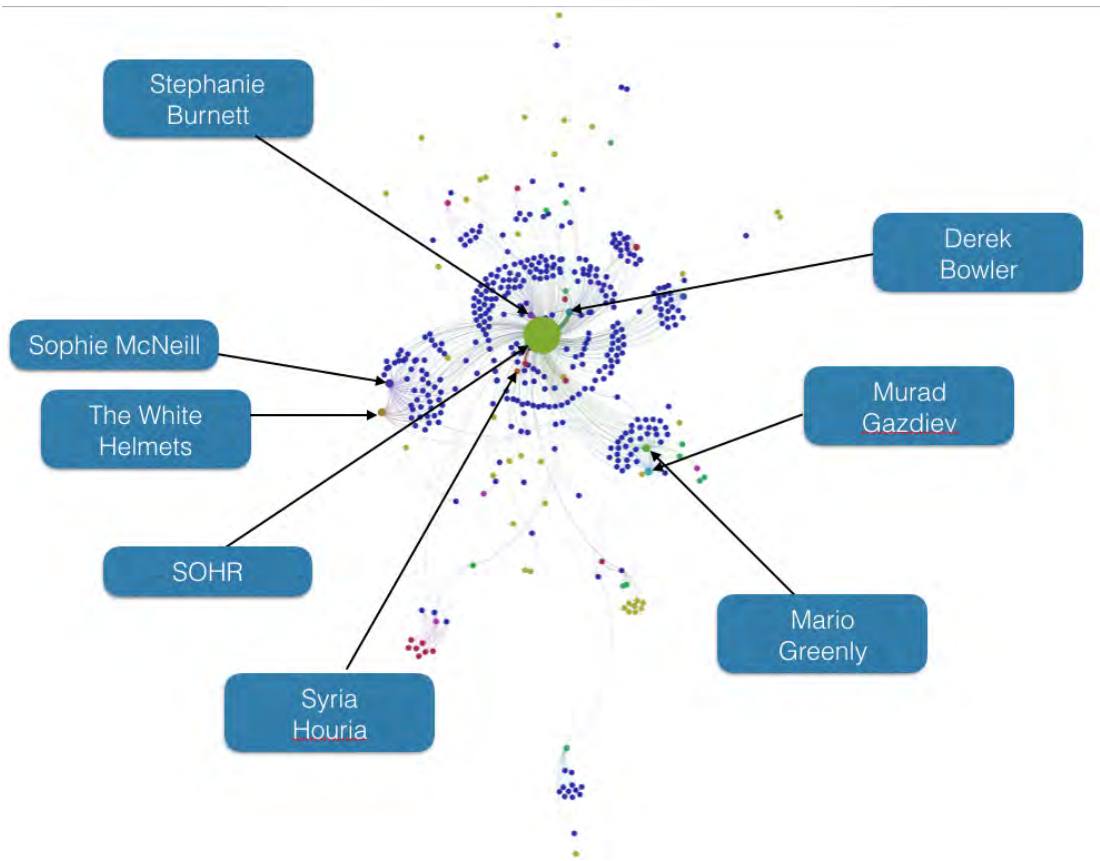
Fig 10. Twitter Network Analysis Map for Syria Observatory on Human Rights 1 November 2015 to 2 November 2015.

The table below, Figure 11, represents the influence of the user accounts that has been calculated by analysing their particular in-degree score. This score calculates the number of references made to a particular link by each user in the form of a comment or a 'like'.

In-degree Score	Influential User
688	Syria Houria
61	Murad Gazdiev
49	Syria Observatory for Human Rights
44	The White Helmets
43	Derek Bowler

Fig 11. In-degree score and most influential stories shared in the Syria Observatory Facebook Group (Source Facebook).

The central node, in Figure 10 above, is the Syrian Observatory for Human Rights (@syriahr), are coloured green and have the most mentions. In addition, other nodes were influential in this network and have formed other clusters of influence. The nodes coloured blue are accounts that have one tweeted reference related to them and comprise 83% of the total nodes in the network. Syria Houria (Syria Freedom), is a group in France dedicated to the Syrian revolution. It hosts cultural and political events in Paris about the situation in Syria and the Syrian revolution[19]. Stephanie Burnett (@stephy_burnett) and Derek Bowler (bowlerderek), both of whom work for Storyful, an organisation that discovers and authenticates user generated videos that are on the cusp of going viral, were influential in sharing updates from the SOHR within their networks and that of Storyful[20]. This may be attributed to their large and active follower community on the network. The White Helmets (@syriacivildef) is a humanitarian organisation which seeks to protect people and their property in Syria. The organization provides services such as medical assistance, urban search and rescue, and decontamination in Syria. The White Helmets has a popular presence online with 18,000 followers and is very close to the issues experienced by refugees coming from Syria[21]. The journalist Murad Gazdiev (@muradort) was also influential within the SOHR network, with 14,000 twitter followers. Gazdiev is a Russian journalist who covers issues in conflict zones and has covered stories in Syria for RT[22].

Syria News Twitter Network Analysis

The network analysis map below, Figure 12, highlights the most influential accounts discussing Syria News on Twitter. The influence of the user accounts has been calculated by analysing their particular in-degree score. This score calculates the number of references made to a particular link by each user in the form of a comment or a 'like'. The colours in the map represent the specific references made to a particular user. The analysis examined the relationships inherent within the 1,000 tweets aggregated related to the terms Syria News in both Arabic and English. The resulting map shows three distinct users influencing the flow of information within the community - Carol Malouf (@carolmalouf), Nida Khan (@nidakhanny) and Chaker Khazaal (@chakerkhazaal); journalists and authors focusing on the Middle East broadly and Syria particularly.

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[19] http://souriahouria.com/ (accessed 06.05.2016)
[20] https://storyful.com/ (accessed 06.05.2016)
[21] https://www.whitehelmets.org/ (accessed 06.05.2016)
[22] https://www.rt.com/op-edge/authors/murad-gazdiev/ (accessed 06.05.2016)
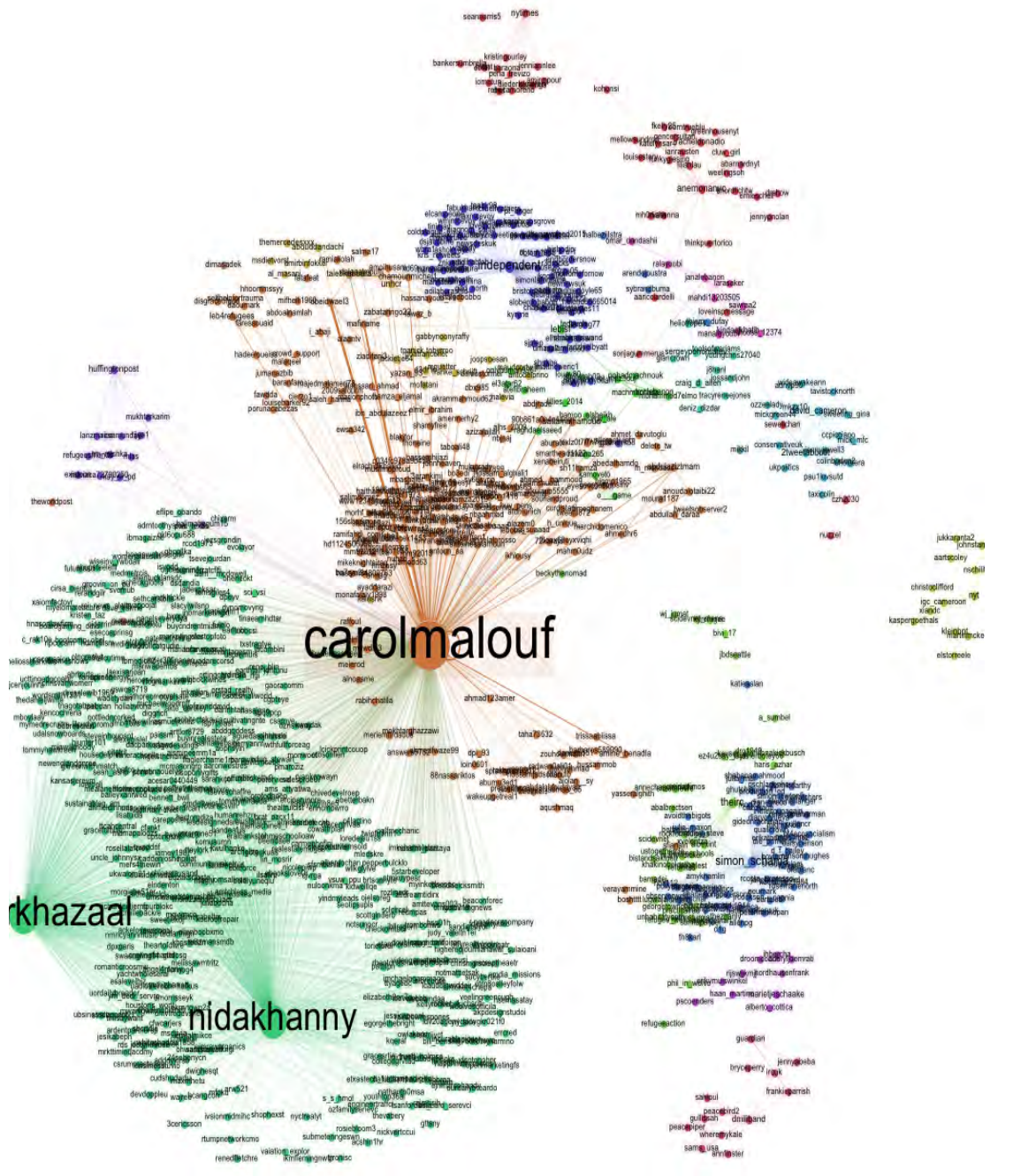
Fig 12. Twitter Network Analysis Map for Syria News 1 November 2015 to 2 November 2015.

The map above, Figure 12, shows how these three distinct users, Carol Malouf, Nida Khan, and Chaker Khazaal influence the flow of information within the community. The nodes are coloured according to the number of tweets mentioning the user. The orange nodes are Twitter users that mentioned Carol Malouf within the Syria News Network, while the green nodes represent those that mentioned either Nida Khan or Chaker Khazaal. Nida Khan is an independent journalist and producer based in New York. Her twitter account identifies her as an "independent journalist, producer, speechwriter, news/political junkie"[23]. Her tweets are related mostly to US politics, US policies in the Middle East and events occurring in Syria. Overall her comments directly concerning the refugees' crisis or Syria are nothing but a small portion of her numerous tweets. It is not clear if Khan has another twitter account, but she seems to use the account for both her personal and professional life. Carol Malouf identifies herself as a "journalist specialised in Islamic Organisations covering Middle East & Syria"[24]. She is a Lebanese journalist and co-founder of Al Jazeera English. She left Al Jazeera in 2011 and

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[23] https://twitter.com/nidakhanny (accessed 05.06.2016)
[24] https://twitter.com/carolmalouf (accessed 07.02.2016)

writes for various media outlets including the Daily Telegraph and Al Jazeera English. In October 2015, she undertook a journey with Syrian refugees crossing from Turkey to Greece[25]. Malouf has 13.3 thousand followers on Twitter and has sent almost as many tweets about the plight of Syrian, Iraqi and other refugees. It is not conclusive whether this account is her personal or professional account or whether she has separate accounts demarcating her personal or professional life. However, this particular account, and its relation to Syria News suggest that this account is primarily used for professional interactions. Chaker Khazaal is a 28-year-old journalist. His twitter account identifies him as, "writer, reporter"[26]. A Canadian citizen, he is Palestinian and grew up in Lebanon. Part of Khazaal's attraction may be that he inspires hope in refugees en route to Europe or present in Europe as someone who migrated to Canada and has become a successful and public figure but still maintains his ties with the Middle East and speaks out about issues concerning the Middle East. His posts are mainly humanitarian, asking decision makers to end the war in Syria. His twitter account is also private: he posts pictures about his travels and journeys abroad.

The Twitter accounts for Carol Malouf, Nida Khan and Chaker Khazaal were not verified by Twitter as influential accounts. While it was not possible to ascertain whether these users had other personal accounts, the accounts that emerged in the network analysis focused heavily on the professional profile of the users in question. Malouf and Khazaal are journalists and writers who spend a great deal of time with refugees in Lebanon or elsewhere and all three users are engaged with Middle Eastern politics and news. The size of the nodes is huge and this is a marker of influence. This suggests that the most trusted and influential people on Twitter are those who are close to the ground. They are vocal, visible and presumably well-informed about the issues affecting those inside Syria and refugees from Syria. This pre-eminence of Carol Malouf, Nida Khan and Chaker Khazaal is significant as it demonstrates that the most influential networks within the Syria News accounts belong to declared journalists and media organizations, making the network a veritable echo chamber. These influential actors echo each other given they are the most engaged or vocal on Twitter within the Syria News network.

Smaller networks of influence were identified and mainly related to mainstream media outlets, in particular the New York Times, and respected journalists as well as controversial debates among public intellectuals. One interesting example, was the attention attracted by the British historian, Simon Schama's, highly public emotional response to the plight of Syrian refugees who appeared on the BBC making the moral case for the need for cosmopolitan hospitality, much to the scorn of another commentator Rid Liddle, as reported by the Huffington Post[27]. The communities around these influential figures and debates were considerably smaller than those around Malouf, Khan and Khazaal suggesting that these Twitter users were more interested in the quality information coming from prestigious news sources and well-informed people. This also suggests a pool of highly educated Twitter users displaying high levels of educational and cultural capital connecting with debates.

The map above, Figure 12, supports the findings from the face-to-face research that refugees and persons in Syria gravitate towards influential individuals who are close to refugees and are vocal about the issues refugees face or the situation in Syria. Therefore, it is a useful exercise to analyse the accounts of influential people to understand how refugees use social media and digital information.

The table below, Figure 13, highlights the top five most influential accounts within the Syria News Twitter network between 1 November 2015 to 2 November 2015. The user's influence has been calculated by analysing the in-degree score. This score calculates the number of references made to a particular link by each user in the form of a comment or a 'like'.

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[25] https://www.youtube.com/watch?v=pkIs2zD_00I (accessed 04.05.2016)
[26] https://twitter.com/chakerkhazaal (accessed 05.06.2016)
[27] http://www.huffingtonpost.co.uk/2015/10/15/bbc-question-time-rod-liddle-simon-schama_n_8308108.html (accessed 02.02.16)

In-degree Score	Influential Account
250	Carol Malouf
120	Nida Khan
113	Chaker Khazaal
27	Simon Schama
20	The Guardian

Fig 13. In-degree score and most influential users in the Syria News Twitter network (Source Twitter).

Another key finding relates to the prevalence of Twitter accounts belonging to prominent professional activist refugees living in Europe or America who follow Syria News. One such account belongs to Mohammad al-Abdallah. Al-Abdallah, who identifies himself as "a human rights lawyer, activist, writer and refugee"[28] in the United States, has a history of vocal opposition to the Syrian regime from prior to the start of the revolution in 2011. His opposition led to his imprisonment in Syria on two separate occasions[29]. He is currently the executive director of the Syria Justice and Accountability Centre in the United States. As the executive director of the centre, he is in a position to reach key decision makers in the United States or elsewhere. Al-Abdallah is a vocal and visible opposition activist who engages in public debates and television interviews about the situation in Syria on Middle East news channels. Al-Abdallah is an avid follower of and commentator on Syria News. A history of political activism combined with presence outside of Syria or only presence outside Syria enables some Syrian refugees to be publically political and speak freely on social media.

Further analysis reveals that some Twitter users are identifying themselves as refugees from Syria, their ability to speak freely on Twitter is because they have migrated to other countries as in the case of Al Abdallah or based on their desire to cultivate a public political persona. While some refugees are interested in participating in political discussions and voicing their opinion online, others are not. This supports findings from the qualitative research where the refugees interviewed were unwilling to participate in political discussions online using their real names. They feared such a participation would jeopardise their or their families' in Syria physical safety and/or place their legal status in their country of asylum at risk.

Influential figures on Twitter: Dr. Faisal al-Kasim as a case study

According to the findings from the qualitative research, which provide strong support to the social media research, refugees prefer to read and consume content from people but not to interact with them directly. Without a prior social relation or justifiable reason to interact with the person in question, refugees consume the content without entering into a direct engagement with the person. In addition, refugees report to be attracted to online influencers who are articulate, eloquent or funny in their communication related to the issues refugees experienced in Syria or are experiencing in Europe. Influential users' ability to articulate grievances or present issues in a witty manner may lead refugees to consume their content rather than articulate the issues themselves.

As such an influential figure on Twitter whose account was analysed is Dr Faisal al-Kasim an Al Jazeera journalist and the host of a controversial show on Al-Jazeera that focuses on political debates, *The Opposite Direction*. He is known for his public anti- regime bias from the start of the revolution. His show gained popularity for hosting pro-regime and opposition figures

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[28] https://twitter.com/mohammad_syria accessed (06.05.2016)
[29] https://www.irex.org/person/mohammad-al-abdallah (accessed 03.05.2016)

together for them to debate about the situation in Syria. He is known for his humour and jokes as evidenced from his show.

It is impossible to outline with certainty whether the account that appears in the network is his personal account, or his professional account. The account has been verified by Twitter as an authentic account for a person "to establish authenticity of identities for key individuals and brands on Twitter"[30]. Therefore, we can be certain that the account verifies his professional status as a journalist for Al-Jazeera, but it cannot be ascertained whether it is also his personal account.

The graph, Figure 15, shows a network map produced (using the network visualisation tool Gephi) of interactions related to mentions and interactions with al-Kasim. A total of 123 tweets by him were collected and analysed, and showed that the other key person in the discussions related to him was Mohammed - @mohammad198796, an independent activist located in Syria.

Fig 15. Twitter Network Analysis Map for Dr.Faisal al-Kasim 1 November 2015 to 2 November 2015 shown using a Force Atlas layout in the GEPHI visualisation and analysis tool. The colours reflect the various communities around influential users who discussed Dr.Faisal al-Kasim. The size of the nodes reflect the number of references made to a particular user.

This community related to Dr. Faisal al-Kasim highlights the significance of commentary from influential individuals such as al-Kasim. Their position as influential individuals was developed through their real life actions and not solely their commentary or activities online. In al-Kasim's case, during the period of research, his tweets were amplified by independent activists such as @Mohamao. The amplification and influence of certain figures was common within self-reported refugee communities. These findings support the network analysis of SOHR where

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[30] FAQs About Verified Accounts. https://support.twitter.com/articles/119135?lang=en (accessed 07.02.2016)

key users such as Malouf, Khan or Khazaal were highly influential. At the same time, it was not clear whether the Twitter accounts included in the analysis related directly to refugees or not. Refugees, and Syrians in general, in order to protect themselves or their families, prefer to keep their social media engagement private or under a *nom de guerre* (see Figure 16).

The table below, Figure 16, highlights the top five most influential accounts within the Twitter network of Dr.Faisal al-Kasim between 1 November 2015 to 2 November 2015. The User's influence has been determined by analysing the in-degree score. This score calculates the number of references made to a particular link by each user in the form of a comment or a 'like'.

In-degree Score	Influential Account
150	Dr. Faisal al-Kasim
32	Syrian Falcon 11
31	@Soohad4 (Account Deleted)
30	Saqr Qualmoun
29	@Mohamao (Account Deleted)

Fig 16. In-degree score and most influential users in the Dr.Faisal al-Kasim Twitter network (Source Twitter)

Figure 16 highlights that is impossible to know whether the users within the community are refugees unless they identified themselves as such, as Mohammad al-Abdallah mentioned above. It is also impossible to know users' legal situation or their location unless they choose to disclose it. While those participating within the community use pseudonyms in their online interaction, some users seek to distinguish or mark themselves with the pseudonym they chose. In the case of two users included in Figure 16, Syrian Falcon 11 and Saqr Qualmoun (Falcon of Qalamoun), their user names serve to identify them as Syrian. In Saqr Qualmoun's case, the name identifies his place of origin or residence. In contrast the other two influential users listed in the table might be Arabic speakers from anywhere across the Middle East. Although as mentioned above @Mohamao's clearly identifies himself as a Syrian activist.

Given the engagement with individual influential users on Twitter or the news media sites, the research raises the question of how or if Syrian refugees or Syrians generally would have a similar engagement with institution's Twitter accounts.

Engagement with Institutions' Twitter Accounts

Of interest to the research group was whether people online, and by extension refugees, registered a heightened level of interest towards influential organisations as they did to influential individuals. To this end, an analysis of the relationships evident within the Yarmouk Refugee Camp in Syria on Twitter was conducted (Figure 17).
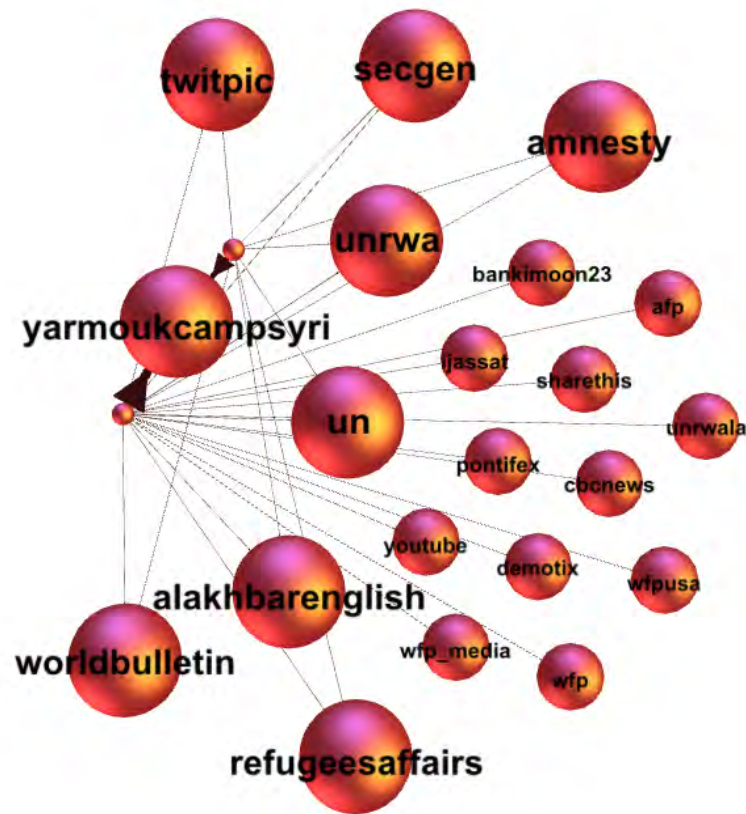
Fig 17. Social Network Analysis Map of the Yarmouk Refugee Camp in Syria 1 November 2015 to 2 November 2015 shown using a Force Atlas layout in the GEPHI visualisation and analysis tool. The colours reflect the various communities around influential users who discussed the Yarmouk Refugee Camp in Syria. The size of the nodes reflect the number of references made to a particular user.

The social media analysis map of Twitter activity around Yarmouk camp above reveals that the camp is only followed by other institutions and high-level professionals within the international development field and global politics not by refugees. The map suggests that institutions talk to other institutions on Twitter in a professional capacity. Refugees or other Twitter users from Syria, do not engage with this institution in its online capacity. Placing these findings against the findings in the previous sections highlights that relations between key influential individuals were much more important to refugees than relations between them and official media or refugee organisation which were sparse to non-existent. It further reinforces our findings that influential individuals online that are close to events on the ground, and to refugees and their plight are key to understanding how refugees use social media as these influential individuals garner the most interest and engagement from them. Moving from this understanding of how refugees use social media can help to understand how social media may best be mobilised to provide them with relevant information.

In addition, the qualitative research revealed that refugees exhibit a low level of trust in official international institutions because they are perceived to be replete with 'westerners' who are far removed from the lives of refugees. 'Western' political institutions are widely seen as a major cause of the political instability in Syria and continued fighting. This contributes to the lack of trust refugees have towards western institutions. With the current high presence of Syrian refugees in Europe and their engagement with state and other official institutions, the presence raises the question of how their engagement and perception of western institutions will change.

Influential users: Carol Malouf Twitter Account Network as case study

Given that further Twitter analysis of influential mainstream media or political organisations would not appear to yield insights into the behaviour of refugees on Twitter, an analysis of influential individuals close to refugees would, we presumed, be more productive. We

predicted that such an analysis would yield useful insights into the attitudes and behaviours of refugees online. As such an analysis of the activity network of the journalist Carol Malouf on Twitter was undertaken. The analysis highlights the importance of analysing influential individuals within social networks.

The network analysis map below, Figure 18, highlights the most influential accounts discussing Carol Malouf's Twitter account. The influence of the user accounts has been calculated by analysing their particular in-degree score. This score calculates the number of references made to a particular link by each user in the form of a comment or a 'like'. The colours in the graph represent the specific references made to a particular user.
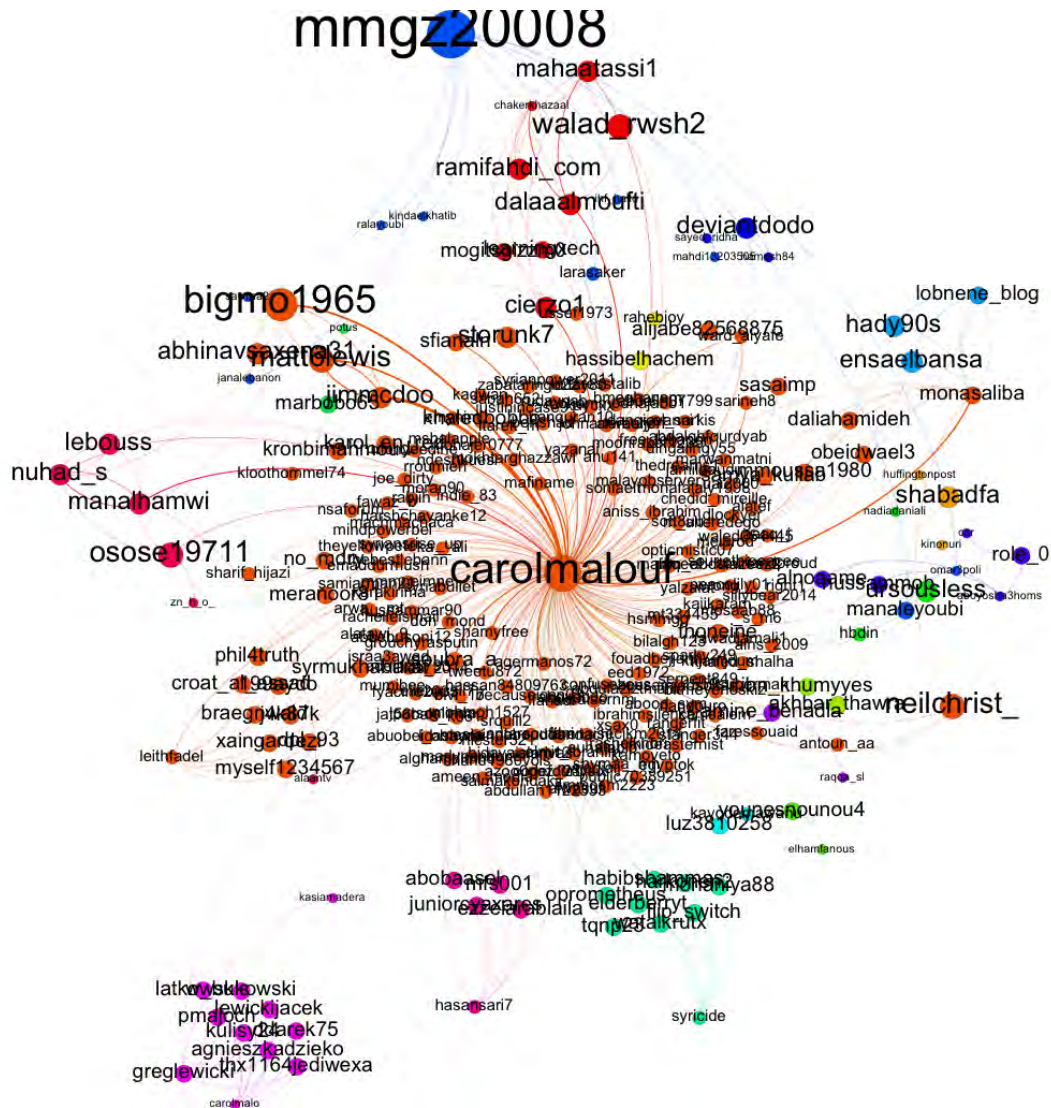

Fig 18. Social Network Analysis Map of the Carol Malouf Twitter Network 1 November 2015 to 2 November 2015. The colours reflect the various communities around influential users who discussed Carol Malouf.

The graph, Figure 18, shows that, while Malouf is in the centre of the network, there is a large and active secondary community of followers that is instrumental both in engaging with Malouf as well as sharing information with the other smaller clusters on the periphery of the network. For example, the user Dark Matter [@bigmo1965] is identified as a Syrian expatriate who "hate[s] sectarians and is pro-civil democracy 4 Syria in Arab countries." The presence of such an influential user within the Carol Malouf network underscores our finding that ideologically similar people cluster together on Twitter and Facebook. Malouf, while a non-Syria, is pro-revolution in Syria and criticizes the regime and its alliances in her journalistic coverage. As such her posts and writing may attract users who share similar views. The graph further corroborates the prior findings that Syrian users- refugees and others- generally prefer

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to maintain their anonymity online. Syrian refugees that have some measure of protection - whether by virtue of being present in Europe or the US or by having professional or institutional protection of sorts, are the ones most likely to be vocal under their real names on social media.

4.4. Key findings

- Refugees connect to Facebook sites mainly in order to communicate with family, friends and influential figures in their social media networks - from prominent and respected activists and NGOs to investigative journalists, political commentators, public intellectuals and participants in controversial debates. Individuals are perceived to be trustworthy when clear and committed support of the interests and welfare of refugees is evident.
- The social media research, using the qualitative research of interviews of refugees in France as support, shows that as a community, refugees are reluctant to share their true identities online in addition to their political affiliations.
- There is a notable fear both of surveillance by traditional institutions such as governments and sousveillance by other group members among refugees which results in them shrouding their identities on social media and online via use of avatars and pseudonyms. This makes refugees, especially those in transit, a particularly difficult group to research.
- Refugees fear potential reprisals from organizations or governments that may be monitoring social media. They fear not only for their safety but the safety of family members who are still in Syria. Moreover, they are more concerned with creating a stable life in Europe, than voicing their opinions online. This behaviour presents a problem for researchers, and if possible access to data from closed Facebook Groups, WhatsApp Messenger, Viber, and Telegram Messenger will yield important information related to this project.
- Even though, it is not easy to discern the identities of refugees online, our qualitative content and discourse analysis, even though limited in scope, suggested that when refugees were confident about privacy and/or anonymity, they expressed their political views without restraint and often in highly emotional registers and hyperbolic tones.
- Relationships in social media networks are shaped not only by kinship and friendship but also by pragmatic and ideological factors. The spaces of social media discussion and debate among those we identified as refugees tended to be fractious, intensely politicised and polarised.
- Through the analysis of relationships on social media we found that public online groups cluster around ideological issues rather than their authentic social relationships. This is perhaps partly a result of the fact that social media research can only focus on groups rather than individual profiles. We have a clearer idea of what people think as opposed to who they are, who they interact with and why. As such if it is possible to access data from profiles, this data would generate further insight into refugee behaviour and usages of social media.
- Interaction with influencers is needed before online platforms are given credibility from refugees
- The network analyses show that refugees tend to ignore formal institutions established to help them, such as relief centres, mainstream media sources, government organisations and Western journalists. Rather, the research shows that online, refugees look to connect with individuals who they trust or who are most like them or share their core values, such as family and friends, activists and 'influencers' like investigative journalists.
- Influential figures direct the flow of engagement and information within a social media network and this reinforces and maintains the networks as insular ideological enclaves. Ideological insularity was a patterned feature of interactions and flows on social media.

- The people who were the most visible online tended to be the people who had a vested interest in attaining large follower networks online such as journalists and/or self-declared activists.
- The research did reveal, however, that the people who are active to some degree online do so when they are assured of their professional and personal security. This finding is significant as the refugees that do not have protection from an institution or those whose legal status is not secure will continue to limit their online political engagement or only participate under aliases.
- The social networks included in the research related to news about Syria are ideological in nature and reveal very little about the actual lives of refugees on the ground. Similarly, some of the Facebook groups are used to access news about Syria. Whereas the other Facebook groups included in the research were concerned with migration and refugee issues. These groups however only partially reveal information about refugees' experiences in Europe or elsewhere users participate in these groups to gather, verify or share information related to migration or asylum seeking processes.
- Refugees tend to ignore official, national and state-funded institutions' online pages or Twitter accounts, even those established to help them, such as relief centres and other government organisations.
- They access international news sources via social media and news feed apps and these are most frequently shared among friends and family. They make limited direct use of mainstream national and international news media sources.
- We found a fundamental mistrust of 'western' individuals and organisations when it comes to refugee engagement with Facebook groups. This is evident in the relegation of European, US and Anglophone sources to the periphery of networks. This may, in large part, be a reflection of language preferences but also reflects an intermittent engagement with European, US and Anglophone news media driven by curiosity and thirst to uncover the facts around major events or news of most direct personal or local relevance.
- We observed a constant commuting between open public and private closed Facebook spaces.
- The most trusted and influential people on Twitter are those who are close to the ground in Syria and other conflict zones. These influential people have friends, fans and followers who amplify their message content and opinions.
- Key influencers can mediate between cultures, languages and groups and perform the role of cultural diplomat and broker.

4.5. Recommendations

- Create Safe Spaces: Refugees will not share personal information online, preferring to remain anonymous for fear of reprisals, surveillance, detention and/ or deportation. It is vital that any digital resources created with the intention of supporting refugees in Europe respects the need for privacy and takes into account the security concerns of refugees.
- Communicate via trusted intermediaries: Refugees do not tend to interact with institutions via social media, preferring contact with trusted individuals. Digital outreach needs to be highly personal via trusted intermediaries and known influencers, not branded as the product of a national or state-funded organisation.
- Multilingual engagement with refugee groups: Our research notes the main languages in use were English, Arabic, Spanish, Portuguese, German and others.
- In order to understand what refugees really do online, access to private or 'dark' social media is necessary across a longer period of time
- Drive social media activity and information around relevant events being reported in the news.

- Find ways of breaking ideological insularity and exposing refugee users to as wide a range of political viewpoints as possible.
- Invest in research to ascertain how to build bridges between private enclaves and public debate fostered by news channels that develops the principles of democratic communication in the public sphere: equality, diversity, plurality and reciprocity
- Find ways of making best use of key influencers in refugee social network to express solidarity and build trust, plug communication and information gaps and in so doing contribute to a more effective settlement process for refugees in their new homes.

5. Digital resources for refugees: best practice

This chapter captures the key features of best practice in the provision of digital and other information and media resources for refugees. The first sections summarise the guidelines and key principles that have been developed by the UNHCR, the UK Department for International Development and the University of Oxford Humanitarian Innovation Project. These principles and guidelines are relevant to producing high quality, relevant, useful, user-focused, sustainable, trustworthy, secure resources for refugees. The second part presents three case studies that have been selected as models of good practice.

Crisis Info Hub is a high profile Google app that is well-conceived, well-resourced and maintained and sustainable. It provides a good example of how new technologies with relevant content can provide useful information to people in need and in danger. *Infomobile - Welcome 2 Europe* is one of the first, and longest-running, networks of activists focusing on the needs of arrivals to the Greek islands. It has contributed in helping refugee avoiding danger and offered practical assistance and resources that are appreciated and valued by refugees. The *Village of All-together* is a network of local people. They have direct local and personal experience and contact with arriving migrants, and they are the first initiative to show in practice that an open, self-organised reception camp for migrants can work. We include this example to show that quick technological fixes don't always work and that solutions have to be based on local conditions, personal experiences and local networks of bottom up initiatives and support from which best practice emerges.

5.1. Overview of guidelines and principles

UK DFID guidelines

Guidelines released by the UK Department for International Development (DFID) are useful for our purposes here[31]. They are intended to help development practitioners integrate established best practice into technology-enabled programmes. Their ultimate aim is to get multilateral organizations, international donors and implementing partners to formally endorse these principles. The analysis in this chapter of our own selected best practice case studies will take the following overall 9 principles into account:

9 Principles
- Design with the User
- Understand the Existing Ecosystem
- Design for Scale
- Build for Sustainability
- Be Data Driven
- Use Open Standards, Open Data, Open Source, and Open Innovation
- Reuse and Improve
- Address Privacy & Security
- Be Collaborative

Three principles are of particular relevance to providing resources for refugees.
- ***Design with the User.*** Include all user groups in planning, development, implementation, and assessment.
- ***Design for scale.*** Be replicable and customizable in other countries and contexts.
- ***Build for sustainability.*** Plan for sustainability from the start, including planning for long-term financial health, e.g. assessing total cost of ownership.

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[31] http://digitalprinciples.org/ accessed 2.6.2016

Also recommended for the use of existing tools (rather than creating new tools and platforms) is the re-use and improve principle. It is important to be able not only to use but also to 'modify and extend existing tools, platforms, and frameworks when possible – to develop in modular ways favouring approaches that are interoperable over those that are monolithic by design.'

The UN Innovation Unit

The UN Innovation Unit collaborates with UNHCR Divisions, refugees, academics, and the private sector creatively to address complex refugee challenges. The following pointers are taken from their annual report for 2014 (UNHCR INNOVATION, 2015). The report examines case studies from their projects in order to present best practice. Like the DFID guidelines it includes an emphasis on user involvement at all stages of a project[32].

Progress indicators
The extent to which:
- the community was involved in driving the design process
- the solution addresses the specific challenge, and
- requests are received to adapt solutions for use in different contexts/locations.

Lessons learned
- Truly effective solutions go beyond the technical; they are developed using a more holistic approach.
- In order to create, lasting, sustainable solutions, it is important to include all actors from the outset.
- Measurement at all stages of the project is key.

Refugee Innovation: humanitarian initiatives that start with communities

A report on Humanitarian Innovation from Oxford University (Betts et al., 2015) suggests that it is vital to understand what people affected by conflict can contribute themselves in terms of 'bottom-up' innovation.

> *"Although 'humanitarian innovation' has been increasingly embraced by the humanitarian world, this kind of 'bottom-up' innovation by crisis-affected communities is often neglected in favour of a sector-wide focus on improving the effectiveness of organisational response to crisis. This oversight disregards the capabilities and adaptive resourcefulness that people and communities affected by conflict and disaster often demonstrate."*[33]

Aspiration Tech

The mission of Aspiration Tech is to "connect non-profit organizations, foundations and activists with software solutions and technology skills that help them better carry out their missions". In their guide to reviewing technology funding proposals (Aspiration Tech, 2015), they emphasize the need for strategic thinking about technology projects: connecting the proposed technology with the overall strategic goal of the organisation, or 'theory of change'. The considerations are presented in the form of questions, with the following questions relating to audience understanding and adoption of the technology project[34].

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[32] report available at http://innovation.unhcr.org/report2014/ accessed 03.02.16
[33] to access the report visit http://www.rsc.ox.ac.uk/refugee-innovation-humanitarian-innovation-that-starts-with-communities
[34] see http://taitech.theideabureau.netdna-cdn.com/wp-content/uploads/2015/03/AspirationWebinarReviewingTechProposals031615-1.pdfhttp://taitech.theideabureau.netdna-cdn.com/wp-content/uploads/2015/03/AspirationWebinarReviewingTechProposals031615-1.pdf
http://tech.transparency-initiative.org/notes-from-webinar-checklists-for-reviewing-technology-funding-proposals/

- How well can the applicant articulate the abilities, needs, and challenges of the intended users of this technology?
- Has that audience affirmed a need for the proposed technology?
- Do they know what unique barriers that audience might face participating in engaging, and have a plan to overcome them?
- How will users and target communities be involved throughout the course of the project?
- From affirming the need of the project, through design validation, and into implementation, users should be present in the development process. Does the project treat each of these engagements as part of a longer process to build credibility and gain buy-in from these stakeholders?
- How will the program work openly and transparently in order to be accountable to both sponsors and project stakeholders?

These guidelines recommend that the prospect of project failure be considered right from the start asking whether the project has modeled for failure and whether there is a contingency plan.

As with the DFID best practice guidelines above, these also suggest that 'from-scratch projects come with higher risk and hidden costs'.
- Does this project propose creating new or improving existing software or web-based tools?
- Building on existing, proven components is a best practice. If building new has a thorough field scan been done?

Security issues are given prominence*.*
- Are there security risks associated with this project?
- Are they sufficient enough to warrant a basic threat modelling process?
- Does the project involve a sensitive topic or subject that could put staff, users, allies, or anyone else in physical or other danger?
- If data is being collected that could potentially put a user at risk, the user should be told in clear language before their information is collected. This practice is called "informed consent."

Secure Application Development for NGOs and others

These security issues are explored in greater depth in a guide to secure application development for NGOs (Saitta, 2015).

> *Building tools that support better security outcomes for high-risk groups requires a deep understanding of what those groups are trying to accomplish. Too often, development teams build tools to support what they think people should be doing and not what the people actually need to do. The details of user community/team cultures need to be understood deeply and carried throughout the entire development process.*[35]

She recommends developers of technology for high-risk groups need to rigorously examine the threats faced by the users of such a technology and act accordingly.

Building software that helps people accomplish their goals when they have adversaries means building software that has specific security properties selected to make a difference in that work.

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all accessed 03.02.16

[35] The paper is available at https://dymaxion.org/essays/ngodevsecpart1.html accessed 03.02.16

Security design should, whenever possible, be done as part of a participatory design process. Understanding what properties will be useful in a given situation is often not easy for designers who don't understand the cultural context other people are working in.

The security design process requires a working understanding of what kinds of adversaries people are facing, what resources those adversaries have at their disposal, how those adversaries are likely to use their resources, and how the situation is likely to change over time. It also means understanding the resources people have at their disposal and the strategies they already use to avoid their adversaries. Much of this information may be confidential and sometimes extremely sensitive. Proper discretion in the security design process is critical.[36]

Oxfam's Responsible Program Data Policy

The NGO, Oxfam, has created a policy (Oxfam, 2015) which is intended to respect the privacy of its' beneficiaries data which any providers of digital and other information resources for refugees would do well to take into account.

> ***Right to privacy***
> *Oxfam will ensure a participant's right to privacy in the treatment of his/her data and has a responsibility to protect the identity of those providing data, unless otherwise outlined and agreed to in the informed consent*
> *Oxfam and its agents will not collect non-essential data that could put participants at risk without justification and a clear process for managing and mitigating that risk.*
> *Oxfam will take all reasonable measures to ensure that the process of data collection and the totality of the data lifecycle have no negative physical, psychological, or political consequences for the participants. Oxfam will store all high-risk data securely.[37]*

Techfugees

The above summary of core principles around privacy is consistent with the approach taken by Techfugees, the non-profit tech community response initiative. Techfugees heads its main resource page with four key guidelines:
- As well as helping refugees directly, you should see if you can help NGOs.
- Don't build anything unless you have ongoing contact with a real user you can test it with.
- If you are building something for refugees, how are they going to find out it exists?
- Remember that there may be *significant risk to life, and therefore anonymity/privacy for refugees may be critical*.

Summary

In summary, the key findings of the research in this section are that the provision of resources for refugees should seek to have the following **components of value**:
- **User-centred:** user involvement in design and implementation is vital
- **Secure and Private**: crucial
- **Strategic**: aligning organisational strategy with tech output is a must as is ensuring that the resource produced has a clear strategic goal
- **Pragmatic:** Consider reusing/repurposing of existing resources rather than creating from scratch

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[36] The paper is available at https://dymaxion.org/essays/ngodevsecpart1.html accessed 03.02.16
[37] See http://policy-practice.oxfam.org.uk/publications/oxfam-responsible-program-data-policy-5759500 accessed 03.02.15

- **Novel**: Ensure effective field scanning to ensure that the project does not replicate an existing resource and has a Unique Selling Point (USP)
- **Trustworthy**: resources must be trustworthy
- **Accessible**: must be easily accessible – cost, technology, language and literacy
- **Sustainable**: long term planning and resourcing is vital to ensure that an initiative is not launched and then abandoned.

5.2. Best practice case studies

This section will provide a general overview of the tools currently available to refugees, before focusing in on several case studies. They have been carefully selected bearing in mind the components of value outlined above as well as the themes and utility value outlined below.

There are hundreds of technological aid initiatives available to refugees upon arrival in Europe. Techfugees have usefully sorted the main themes and utility value of tech projects for refugees into a growing collaborative Hackpad database with the following 13 categories:[38]

In preparing resources for refugees one needs to consider carefully their utility value and function**:**
- travel advice/mapping/visas,
- finding people,
- managing donations and requirements,
- access to electricity and wifi,
- access to healthcare,
- Airbnb-for-Refugees type projects,
- finding employment,
- education,
- data security and standards,
- tackling violence against women,
- communication solutions,
- long term solutions to refugee problems.

Technology Initiatives include dozens of other initiatives exist that do not fit into any of the above categories – projects include apps, websites, SMS group services, map tools, crowdsourcing tools, and online databases.

Actors include tech communities, humanitarian aid workers, NGO actors, media NGOs, telecoms companies.

This section will examine selected initiatives that have assisted refugees during their journeys and upon arrival in Europe. We have selected these examples because they are judged to be the most popular and relevant according to the first-hand research experience of our team. On the ground knowledge and experience of these networks and initiatives allows us to draw out nuanced strands of analysis that take into account the complex modes of interaction between refugees and aid resources. These case studies illustrate the role of various actors involved in refugees' journeys to Europe, and illuminate their relationships with technology, family, friends, smugglers, volunteers, activists and aid workers all cross paths in a plethora of ways with smartphones, applications, social media and the Internet. They illustrate the holistic, ethnographic approach that we take towards analyzing refugee information and media needs and how best to provide appropriate digital and other resources to meet their needs.

The first three case studies focus on Greece, with some reference to other migration pathways (Macedonia (FYROM), Hungary, Croatia, Slovenia), that refugees follow in order to reach safety in a European country. Greece is a key case study location because it has been a key transit country and, most importantly, was until recently the largest migratory path leading to

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[38] Cf. https://hackpad.com/Tech-Projects-For-Refugees-hL0DFzrTNAq

Europe.[39] After the underlined agreement between the EU and Turkey on 18/03/2016 the refugee flows have decreased and the Greek borders have closed.[40] However, as the table below (see Figure 9) illustrates, considerable numbers of refugees continue to arrive. Approximately 45,666 refugees have been trapped in Greece, including 4,173 refugees detained or hospitalised at Lesvos (see Figure 10 below).
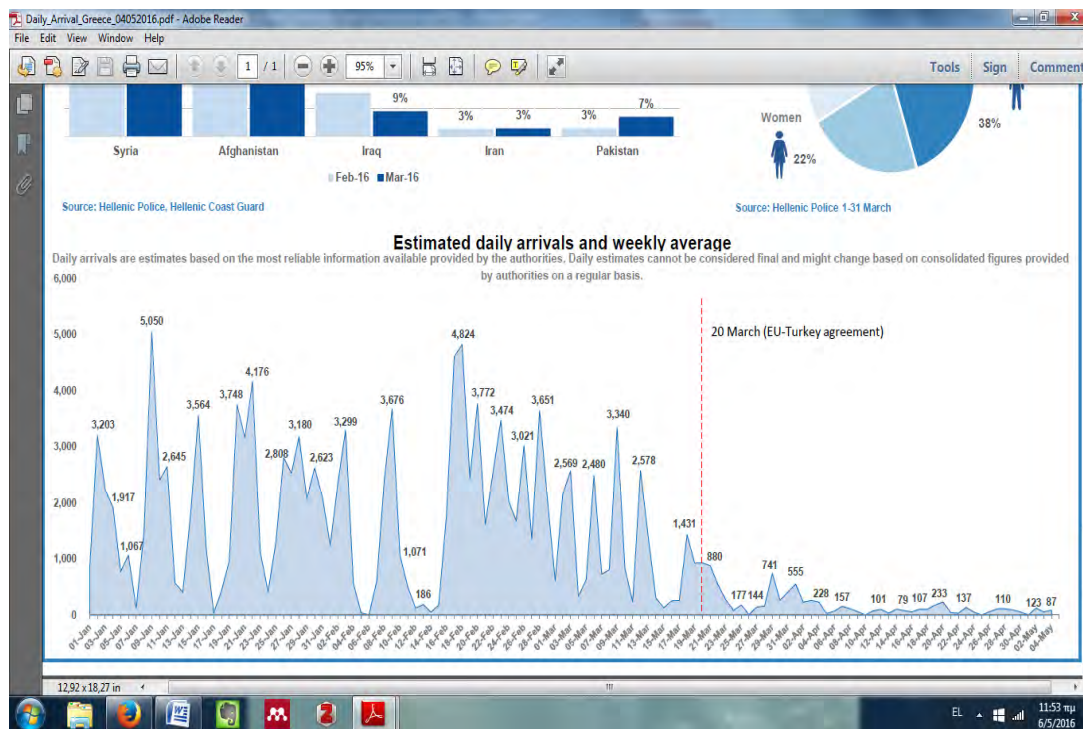

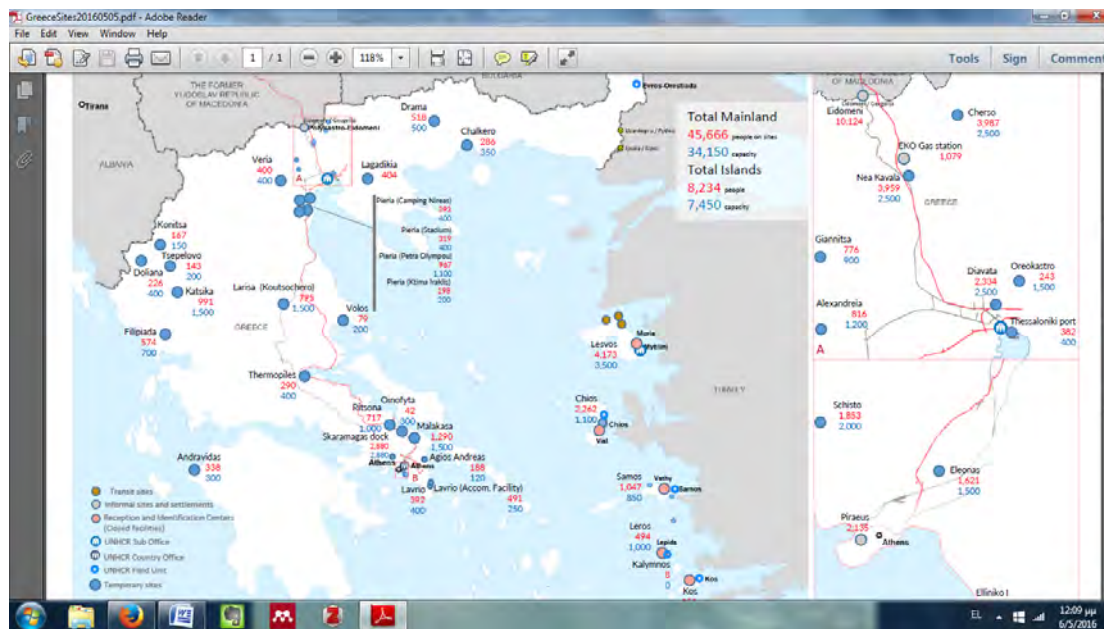*Figure 9*, UNHCR, Greece data snapshot, 4 May 2016, source : http://data.unhcr.org/mediterranean/country.php?id=83

Figure 10, UNHCR, Site Locations in Greece, 5 May 2016, source : http://data.unhcr.org/mediterranean/country.php?id=83

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[39] According to UNHCR the arrivals by sea from 01/01/2015 until 20/12/2015 have been 814,750. See: http://data.unhcr.org/mediterranean/country.php?id=83 (visited 18/12/2015).

[40] Please also see: "EU-Turkey statement, 18 March 2016" available at:
 http://www.consilium.europa.eu/en/press/press-releases/2016/03/18-eu-turkey-statement/ (accessed 26/04/2016)

Particular attention is paid here to Lesvos Island, Greece. The reason is twofold:

- Lesvos, located on the North Aegean at the sea borders with Turkey,[41] is the main entry point to Europe for refugees. As the UNHCR highlights: *"Of the 660,000 refugees and migrants who have reached Greece this year (2015) more than half have landed at Lesvos. So far this year, some 3,460 lives have been lost crossing the Mediterranean, 360 in the last four weeks alone with 250 of these in Greek territorial waters."*[42]Even after the EU-Turkey agreement there are still migration flows to Greece and Lesvos, although the numbers have been decreased. Lesvos is an important site because it still is the main gate to Europe for the vast majority of refugees. However, there is a lot of concern for the people either detained or accommodated there, by living in precariousness.
- Between 2008 and 2013, our researcher, Evgenia Illiou, who has provided the data and research reports for these case studies, worked on Lesvos Island as an aid worker for various NGOs, and as a sociologist and researcher for refugees arriving there.[43] In August 2015, she revisited Lesvos Island during a great upsurge in refugee arrivals. Her experiences there, as well as in other detention centres in the North Aegean Sea (Samos and Chios Island) and in Northern Greece (Evros region) gave her first hand access to and experience of these locations, which are all heavily monitored and controlled by police and authorities. Evgenia is very familiar with the field, and possesses unique insights into the activities and initiatives taking place there.

Case study 1: Crisis Info Hub Google app[44]

Confirmed by Techfugees as the 'go-to mobile portal' and the 'First ContactWebsite' Crisis Info Hub is an application for smartphones designed to help refugees by providing them with information on the situation and the conditions in five countries (Greece, Macedonia (FYROM) (FYROM), Serbia, Croatia, and Slovenia), including five key border areas in Greece (Kos, Lesvos, Chios, Samos, Eidomeni and Athens). This app is translated into five languages so that the majority of refugees are able to have free, comprehensible access to this information.

Case study 2: Infomobile - Welcome 2 Europe[45]

Infomobile- Welcome 2 Europe is an activist network focusing on informing refugees about the conditions at migratory paths and borders by using new technology, smartphones applications, the Internet and social media.

Case study 3: The Village of All-together network[46]

The Village of All-together is a non-digital activist network that supports newcomer refugees at the Island of Lesvos. It provides them with humanitarian aid, accommodation and various useful pieces of information mainly concerning their stay at Lesvos and the asylum procedure.

These three case studies have been selected as models of good practice because:
- ***Crisis Info Hub Google app*** is a high profile, well thought out, funded and well-maintained and therefore sustainable project – a good example of how new

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[41] See map below.
[42] See: "Some 3,300 people a day still arrive on Lesvos" in http://www.unhcr.org/5645eb7f9.html (visited 17/12/2015).
[43] In particular, Evgenia worked as a sociologist/aid worker at the Pagani detention centre in Mytilene, the capital of Lesvos Island. She provided social services and support, especially to vulnerable groups (victims of torture and trafficking, unaccompanied minors, families, pregnant women etc.), as well as written reports on the situation there. She was responsible for accompanying unaccompanied minors from detention centres (such as in Fylakio, Feres and Petrou Ralli) to various reception centres in Greece (Agiasos, Konitsa and Athens, for example) and provided socio-legal information to these vulnerable groups about their rights.
[44] See: https://refugeeinfo.eu/ (visited 16/12/2015)
[45] See: http://w2eu.info/ (visited 16/12/2015)
[46] See: http://xoriooloimazi.blogspot.co.uk/?view=classic (visited 16/12/2015)

technologies with relevant content can provide help and useful information to people in need and in danger.

- *Infomobile - Welcome 2 Europe* is one of the first, and longest-running, networks of activists focusing on the arrivals to the Greek islands, and has contributed in helping refugees with avoiding dangers in their journeys practically and with various tech resources and relevant information.

- *The Village of All-together* is a network of local people. They have direct local and personal experience and physical contact with arriving migrants, and they are the first initiative to show in practice that an open, self-organised reception camp for migrants can work. We include this example to show that quick technological fixes don't always work and that solutions have to be based on local conditions, personal experiences and often local networks of support from which we can draw out best practice.

5.2.1. Case study 1: 'Crisis Info Hub' (Google)

Crisis Info Hub app was set up in response to arguments claiming "technology isn't solving humanity's biggest problems".[47] As Google team reports on their blog:

> *Millions of people around the world want to do what they can to help refugees and migrants caught up in the crisis in Europe, the Middle East and Northern Africa. We wanted to give you an update on where things stand as we continue to think about what Google—and all of us—can do to help.[48]*

Google, mobilized by the "refugee crisis", developed this project in cooperation with experienced NGOs in the field of humanitarian aid, the International Rescue Committee and Mercy Corps. The Google team identified a "lack of timely hyperlocal information for refugees",[49] developing something that would give refugees vital forms of information concerning the particulars of their departure, journey, and arrival, "providing refugees—most of whom carry smartphones—with critical information for their journeys: lodging, transportation, medical facilities, etc." The project is "open source" and "a lightweight mobile-friendly site."[50] This makes it easy for others to contribute by providing critical information via Google Docs and assisting in this way in (re)shaping, extending and updating the information. Furthermore, it means that information is disseminated "in a lightweight, battery-saving way" while "working to make connectivity in the region more widespread and reliable by partnering with NetHope to deploy robust access solutions where they're needed most".[51]

Crisis Info Hub includes information and all recent updates, concerning the EU-Turkey agreement, for refugees arriving to ten areas: Lesvos, Chios, Samos and Kos Island at the sea Greek-Turkish borders, Athens (the capital of Greece), Gevgelija at the Greek-Macedonia (FYROM)n borders, Tabanvoce (FYROM), Presevo (Serbia), Croatia and Slovenia.

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[47] For example see: "The European refugee crisis is a wakeup call: Tech isn't fixing humanity's biggest problems", by Mic Wright in http://thenextweb.com/opinion/2015/09/03/we-have-to-do-more/ (visited 16/12/2015).
[48]See: "An update on our response to the refugee and migrant crisis" https://googleblog.blogspot.in/2015/10/update-response-refugee-migrants.html, 23/10/2015 (visited 16/12/2015).
[49] Ibid
[50] Ibid
[51] Ibid
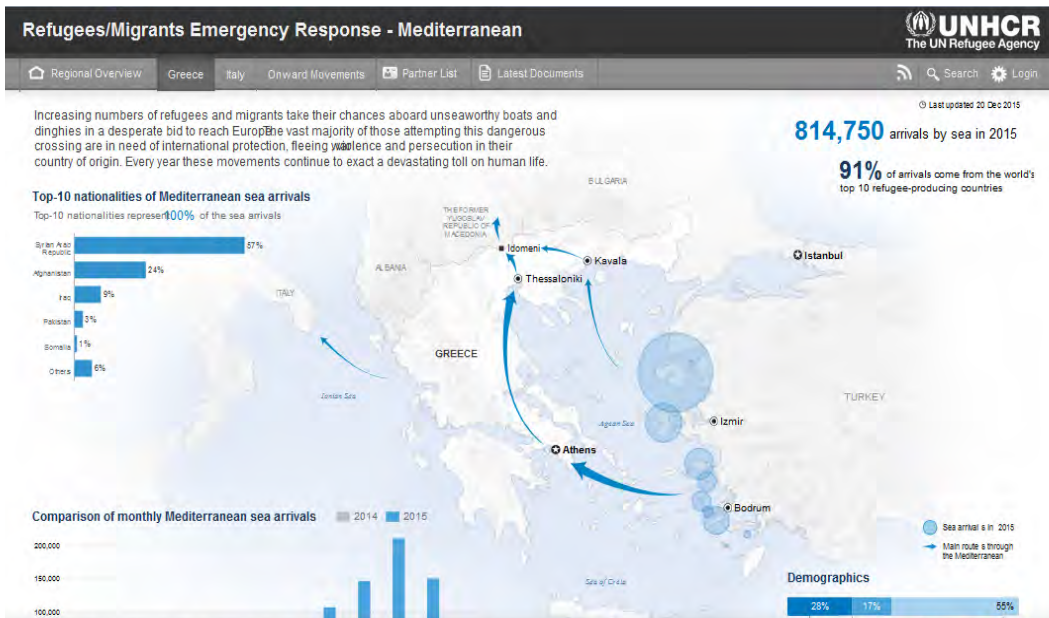
Figure 11. Refugee Routes I (2015), source: http://data.unhcr.org/mediterranean/country.php?id=83
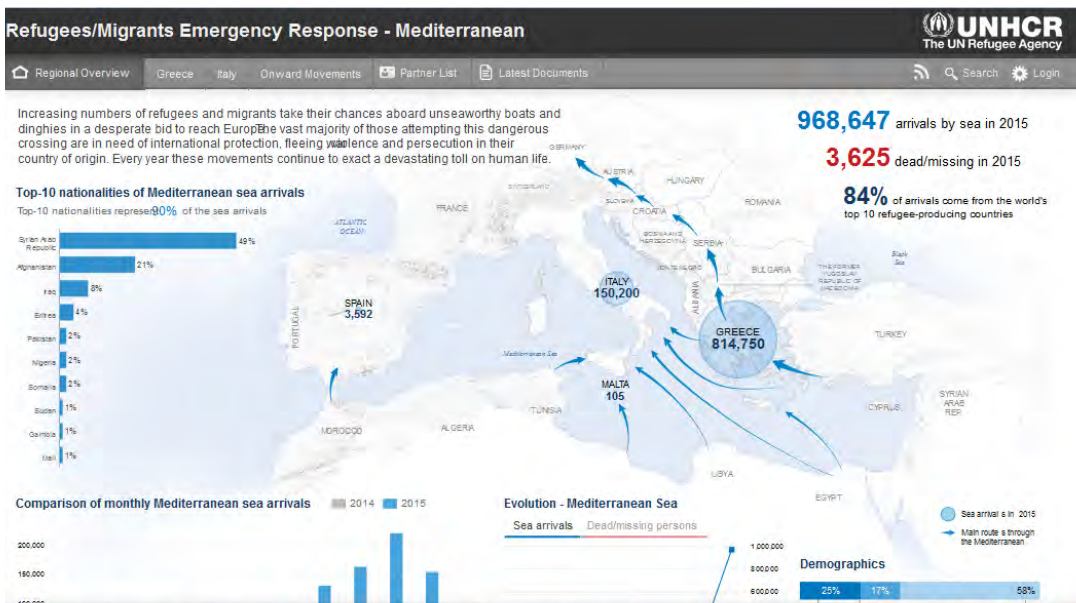
Figure 12. Refugee Routes II, Source: http://data.unhcr.org/mediterranean/regional.php
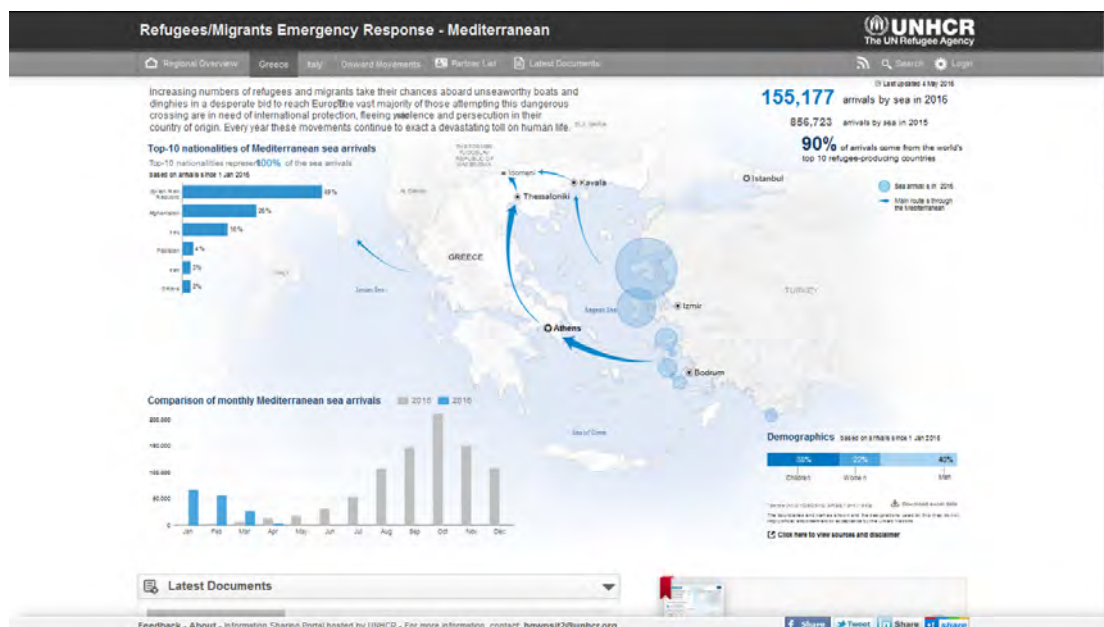
Figure 13. Refugee Routes III (2016), source: http://data.unhcr.org/mediterranean/country.php?id=83

All these places have been - until the 18th of March 2016 EU-Turkey Agreement[52] - very important entry points and gateways for refugees bound for other European countries. These places are also highly criticized for the unbearable living conditions they oblige refugees to stay in.[53]

Advantages

- Overall, Crisis Info Hub is a **well-designed interface**: it is easy to access and use, and can be auto-translated or manually translated into five different languages. It combines images with written instructions, making the information inclusively digestible and comprehensible.
- Crisis Info Hub provides a template Google Doc, **customizable** to allow organizations and individuals to disseminate crisis-relevant information in a **low-bandwidth** way.
- A published version of this Google Doc is served through a Google App Engine instance, which provides additional functionality, including **translation and analytics.**
- **Open source** means it's *repurposable.* Thus, the app is nicely **sustainable** – in terms of resources, staff and info – thanks to its template-based format. High levels of investment and public profile push on this front too.
- The Google brand has **credibility and trust** in eyes of the refugee users. Also, the resource is hosted robustly on Google servers.
- Is the app **protecting privacy and security**? Yes: it's not asking users for any data.
- The app is **collaborative,** involving multiple agencies and pooling wisdom, information and resources from a variety of **selected reliable, verified sources and organizations.**
- NGO workers don't need to learn new tools to update the hub: it essentially involves word processing
- The app is optimised for mobile phone, with user first design which minimizes battery usage

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[52] See: "EU-Turkey statement, 18 March 2016" available at:
 http://www.consilium.europa.eu/en/press/press-releases/2016/03/18-eu-turkey-statement/ (accessed 26/04/2016).
[53] See: "Europe's Borderlands: Violations against Refugees and Migrants in Macedonia (FYROM), Serbia and Hungary", report by Amnesty International, 6 July 2015. See also: "Greece: Chaos and squalid conditions face record number of refugees on Lesvos" in https://www.amnesty.org/en/latest/news/2015/08/chaos-and-squalid-conditions-face-record-number-of-refugees-on-lesvos/ (visited 17/12/2015).

- It includes detailed information for refugees arriving, for example, to Molivos (Mithimna), a region located on the North Lesvos. This includes particulars about where the registration camp is located, how to follow registration procedure, transportation directions from Molivos to Mytilene (the capital of Lesvos), ways of free access to medical treatment, humanitarian aid, accommodation, clothes and shoes. It also includes information about travelling to Athens and on to Greek border areas: boat ticket prices are included, as well as contact addresses of travel agencies from which refugees can buy their tickets for Athens or the port of Kavala (North Greece) in order to continue their journey to the Greek-Macedonia (FYROM) borders.[54] There is also a "detect my location" option, a useful travel tool for refugees with geo-locatable smartphones.

- In some cases, such as in Kos Island, the app includes a map, which can help refugees through the misinformation or deception by smugglers, which is a common occurrence. For example, there are refugees who had paid their smugglers in order to be transferred to Italy but instead their smugglers transferred them to Greece.

- The app combines images with written instructions. For example, in Kos Island the app provides a photo of a Red Cross container, which refugees are encouraged to go to in order to obtain a priority number, which is necessary for their registration procedure. An image of the priority number is also included. Both images combined with the written instructions are key to helping refugees identify and understand the important resources and procedures, helping to reduce the possibility of misunderstandings and incomprehension. It is also possible to download images as PDFs: information can be saved and accessed offline.

- There is also information included about how to travel by ferry to Athens, with photos of travel agencies' signs to help refugees identify them. Refugees are encouraged to search for these signs in order to buy their tickets from reliable sources. All content is set to a battery-saving, clear black and white format.

- There is a list of NGOs that provide legal and health services and social support to refugees, also providing their contact details. The names and details of NGOs supporting refugees in Athens are also included, which is very useful for emergency use.

- There is detailed information regarding transportation from Athens to Eidomeni, (a village on the Greek-Macedonia (FYROM) borders as well as directions concerning what to do when arriving there. Eidomeni was until the 18th of March 2016 the main border area in northern Greece, where refugees were arriving in order to continue their journey to Macedonia (FYROM). Despite the fact that borders have closed, there are some 10,028 refugees waiting in order to continue their journey further to Europe according to the UNHCR (see Figure 14. below). There is information concerning the facilities provided there by the United Nations Higher Commission for Refugees (UNHCR) and Medicins Sans Frontiers (MSF), (e.g. accommodation, food and water). There are also links with maps showing where Eidomeni actually is, as well as the village Gevgelija at the other side of the border.

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[54] After the 18/03/2016 EU-Turkey agreement the borders of FYROM, Serbia, Croatia, and Slovenia are currently closed to anyone without a valid passport and visa.
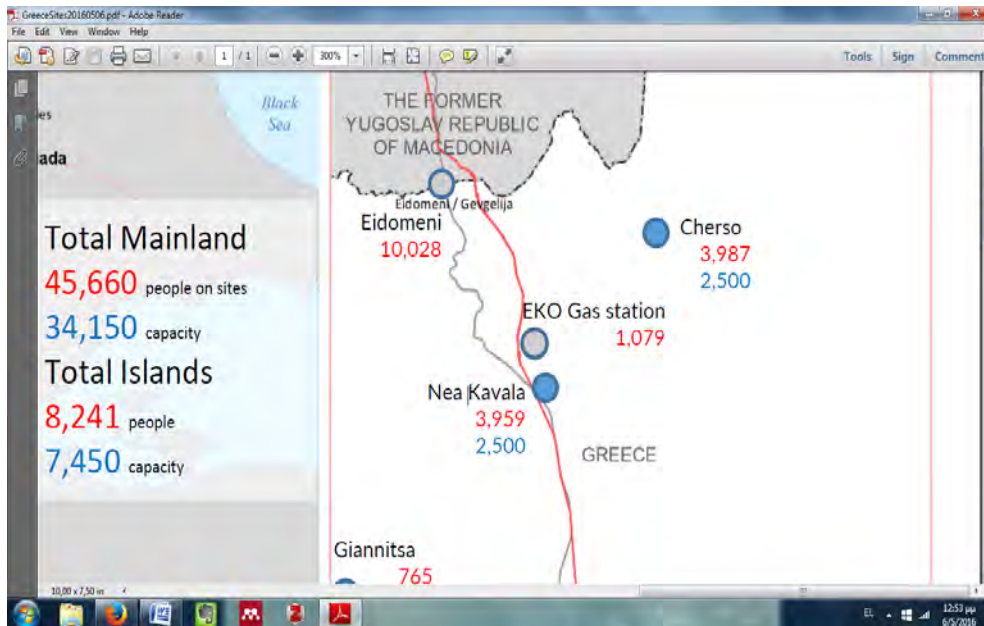
Figure 14. Refugee population at EEidomeni, detail of the map sited in UNHCR, "*Site Locations in Greece, 6 May 2016*", available at: http://data.unhcr.org/mediterranean/country.php?id=83

- There is information concerning temporary shelters for refugees,[55] with the associated contact addresses and phone numbers, plus details about where the refugees can find accommodation (including a list of hotels), food, water, health services (including a list with addresses of pharmacies and hospitals) and clothes.

Disadvantages

- The app is currently in a stage of transition whilst all the information it includes is being shaped and updated. For example, in November 2015, there was no legal information on the asylum procedure, or even general information about what an asylum seeker is. A month after, legal information regarding asylum was included only for Greece. After the 18th of March, legal information was adjusted to include the EU-Turkey agreement.
- Although there is some information on registration procedure, it does not include much regarding the police note and its duration and validity. Nor does it inform on any other important administrative issues they will encounter such as fingerprinting (an obligatory procedure during registration procedure for everyone except children under the age of 13), Eurodac identification database, verification of age and nationality, et cetera.
- The app informs refugees that they can use photocopies of their police note, but it is not taken to account that people with photocopied police notes might be in danger of being detained, at least until the authorities verify that their photocopy is true to a valid original. If the original police note is damaged, destroyed or lost, migrants will be detained until a new valid police note is issued, which might take a long time and require legal action.[56] People with expired police notes also face the danger of detention and/or deportation.. For example, that for Syrians, a police note is valid for

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[55] An example of temporary shelter is Eleonas, please see: http://www.huffingtonpost.com/entry/athens-camp-refugees_55d7732ae4b04ae4970330d6 (visited 21/12/2015).
[56] This police note, typically a deportation order, is an official document published by the Greek authorities, who are responsible for the registration of all non-Greek citizens and third countries nationals without documentation, passport, identity card or visa. People without a police note are not allowed to travel inside or outside of Greek territory. They can be arrested until the registration procedure is completed and their police note is published.

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six months,[57] while for all other nationals it is only valid for one month and cannot be renewed.

- The app informs refugees that they cannot use taxi or any other private vehicles to transport themselves from one place to another in Lesvos, and in general. It is valid that, according to law 4251/2014, art. 30, par. 1,2,3[58] the transportation of people without documents by citizens or professionals (e.g. taxi drivers) is prohibited by the authorities. However, it is denoted in par. 6 that this law is not applied in cases of rescue of people in the sea and in cases of people who are in need of international protection. People and citizens who violate law 4251/2014, article 30, are currently facing various legal consequences, such as financial penalty and at least ten years imprisonment. But law 4251/2014, article 30, has been recently amended by the 4332/2015 law, article 14, par. 2[59], which states that somebody can lawfully transport undocumented migrants by his/her vehicle if he/she has previously informed the authorities. Thus, the information on the app in this domain is outdated and un-nuanced.
- The app does not provide any warning to refugees about the smuggling networks and individuals who might be out to exploit them. It should be noted on the app that, for instance, ferry tickets to Athens are often sold for double price, as are police notes, which can go for as much as 400 euro. Refugees need to know that both getting registered and obtaining a police note are free.
- The app does not include information about the duration of the registration procedure and the awful living conditions at the registration/detention camp. It offers no words of warning to refugees about what they are about to face, or images of the overcrowded camps and the unbearable living conditions at the Greek-Macedonia (FYROM) borders.
- There is a lack of any legal information for asylum seekers (particularly about what the status means and what their rights are.
- EidomeniThe app could be made available in more than 5 languages.
- It could also include more/clearer iconography to accompany text – it lacks visual aids
- Could it be more user-driven? It is a top-down, big organisation initiative, unlike, say, Gherbtna, which is another notable good practice resource. Gherbtna is an app developed and produced by an actual refugee, so is completely user/community-driven and trustable. It provides information for refugees seeking jobs or further study – small dreams big initiatives might not consider?

5.2.2. Case study 2: 'Welcome 2 Europe' (activist networks)

Figure 11. Source:https://www.facebook.com/w2eu.info/photos/pb.136668709706341. 2207520000.1450465114./1040470135992856/?type=3&theater

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[57] In the case of Syrians, a six-month suspension of deportation is provided, which gives them no other rights except from the right of free movement in Greece. This document can be renewed.

[58] http://www.mfa.gr/images/docs/ethnikes_theoriseis/2014/4251.pdf (in Greek).

[59] http://www.synigoros.gr/resources/4332.pdf (in Greek).

***"Hartino Karavi** is Greek for "paper boat". It is a metaphor for what we want to create and for the situation of refugees and migrants in Greece. The paper boat is a folded boat able to swim – for a while. Then you have to build a new one to go on travelling. A paper boat is symbolic for the journey of life, vulnerable but in your own hands and to be recreated again and again. It is simple, but it carries many hopes and dreams. It can dance on a turbulent sea. It belongs to everybody. And it might become the small version – like a first draft – of a welcome-island".* [60]*

Infomobile -Welcome 2 Europe is a network that provides various kinds of humanitarian aid to refugees, motivated by the ideas of solidarity, freedom of movement, anti-racism, equal rights and opportunity, as evidenced by their symbol, the paper boat. *Infomobile-Welcome 2 Europe* is a "self-organised open space" providing support, guidance and useful information about and for refugees who are on the move via their distribution of information cards and leaflets on location, their web resources, and the *Alarmphone* and *WatchTheMed* platforms. They try to raise public awareness about refugee issues through the dissemination of information; this includes refugee narratives, press releases, photos and video documentaries regarding refugees, their detentions conditions, and violations of human rights.[61] *Infomobile-Welcome 2 Europe* also provides political intervention, by its participation in the NoBorder movement.

Members of *Welcome 2 Europe* are mainly activists from various European countries (Greece, Germany, Sweden) with much experience in the field of human rights, and also refugees,[62] most of them former detainees at detention centres in Greece and elsewhere. The group organizes campaigns and projects, such the *NoBorder* demonstration about the Pagani detention centre in Lesvos in 2009, during which they filmed and depicted the awful facilities and detention conditions, and recorded refugees' life histories.[63]

w2eu.info

w2eu.info is a site which "*provides information to refugees and migrants that might be useful on their journey to and through Europe." Their desire is to "give access to counselling and useful contacts in different European countries" in order to support refugees "in their struggle for a better life."*[64]

The web guide is translated to four languages; English, French, Arabic and Farsi. Refugees are encouraged to navigate across the various links in order to find information concerning issues such as: "safety on the sea", "asylum", "Dublin II", "gender", "minors", "regularization", "detention", "deportation", "living", "family", "medical" and "work". Refugees can find updated information on migration policy in various countries, as well as contacts and addresses of organizations and groups that support refugees. Additionally, there are links with information concerning refugees of 35 countries, including a general description of the current situation in each country, with help-guides and information cards that give warnings and advice. As well as this, the people at *Infomobile-Welcome 2 Europe* have also created two applications called "*Alarmphone*"[65] and the "*WatchTheMed*"[66].

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[60] http://infomobile.w2eu.net/about/ (visited 18/12/2015)
[61] Regarding detention conditions see http://infomobile.w2eu.net/tag/detention/ (visited 18/12/2015), regarding deportations see http://infomobile.w2eu.net/tag/deportation/ (visited 18/12/2015), for videos see http://infomobile.w2eu.net/media/videos/ (visited 18/12/2015), for photos see http://infomobile.w2eu.net/media/photos/athens/ (visited 18/12/2015).
[62] For example see: "Letter to the People of Mytilini" in http://lesvos.w2eu.net/2013/09/24/w2eu-youth-without-borders-letter-to-the-people-in-mytilene/,24 September 2013, (visited 20/12/2015).
[63] See: "Voices from the inside of Pagani (video)" in http://w2eu.net/2009/08/20/voices-from-the-inside-of-pagani-detention-centre/ 20 August 2009, (visited 18/12/2015). See also: "No Borders camp at Lesvos", 17 September 2009 http://www.archive.lasthours.org.uk/articles/no-border-camp-at-lesvos/ (visited 18/12/2009). See also: "No Borders in Greece", 29 August 2009, in http://www.archive.lasthours.org.uk/news/no-borders-in-greece/ (visited 18/12/2015).

[64] See: https://www.facebook.com/w2eu.info/info/?tab=page_info (visit 20/12/2015).
[65] See: http://alarmphone.org/en/ (visited 20/12/2015).

live.w2eu.info

live.w2eu.info is a live feed link which encourages refugees to inform themselves about the current situation in border areas. It records the changes and difficulties on all migratory paths that refugees follow on the way to Europe. It helps refugees be cautious and informed about what they are going to face during their journey.

Alarmphone

Alarmphone is a "self-organised" emergency hotline, created in a collaborative project between activist networks like *Welcome to Europe*, *Afrique Europe Interact*, *Borderline Europe, Noborder Morocco,* and *Watch The Med*.[67]. It is for refugees travelling by boat who are in danger and distress during their crossing of the Mediterranean Sea. The *Alarmphone* was created in October 2014 "by activist networks and civil society actors in Europe and Northern Africa. It offers the affected boat-people a second option to make their SOS noticeable. The alarm phone documents and mobilises in real-time. In this way, pressure to rescue is built-up, wherever possible and push- backs and other forms of human rights violations of refugees and migrants at sea can be opposed. Thus, the Alarm Phone is not a rescue number, but an alarm number to support rescue operations."[68]

WatchTheMed

WatchTheMed is an online mapping platform that monitors the deaths of migrants and violations of human rights at sea.

The information included in this platform is based on reports and testimonies "sent via phone calls or the internet from migrants, relatives, seafarers and other witnesses of ongoing or violations of migrants' rights at sea."[69]

Advantages

- One very important impact of *Welcome to Europe* initiative is that many refugees who have been assisted by this network later got **actively involved** in it. Refugees for example crossing the Greek-Turkish border, who were detained in Greece and then continued their journey further to another European country and who were supported by this network, later participated in *Welcome 2 Europe's* initiatives as active members. They got involved by becoming, for example, interpreters for the *Welcome 2 Europe* network, by translating information documents/leaflets or by supporting other refugees in their host countries. This grassroots growth is testament to the initiative's credibility and trust.
- Information is **updated regularly**, especially on the live feed, which is an excellent, verified resource for finding out about changes in reception of refugees and border closures, as well as the humanitarian situation at a great number of sites in a great number of countries (including Austria, Bulgaria, Croatia, Denmark, Finland, Germany, Greece, Hungary, Macedonia (FYROM), Norway, Russia, Serbia, Slovenia, Sweden and Turkey).
- By participating in social movements, the members of *Welcome 2 Europe* come into **direct contact with refugees**. They are involved in intervening and supporting refugees, as well as keeping records of narratives and publishing them. Thus, they have first hand experience of refugees' informational habits and needs.
- *Welcome 2 Europe* does not underestimate the **value of physical printed information**. Members give out cards and leaflets with contact details and other useful details, all

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[66] See: http://www.watchthemed.net/ (visited 20/12/2015).
[67] See: http://alarmphone.org/en/about/ (visited 20/12/2015)
[68] *Ibid*.
[69] See: http://www.watchthemed.net/pdf/WTM-flyer-eng.pdf

translated into various languages. These cards are distributed not only to refugees, but also aid workers and volunteers in camps and detention centres.[70]

- *Infomobile-Welcome 2 Europe* is available on multiple platforms, including the *Welcome to Europe Blog* (w2eu.net). *This blog* contains updated news regarding refugees and undocumented migrants, and, very usefully **versatile, it can be followed on Facebook and Twitter**. Via whichever of these platforms is preferable, you can follow various links concerning refugees, border discussions and solidarity activities in Athens, Crete, Igoumenitsa, Lesvos, Orestiada, Patra, Samos, Chios, Thessaloniki.[71]
- Watch the Med is **collaborativ**e, "through the transnational cooperation with migrants' rights organisations, activists, researchers, migrants, seafarers active in, around and beyond the Mediterranean and the use of new mapping technologies". Also, "the participatory nature of the platform allows many different actors to indicate ongoing situations of distress." But is it useful for refugees themselves?

Disadvantages

- People who cannot read do not have access to the information provided by the *Infomobile-Welcome to Europe* in its various forms (web guidance, information cards and leaflets, the *Alarmphone* and *WatchTheMed* platforms).
- The main Infomobile website mainly contains stories rather than useful information, and it is not updated very regularly, with no new post since the start of 2016.
- *w2eu.info*, however, provides information that might be useful to refugees in Europe, but it is only translated into Arabic, Farsi, English and French.
- The live feed is only available in English
- Watch the Med might do more to scaremonger than practically help a refugee: it's mainly to locate and document deaths and human rights abuses at European border controls, and to determine responsibility for (and support legal action against) these violations at sea (via "the accounts of survivors and witnesses, but also the analysis of ocean currents, winds, mobile phone data and satellite imagery")
- The Alarmphone does not provide rescue, just alarm. SO, it's helpful for monitoring and mapping emergency situations, but not a practical or informational aid resource for refugees.

Follow up research will examine further the following questions in relation to the live feed, the Alarmphone and WatchTheMed*:*
Does it understand and meet the different intended users' needs, access and capacity? I.e. is it a well-designed interface? Does it have credibility and trust in eyes of the user? What is the initiative's place in the existing ecosystem? Is it sustainable (resources, staff, info), is it protecting privacy and security, is it open source, is it also a useful tool for coordinating NGO work?

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[70] See: http://w2eu.info/ (visited 18/12/2015).
[71] Concerning Athens see http://www.tsamadou13.gr/ (visited 18/12/2015), concerning Crete see http://www.stekichania.gr/ (visited 18/12/2015), concerning Igoumenitsa see http://metanastes-igoumenitsas.blogspot.co.uk/ (visited 18/12/2015), concerning Lesvos see http://lesvos.w2eu.net/ (visited 18/12/2015), concerning Orestiada see http://stopevroswall.blogspot.gr/ (visited 18/12/2015), concerning Patras see http://www.kinisipatras.gr/ (visited 18/12/2015), concerning Samos see http://allileggyi-stous-prosfyges.blogspot.co.uk/(visited 18/12/2015), concerning Thessaloniki see, http://socialcenter.espivblogs.net/ (visited 18/12/2015) concerning Chios see, http://www.lathra.gr/(visited 18/12/2015).

5.2.3. Case study 3: 'The Village of All-together' ("live" local network)

Figure 15. The ''village of all together''[72]

This case study is non-digital, but it is important to note as an example of successful, localised, grassroots resource provision. The ''Village of All–together''[73] is a network of volunteers, activists and local NGOs in Lesvos Island. The idea of this network was born during 2012 when austerity measures in Greece began to have serious effects on local citizens' lives. The Village of All -together was founded as a response to the economic crisis, with its motto; "*no one should be left alone in the financial crisis*". Soon, the network started initiatives for refugee support, since during that period of time many had started arriving again to Lesvos Island.[74]

The Village of All-together has been running since December 2012 as an informal, open, self-organised refugee camp in Mytilene, the capital of Lesvos Island, in the former summer camp for children called "P.I.K.P.A".[75] Homeless and newly arrived migrants whom authorities didn't arrest were hosted alongside refugees who didn't have a place to stay after their release from detention at the Police Station of Mytilene and at the detention centre of Moria in Lesvos Island. Now, mainly refugee families with children, unaccompanied minors and other vulnerable groups live there.

Village of All-together members support homeless refugee newcomers or formerly detained, documented or undocumented migrants by providing them with accommodation at PIKPA camp, with humanitarian aid (provision of food, clothes, shoes etc.) and legal counselling by volunteer lawyers. The network participates in various activities to create publicity and raise awareness about the gradually rising issue of undocumented migration in Lesvos Island. One of the local NGOs actively involved in the network coordinated during 2012-2013 an *Info Point* office in the city centre in order to inform migrants about their rights and about PIKPA. Members of the Village of All -together also approach newcomers and homeless refugees by distributing clothes, food etc., and inform them about PIKPA and about how to get registered by the authorities and access the asylum procedure.

Currently, apart from local members of the Village of All -together network, there are also many volunteers from many European countries actively involved in various activities in PIKPA. There is a Facebook community from which one can get informed even about yoga lessons for children being taught there by volunteers. Furthermore, refugees who are permanently settled in Mytilene are actively involved as interpreters in the Village of All-together. As mentioned at the Village of All -together blog,

> *Our main objective is to stand in solidarity with the refugees and fight against the illegal arrests and any practice of humiliation or atrocities*

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[72] All images for the ''village of all together'' and ''PIKPA'' have been taken from: https://www.facebook.com/Pikpa-Lesvos-1650025878606170/?ref=profile

[73] Blogspot: http://xoriooloimazi.blogspot.co.uk/
 Facebook: https://www.facebook.com/Pikpa-Lesvos-1650025878606170/?ref=profile

[74] The migration flows at the Aegean Sea from 2010 to 2011 had considerably decreased, compared to previous years. Migrants were mainly arriving to Greece through the Greek-Turkish land border at the river Evros and not by the Aegean Sea. See: http://www.unhcr.org/pages/4a1d406060.html (visited 19/12/2015).

[75] Due to the absence of adequate reception infrastructures in Lesvos, PIKPA was granted by the municipality of Lesvos, in order for migrants to be temporarily hospitalised there. The greek initials of P.I.K.P.A. mean ''Patriotic Institute for Social Welfare and Awareness''.

conducted in the sea or at the borders… e.g. In June 2015 and while the law was still criminalizing any altruistic acts, we, the "Village of all together" organized a convoy with over forty cars that travelled from Molivos to Mitilini in order to transport refugees to the hospitality center. Moreover, we participated in trials against citizens who transported refugees to the cities when the respective authorities pointing the law, were leaving thousands of people walking long distances all over the island.[76]

Advantages

- It is a **vibrant community easy to find its activities through the social media** and **the Facebook group**, which has been created. Citizens and refugees are encouraged to come together to participate in the network's everyday activities. **Everybody is welcomed**. Such activities as children's yoga, for example, offer a unique type of psycho-social support.

- Many of the network's **members are locals**, and this can be important in dealing with the various nuances and peculiarities of local society. The local people of Lesvos can trust them more than, for example, the new NGO on the island – locals often feel suspicious about outsider groups' intentions. During the last months of 2015, there was intense criticism of the role of the numerous NGOs that had arrived to Lesvos.[77] As a result, a network with friendly, familiar, local characteristics, well-known to the existing population, can be more trusted as a source of help that will be more likely to **show solidarity with migrants**.

- The Village of All -together is a **"live" network**, and has been present at Lesvos for years now, proving its aptitude at providing newcomers with **timely information, especially in emergency situations, during which circumstances are unique and change day by day**.[78]

- The network is not a legal entity (this can also have a negative aspect: see under Disadvantages below). Thus there are no limits to its actions imposed by any subsidizer or sponsor. Furthermore, it is easier for its members to express important views in press releases, **without being afraid of any kind of censorship** by the administrative body of an NGO. For example, on the 25th of October 2015, the network issued a press release condemning the inhumane reception facilities and the everyday police violence at Moria detention centre. None of the almost 100 NGOs taking action in Lesvos Island had done so.

- It is a **sustainable, self- organised network**. Everybody participates in organising the initiatives that perpetuate the good work of the camp. For instance, collective cooking activities.

- PIKPA open camp proves that there are **alternative solutions to the ones imposed by governments : detention and restraining human mobility**. For example, in 2012 the Village of All together proposed to the authorities that, instead of migrants being detained for many days or even weeks at the overpopulated and inappropriate police detention centres at Mytilene, many could stay at PIKPA until the Greek police completed all bureaucratic procedures. This practice was unofficially accepted by the local police department and for a period of time the prolonged and unfair detention of many migrants was prevented.

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[76] Blog: http://xoriooloimazi.blogspot.co.uk/2015/08/village-of-all-together.html
Facebook: https://www.facebook.com/Pikpa-Lesvos-1650025878606170/
[77] There is a great number of local press releases and articles criticising the role of various newly arrived NGOs at Lesvos and their attitudes and practices towards migrants and the local population: http://www.emprosnet.gr/tags/mko-0 (in Greek)
[78] During 2015, almost 500.000 migrants arrived by sea to Lesvos Island. These enormous numbers have caused serious problems to the authorities struggling to manage and develop reception infrastructures, which were, and still are, inadequate. In their struggle, the authorities have enforced all kinds of weak policies. For example, Syrians were being registered to a certain area for a ridiculously short period time; after only several days their assigned area could change.

- The Village of All- together is a community in which refugees **build trusted relationships with its members**. In this secure way, refugees can get informed about their rights, the asylum procedure and the dangers that they are going to face by continuing their journey.
- Members of the Village of All- together inform refugees on the "Welcome 2Europe" project (see case study II). It is crucial to highlight that the Village of All-together **functions as a platform interlinking and strengthening various other networks.** In doing so, it bolsters and provides a whole host of different kinds of services. As well as the individuals participating in this network, there are also various organizations actively involved. These include "Siniparxi kai Epikoinonia sto Aigaio",[79] "Agalia",[80] "liaktida",[81] the Mytilene social clinic and pharmacy and the Mytilene medical association.
- **Accommodation and humanitarian aid provided to refugees by the network** in the PIKPA open camp is crucial for many migrants, since the nearly all of them cannot find shelter and have no money or access to water and food.
- At the PIKPA camp, refugees have **access to telephone booths and can charge their mobile phones**. This enables them to communicate with their families and friends, and to further organise their journey.
- For some refugees, PIPKA is a **safe haven** at which they with stay for several weeks or even months. Some have applied for asylum and need to wait for their interview to take place and for the final decision to be issued, others might have been sick before and **need to stay for a period of time at a safe place to recover**.
- Migrants are also informed by the members of the network about the situation at – and the dangers concerning – borders. This **helps refugees organise their journey and avoid dangerous paths.**

Disadvantages

- The network is run entirely by volunteers, and so in certain periods of time there is a lack of people to assist the large numbers of refugees arriving.
- The Village of All –together is not a legal entity and, as a result, cannot officially be funded.
- Since PIKPA is a former summer camp belonging to the municipality of Lesvos and not to volunteers, the Mayor of Lesvos following the EU-Turkey agreement announced the closure of the camp. Thus, PIKPA as a sanctuary for refugees, mainly vulnerable groups, is in danger of shutting down at any time.
- Information provided to refugees is mainly oral. Resources in various media would pass on information much more effectively.
- Although the network is on Facebook and has a website, the information provided is mainly in the Greek language, and is mainly related to organisational issues and advocacy or public interventions. Thus, many migrants cannot directly benefit from having access to those pages.
- Everybody can have access to PIKPA, since it is a completely open and self-administered camp. But this means that security and safety issues could arise. For

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[79] *Siniparksi kai Epikoinonia sto Aigaio* means 'coexistence and communication in the Aegean Sea'. This local organisation actively supports, since 1998, the coexistence of people from different nationalities and cultures, see: http://siniparxi-epikoinonia.gr/ (in Greek).

[80] *Agalia* is a famous NGO founded by a priest in Lesvos, Father Efstratios Dimou a.k.a. Papa Stratis. Agalia has provided valuable humanitarian aid in many difficult circumstances with the Village of Alltogether, and has made numerous interventions, supporting equality among people. See: https://www.facebook.com/%CE%9C%CE%9A%CE%9F-%CE%91%CE%B3%CE%BA%CE%B1%CE%BB%CE%B9%CE%AC-1175287122497713/timeline/

[81] *Iliaktida* was the coordinator of the unaccompanied minors centre at the village of Agiasos at Lesvos Island. This NGO, also established during 2012, is an info point for migrants arriving in Lesvos, and has been an integral part of the *Village of All together*. See website: http://www.iliaktida-amea.gr/ (in Greek) or Facebook: https://www.facebook.com/iliaktidamke/

example, smugglers could have easy access and misinform migrants about their journey.
- In addition, there is always great concern that right wing members could harm the migrants hospitalized there, especially during the night hours, when there are not any members of the network to somehow protect the migrants.

5.3. Key findings and recommendations

Digital infrastructure underpins and guides refugees through the physical infrastructures of roads, railways and sea crossings. It comprises a multitude of technologies and sources: mobile apps, websites, messaging and calling platforms, social media, translation services, and more.

A holistic research and development approach is vital to understanding how refugees commute across platforms and between sources, and move in and out of online communities and discussion. A holistic approach ensures that the actual uses of technological and informational resources direct any initiatives and in so doing contribute to their success.

Google's Crisis Info Hub app and the Welcome 2 Europe website, and also the local, direct, active, live network, the Village of All-together, all provide crucial resources and information that refugees might not attain in any other way. But the value of these initiatives needs to be monitored from multiple perspectives: those of refugee individuals and groups, NGOs, funders, locals as well as official and government agencies. There is always room for development in this very rapidly changing landscape.

Recommendations

Our research found that:
- Quick technological fixes don't usually work. As the Village of All-Together exemplifies, successful solutions can be rooted in local communities and bottom-up, organically evolving approaches, based on understanding shifting local conditions, drawing wisdom from on-the-ground experience and the strength of sustainable existing networks.
- The situation changes almost every day in border areas: any resource must be frequently updated in order to avoid it doing more harm than good with misinformation.
- Long-term planning for the continuous physical and digital presence of staff at key sites is crucial in order for the everyday situation to be monitored, so that the resource can be kept up-to-date. On-the-ground individuals or organizations must be closely coordinated (a tech initiative could also help in this domain) for the resource to be sustainably maintained.
- Initiatives must harness the power of existing resources available to refugees. For example, refugees can be encouraged to ask for help and counseling from NGO staff.
- New resources could include both digital and non-digital resources - a hard copy as well as a digital map illustrating the exact addresses of the various NGOs and solidarity networks that support refugees at entry points in Athens and elsewhere.
- To ensure trustworthiness, an initiative needs to involve refugees directly: its design and implementation, and its monitoring and evaluation must include refugees.
- Refugee security must be a central principle. Lack of trust and fear of surveillance drives refugees towards unofficial, potentially dangerous and exploitative resources.
- The digital tools and resources that help, guide and comfort refugees are also used to exploit, monitor and track them. Security must be upheld in terms of **set up** (e.g. by not asking refugees to disclose any information about themselves, as with Crisis Info Hub and Infomobile) and **content** (e.g. these resources should provide warnings regarding the dangers of financial exploitation by certain groups such as taxi/private drivers and smuggling networks).

- Help for the many illiterate refugees could come in audio and visual formats; video or sound resources would be appropriate and useful. However, there could be an option for whether or not somebody wishes image/video/audio content to be provided: for someone who has no problem understanding written information, the choice to not open image/video/audio content would help them conserve mobile battery.
- An initiative could easily include more – and more up to date – legal advice than these case studies. Relevant high quality legal information appears to be lacking as are sources of information about language learning facilities. These are key areas that any new digital resources could focus on.
- The resource must be accessible. Crucially, free access to the Internet gives refugees the means to discover helpful information through websites, apps, Facebook communities and volunteer/activist networks. Indeed, certain forms of information can protect refugees' lives from danger and exploitation.

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