

A STUDY INVESTIGATING INFORMATION SEEKING MOVEMENTS BY REFUGEES FLEEING TO EUROPE

REFUGEES' MOVEMENT IN IMMOBILITY

colophon**title**

Refugees' movement in immobility: a study investigating information seeking movements by refugees fleeing to Europe

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Delft University of Technology

faculty of Architecture

department Urbanism

research group Complex Cities

studio Imagining European Regions

author

Jeanne Blok

4535189

supervisors

Ir. V.E. Balz

Dr.ir. F.D. van der Hoeven

illustration front page

(Reluga, 2018; Google Earth, 2018) edited by author



keywords - refugees, immobility, information flows, communication forms, resources

thesis abstract - For refugees that are fleeing is access to reliable information of great importance in order to allow them to seek for what they need and avoid dangers. On their journey they experience moments of immobility and in these periods useful information is in need leading to economic, social or knowledge resources. These resources gives them access to mobility of the following trajectory. The purpose of this study is to investigate information processes used by refugees approaching economic, social and knowledge resources while being in immobility fleeing to Europe and redesigning in information flows in order to ease resource collecting. This research made progress through documentary and literature study, empirical analysis in an exploratory in-depth case study by mapping that draws upon field work, and proposes design principles in information provision. The way interventions provide communication for information needs vary in different settings of urban and rural areas. In a urban spread complex information network, provision focuses on filtering and linking to the surroundings. That is other than in rural areas with limited clustered network, where providers have the role of introducing and connect to a wider existing network.

legend list

-  (flow of) mobility
-  (area of) immobility
-  air flow
-  sea flow
-  land flow
-  strict borders
-  hotspots
-  informal places
-  information
-  communication
-  user
-  information process
-  ICT tool
-  country of origin
-  city boundaries
-  urban areas outside the city
-  water
-  economic/social/knowledge resource locality
-  economic resources
-  social resources
-  knowledge resources
-  other kind of resource locality
-  food and drinks
-  shelter
-  clothing
-  wash
-  health
-  education
-  protection
-  available economic/social/knowledge resource
-  unavailable economic/social/knowledge resource
-  available other kind of resources
-  unavailable other kind of resources
-  hub of movement patterns
-  walking movement to localities
-  public transport
-  some thing communicating
-  difficulty in informing
-  movement pattern
-  waypoint
-  kiosk waypoint
-  direction waypoint
-  information need

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fig. 1 illustration European migration crisis
(Sluka, 2016)

1 introduction

1.1 problem field

1.1.1 European migration crisis

The phenomenon of migration is indispensable in human history, it is widely discussed and so too the last decade. The act of migration involves an origin, a destination and a set of intervening obstacles, whether the journey is short or long and easy or difficult (Lee, 1966). The movements of human populations are perceived widely, some even go as far as to call the last century “The Age of Migration” (Castles, Haas & Miller, in Ibrahim, 2005, p. 167). Often migration and settlements are a long process that determines the rest of the migrants life and affects the next generation. It is more often a collective action than a individual act, arising out of social, economic and/or political change (Castles, Haas & Miller, 2014).

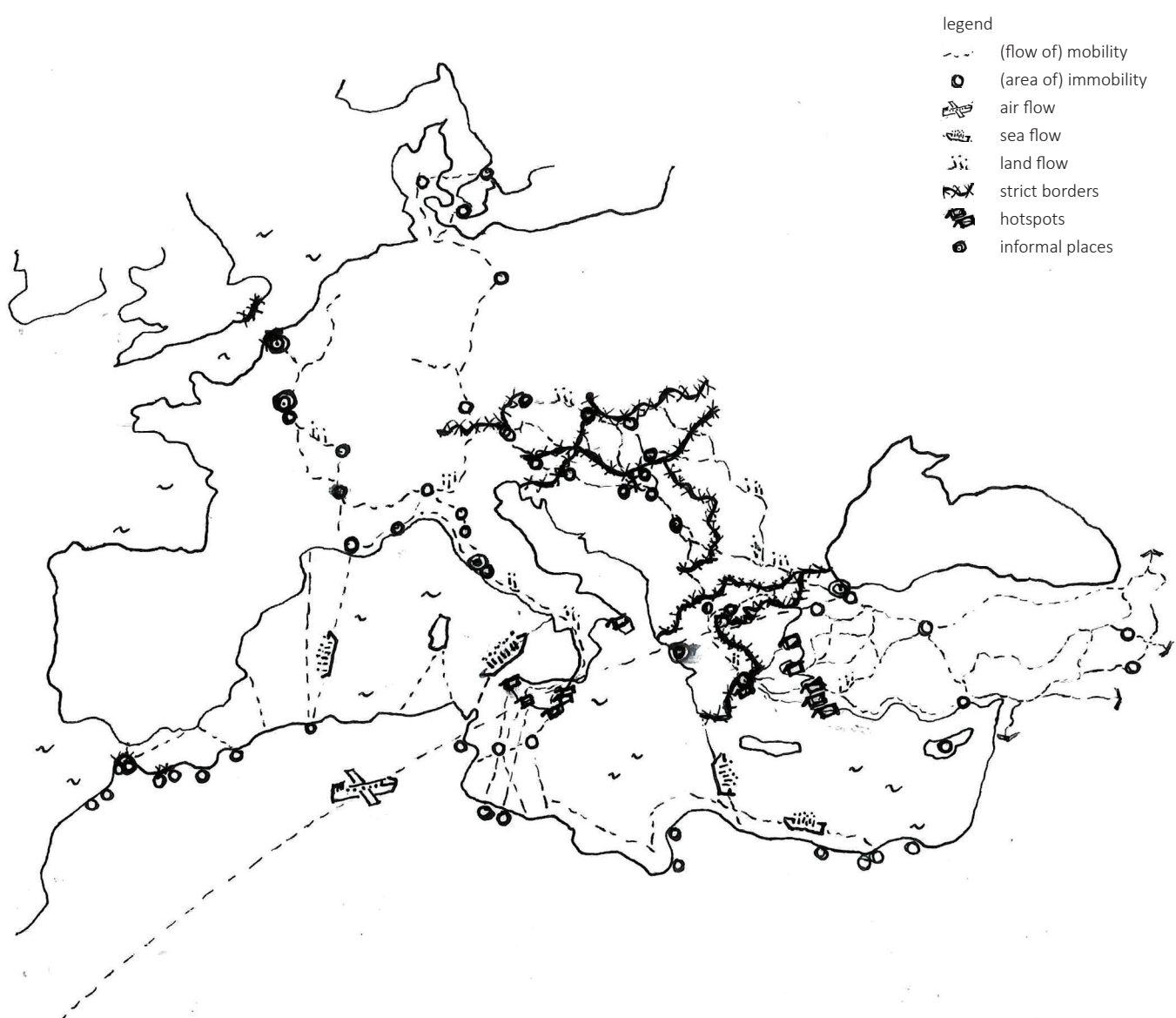
The last decades there has been more categorizing in migration trying to find ways to distinguish migrants (see fig. 2). For instance, policies define categories such as ‘illegal’ or ‘irregular’, meaning migration that is not authorised by migration laws and policies in the country concerned (Jordan & Düvell, in Geddes & Scholten, 2016). Since the 1980s there has been an increase of people crossing international borders illegally and irregularly (Betts, 2008). It is debatable if it is useful to use these kind of categories of migrants in policies and theories, such as ‘forced’ or ‘voluntary’ or refugee, family or economic migration. The reasons of people migrating are often complex and manifold. For that reason it is questionable if economic, social, cultural and political causes for migration can be separated (Castles, Haas & Miller, 2014). “Are migrants voluntary or forced if they leave their countries because of unemployment or poverty?” (Geddes & Scholten, 2016, p. 7) European law and policies divide immigrants in five categories: 1. tourists or visitors that travel for recreational reasons, 2. labour migrants that have the freedom to travel within the EU, 3. family members that have the rights to maintenance family life, 4. people who apply for asylum and 5. ‘illegal immigrants’ that are moving in the EU without permission or legal documents (Cseke, 2013). People who are fleeing can rely on the instruments of the 1951 Convention Relating to the Status of Refugees and the 1967 Protocol for international protection (Goodwin-Gill & McAdam, 2007). These instruments give foreigners a status of refugee and with that rights to move across territories and how to be treated. The state is obliged to assure that the rights of the refugee are met (Cushman, 2012).

The emergence of a crisis point in Europe is perceived from different perspectives. Some has been describing the trend of migration as “The Global Migration Crisis” raising a sense of threat (Weiner, in Ibrahim, 2005, p. 167). Currently, Europe is struggling with the influx of migration (see fig. 1). Recent years more than a million migrants and refugees has crossed into Europe (BBC, 2016). It influences the way migration is rendered when the police and the EU department of the Foreign Affairs Council have a prominent role in the regulation of migration. Immigrants, asylum seekers and refugees are evoked as a problem of security (Ibrahim, 2005). “It is argued that the migration crisis point has emerged because ‘irregular migrants’ are seen as both a security threat to the EU as a life threatened and in need of protection. This leads to paradoxical situations whereby humanitarian policies and practices exposes these kind of migrants to often dehumanizing and sometimes lethal border security mechanisms.” (Vaughan-Williams, 2015, p. 1). Immigration have made societies more socially, ethnically and linguistically diverse. Many people share the perspective of seeing this development as a enrichment of economy, culture and also socially. Others perceive the change negatively and as a cost. Recently many European countries saw an increased support for anti-immigration parties, such as in Austria, France, Greece, Italy, Hungary, the Netherlands, Sweden and the UK (Geddes & Scholten, 2016). There always has been migration, but through shifts of perception a crisis point has emerged. For instance, in the 1950s and 1960s it has been perceived positively by countries such as France, Germany and the Netherlands that used a policy promoting migration to fulfil jobs (Ibrahim, 2005; Geddes & Scholten, 2016). In 1980s, state policies started to categories the migration as ‘illegal’ and ‘irregular’. This phase is associated with the common EU migration policy operating since the 1990s. This was subsequently tested by the great numbers of movements of people towards Europe that lead the EU asylum, migration and border control system into crisis (Geddes & Scholten, 2016) (see fig. 3 and 4). In the last decades the concept of security has changes and as a result migration has been more often described in terms of security. Organization and states that are concerned with migration shifted their focus from human rights to security and control. The concept of ‘human security’ recentres the place of the individual instead of that of the state (Ibrahim 2005; Betts, 2008). In the act of migration, the population that is at risks are migrants

who cross borders to flee from war or hunger or else. However, the 'human centred' concept neglects this and sees migrants as threatening to the population of the receiving country. This is a paradox of this concept that can be seen in various developments, wherein the vulnerability of migrants' is increased instead of supporting protection of the risks they are exposed to. It raises a moral question whose 'human security' to protect first, the citizen or the migrant (Ibrahim, 2005)?

mi-grant	is any person who is moving or has moved across an international border or within a State away from his or her residence, regardless of the person's legal status; whether the movement is voluntary or involuntary; what causes for the movement are; what the length of the stay is (IOM, n.d.)
re-fu-gee	is a term with a content verifiable according to principles of general international law. According to the 1951 Convention refugees includes individuals recognised owing to a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinions, is outside the country of his nationality and is unable to avail himself of the protection of that country (Goodwin-Gill & McAdams, 2007; IOM, n.d.)
as-y-lum see-ker	are individuals who have lodged an application for protection on the basis of the Refugee Convention and whose claims for refugee status has not yet been determined. In the case of a negative decision, the person must leave the country and may be expelled (Goodwin-Gill & McAdams, 2007; UNHCR, n.d.; IOM, n.d.)
ir-re-gu-lar mo-bi-li-ty	is term that does not a clear or universally accepted definition. It is movement that takes place outside the regulatory norms of the sending, transit or receiving countries. From the perspective of destination countries it is entry, stay or work in a country without the necessary authorization or documents required under immigration regulations. From the perspective of the sending country, the irregularity can be seen in cases in which a person crosses an international boundary without a valid passport or travel document or does not fulfil the administrative requirements for leaving the country (IOM, n.d.)

fig. 2 a little dictionary of a few categories in migration



legend

- - - (flow of) mobility
- (area of) immobility
- ✈ air flow
- 🚢 sea flow
- ⚡ land flow
- 🇸🇰 strict borders
- 🌟 hotspots
- informal places

fig. 5 irregular mobility to Europe
 (IOM, UNHCR, & National Authorities, 2017; Europol, n.d.; Migreurop, 2016)
 drawing by author

1.1.2 information needs in immobility

Refugees taking the European journey experience periods of immobility and waiting (see fig. 5). The securization of undocumented migration leads to longer fragmented journeys. Migrants often find themselves stuck in transit countries in front of strict border controls until they reach illegal entry into Europe (Dowd, 2008). In moving through migrations, people experience periods of mobility and immobility, moving and waiting. Of interest here is the so-called “velocity of travel”, a term by Schapendonk which is essentially the speed at which one travels through different stages of the journey. Migration trajectories are not only about mobility, but also about the periods of rest, reorientation and (un)expected and (un)intended temporary or long-term settlement (Schapendonk, in Hagen-Zanker & Mallett, 2017). One respondent described travelling from Greece to Germany by trains in two days, a trip that could be described as a super-deluxe journey. Other did much of the same journey through the Balkans on foot or bike and with public transport and private cards, often taking weeks. It is less obvious that the velocity of the migrant’s trajectory is also determined by what happens in between travelling stages. These periods of (in)voluntary immobility can be extremely important, this is when migrants meet new people, gather further information and have new experience that could shape future further travelling (Zanker & Mallett, 2016). Terms such as ‘stranded migrants’ and ‘fragmented migration’ are key elements of migration (Collyer, 2007), and others such as ‘migration hub’ and ‘transit countries’ serve as major transfer destinations for migration movements (Chetail & Braeunlich, 2013). Although circumstances and needs differ individually, a determining factor in the trajectory of refugees is the period they have been in a place (Better Place Lab, 2016).

Migrants in immobility are at risk of being vulnerable for exploitation and abuse due to invisibility and exclusion (Chetail & Braeunlich, 2013). Amnesty International states that “those who lack official status and the protection of the law are often denied to the right to education, health and housing services and are condemned to live and work in appalling and degrading conditions” (2008, p. 4). Irregular migration is a process that is dynamic wherein circumstances can change drastically (Betts, 2008). When people run out of money and are fleeing, they find themselves in desperate situation and are then an easy target for criminal groups. For that reason, refugees can experience dangers and suffering during their journey such as death, theft, violence and hunger (Rijken, 2016; Dowd, 2008; UNHCR, 2017). Irrespective of the reasons why a person is migrating, during the process of immobility threats to human rights may appear.

In these moments of immobility reliable information that could give access to mobility of the following trajectory is of great importance. For migrants in immobility is accessibility to mobility a crucial factor. A small minority may be in possession of visas for Europe and can travel for the price of a plane ticket. For others without visas, smuggling routes cost many times more than a direct travel. The access to financial capital determines the potential destination (Van Hear, in Collyer, 2007). For most potential migrants, paying smugglers by direct air or overland routes are unrealistic options, although have sufficient money to make the journey themselves. Those are the people whose journey are increasingly fragmented as they stop to collect money for onward travel. It is often the case that the journey is not entirely planned in advance, but contains of stages that are determined by limitations of collecting resources and options for further future travelling. It has been argued that poverty is an important cause of transit migration (Barros et al., in Collyer, 2007). Financial capital may be a key factor that relates to the vulnerability the migrant is in (Collyer, 2007). Transit migration is a chaotic process with extreme uncertainty and material discomfort or danger at every stage. It is perhaps because of this that social networks are of great importance. Economic and social resources, as well as the capability to access key knowledge may greatly affect the migration experience (Collyer, 2010). Some parts of the journey are beyond migrants’ control as a result of action of others, but primary reasons of migrants being in transit is mainly border controls and lack documentation and/or resources (Dowd, 2008; Zanker & Mallett, 2016). Collecting resources for further travelling raises a great need of useful information. Information affects the probabilities available to an individual making a decision (Rogers, 1986). Having access to reliable information is of great importance to refugees to allow them to be independent, seek for what they need and avoid exploitation (Better Place Lab, 2016).



fig. 6 Syrian refugees on the streets of Izmir in Turkey
(Martins, 2015)
edited by author



fig. 7 a Red Cross billboard giving information on services at Gevgelija transit camp in Macedonia (Haga, 2016)
 edited by author

1.2 problem statement

The journey for refugees fleeing to Europe is often dangerous in the context of the ongoing migration crisis. Especially refugees whose journey is long and contains of various stages are vulnerable for human right violations. A determining factor of the trajectory for refugees is the period of immobility. Access to mobility to the following trajectory becomes crucial. There is an inequality of accessibility in mobility that is determined by financial resources, social contacts and knowledge. Refugees in immobility are of great need of reliable information in order to seek for what they need for collecting resources and avoid dangers.

1.3 project objective

The objective of the research is to gain an insight in the information processes used by refugees approaching economic, social and knowledge resources in immobility. It aims to an insight of the meaning of “information” and new forms of communications emerged through technology that are used by refugees. Also aims to the understanding of the trajectory and forms of communication refugees depend on, actors that facilitate these and difficulties causing uninformative. The objective of the design assignment is to ease the process of information-seeking for resource collecting by refugees while being in immobility. In other words, the objective of the study is to investigate information processes used by refugees approaching economic, social and knowledge resources in immobility in their European journey and how to redesign in information flows easing resource collecting.

1.4 research question

RQ What are information processes used by refugees approaching economic, social and knowledge resources while being in immobility fleeing to Europe and how to redesign in information flows easing resource collecting?

sq 1 What is information?

sq 2 What type of ICT use shapes irregular mobility?

sq 3 What is the spatial structure of refugees approaching resources?

sq 4 What are local (spatial) forms of information refugees depend on?

sq 5 What are actors that facilitate information flows for refugees?

1.5 methodology

The study draws upon theoretical research wherein is sought after insights in the meaning of various forms of “information” in irregular mobility. Through literature is the term “information” and “information process” studied in academic writing in the information field. Then the study focuses on information in irregular mobility and more specifically on the emergence of new forms of communication through technology. The way type of Information Communication Technology (ICT) shapes irregular mobility is investigated with literature and documentary analysis. In academic writing in the ICT field is studied what the term ICT contains. A theory from authors Ros, González, Marín and Sow is looked into that conceptualizes ICT use in irregular migration and empirical surveys in the migration field describing ICT use in the organization of migration. Reports from non-profit organisations and articles in investigated journalism show the ICT use by refugees derived from field studies such as UNHCR, GSMA and Better Place Lab. Findings are summarized and concluded into a theoretical framework that structures further research.

In analytical research is looked into the structure of information-seeking for resources and local forms of information refugees depend on. Therefore is chosen for the method of an exploratory in-depth case study. The case study is conducted in Greece, in the capital Athens and a village Katsikas in the North (see fig. 9). Greece is a problematic case in the context of the ongoing migration crisis. Many migrants finds themselves stuck in dangerous situations, a large part of them ends up in Athens and others are spread over the country in smaller sized areas. Both cases are areas where refugees spend a period of immobility with the present of possible dangers. The cases are opposite in the terms of information flows; while Athens has many existing flows is Katsikas isolated between a mountain landscape (see fig. 10 and 11). The cases are studied through a field trip to Athens and Katsikas that results in empirical findings which are subsequently mapped and analysed in order to research local information processes used by refugees. During the field trip is empirical research conducted through working in distribution places in Athens and Katsikas, wherein observations and information conversations lead to insights in the use of information flows. These results about local information processes are mapped analysing the structure of resource seeking movement by refugees and secondly forms of information and its providers. These maps are framed into an conclusion that establishes a ground for the proposal.

Design principles are proposed that draws upon the theoretical and empirical framework giving recommendations in redesigning in information flows that eases economic, social and knowledge resource collecting. The principles are shown and tested in designs in the case of Athens and of Katsikas that are opposite in their context of information flows.

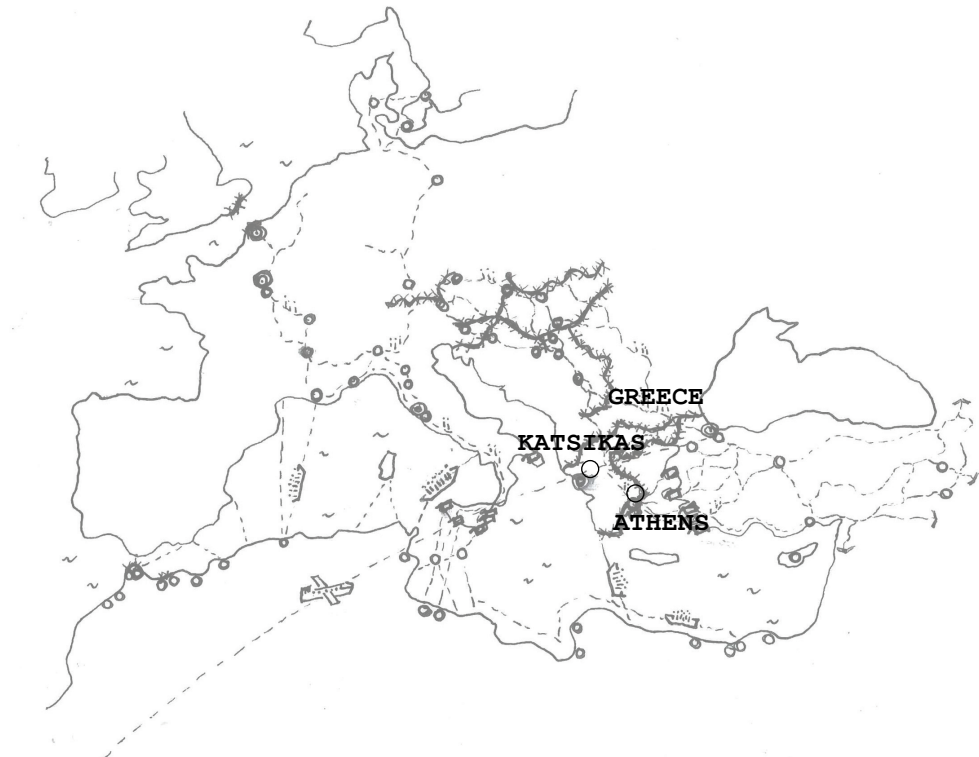


fig. 9 locality of cases
drawing by author

[questions]

RQ:

What are information processes used by refugees approaching economic, social and knowledge resources while being in immobility fleeing to Europe and how to redesign in information flows easing resource collecting?

II. THEORY

III. ANALYSIS

sq 1:
What is information?

sq 2:
What type of ICT use shapes irregular mobility?

sq 3:
What is the spatial structure of refugees approaching resources?

sq 4:
What local (spatial) forms of information depend refugees on?

sq 5:
What are actors that facilitate information flows for refugees?

[methods]

literature study
academic writing in information field

literature study
academic writing in ICT field

exploratory in-depth case study
Athens and Katsikas

field trip
Athens and Katsikas

theory ICT use in irregular migration context in migration study

empirical surveys ICT use in irregular migration context in migration study

documentary analysis reports non-profit organisations in field studies

articles investigated journalism reports from the field

map analysis
Athens

Katsikas

map analysis
Athens

Katsikas

actor analysis
Athens

Katsikas

[products]

• **paper**

• **theoretical framework**

• **maps**

• **empirical framework**

• **maps**

• **maps**

IV. PROPOSAL

[end product]

• **PRINCIPLES**
for redesigning in information flows that eases economic, social and knowledge resource collecting

• **DESIGN**
principles illustrated in Athens and Katsikas

fig. 8 table methodology of the study
table by author



fig. 10 impression of information flows on street level in Athens
(Athens Walker, 2012)
edited by author



fig. 11 impression of information flows on srteet level in Katsikas
(Google Earth, 2018)
edited by author

1.6 relevance

Refugees that are in immobility in their journey fleeing to Europe are isolated from society. Being excluded puts them in a vulnerable position for dangers by criminal groups or basic human needs and rights. It is relevant to study ways to support the vulnerable group of refugees in these situations. Reliability of information flows in irregular migration processes are crucial for their experience and vulnerability. The role of information in irregular migration is not always paid attention to in (migration) policies and by actors giving refugee support. Knowledge on how support could be given through information flows is of value here, or otherwise the role and impact of other actors that facilitate important information to refugees and their interests of providing. Support through reliable information has the potential of being an affordable form of help effecting self-organization and reliance with informative decision-making for refugees. For that reason it is relevant to contribute to this by exploring information use and facilitation in irregular mobility.

In terms of scientific relevance, it is written that there is a lack of knowledge on the ways information communication processes shape irregular migration. By shifts in information-seeking through the emergence of affordable ICTs or by other forms of communication that impact movement and decision-making for the trajectory. It is relevant to contribute to the existing lack by exploring these processes.

migration network of interconnection

shifts in the journey of irregular mobility due to access of information through telecommunication

key words – irregular mobility, ICT, type of use, migration information networks

abstract - The emergence of affordable ICT changes the way irregular mobility is organized towards more informative decision-making and self-organization. Often ‘irregular’ migrants experience long and fragmented journeys with high risks and find themselves in situations beneath human rights. ICTs gives these migrants an interconnection with their social network worldwide and in that way extends their opportunities such as economic resources and valid knowledge. New communication technologies are a key aspect in migration, though often paid little attention to in policies. There is a lack of knowledge of the ways information telecommunication flows shape the movements of people around the world. The purpose of this paper is to study the role of ICT in the ‘irregular’ migration context and the type of use. The chapter concludes on a conceptual theory of information migration networks and looks into empirical surveys. Through documentary analysis is gives an overview of type of telecommunications that is used in irregular mobility. Networks of information emerge at the need of communication and is renewed by interaction.

2.1 introduction

Hekmatullah, a 32-year old Afghan, sometimes stands for the choice between food and connectivity. He says, sitting in a dirty tent in the Oinofyta migrants camp near Athens, “I need to stay in touch with my wife back home.” The local Wi-Fi works rarely, thus he bought mobile phone credit. That means that he and his travellers, his sisters, a friend and five children, sometimes go hungry (Economist, 2017). According to UNHCR such stories are common in migrant camps. Many migrants view access to a mobile phone and the Internet as being as critical as their safety and security as food, water and shelter (2016). Maps with directions to border crossings, weather reports, language translators to help migrants to communicate with volunteers and locals, and social media helps them to share reliable information with one another. Bassem, a young man from Syria, describes: “Without my smartphone I wouldn’t have made it to Germany.” (The Guardian, 2017). In a camp near the French city of Dunkirk, migrant walk for miles to find free Wi-Fi (Economist, 2017). The importance of ICT tools in the migration trajectory is increasingly recognized in development and policies.

Long dangerous fragmented journeys have become a common feature in global migration. The increased securitization of the access of European territory gives migrants the motive to travel overland. However, the increased importance of fragmented forms of migration is also associated with developments in technology and communications. There are structural changes in the organization of migration that require rethinking of ways of giving protection to irregular migrants. Lengthy overland migration depend on the availability of the necessary communications and other technologies that facilitate mobility (Collyer, 2010). Instead of being depended on international smugglers, technological development gives the possibility for small-scale organizations. Migrants are able to organise their journeys and remain in contact with family at home for relatively low costs (Alioua, in Collyer, 2007). Their journeys would be impossible without cheap mobile communications, such as mobile phones and e-mail access. These information communication technologies (ICT) provide knowledge quickly and maintain links between people on the move. International money transfers secure migrants with a lifeline to home, or people elsewhere. For a few cents can migrants access internet and check email accounts. This technological infrastructure provides the support for migrants to organise their own journeys (Collyer, 2007).

information as...

“signal transmission”
Shannon in information theory
“filled with a content”
Bar-Hillel
“books as physical objects”
historical bibliography
“patterns population or objects”
statistical analysis
“not physical expressed in a form”
Rogers

fig. 12 table of “information” understandings table by author

New communication technologies are a key aspect in migration, though migration

policies do not consider information and communication flows as an area of action (Ros, González, Marín, & Sow, 2007). One of the main first questions migrants ask once they arrive in one of the locations in Europe is: “Where is Wi-Fi?” (Jump, 2015; Cernigoi, 2017; Latonero, 2016). The importance of such ICTs in the development process is shown by the willingness of the poor to pay for service (Grace, et al., 2004). For refugees and migrants that move across borders, internet access is a lifeline as critical as food, water and shelter. Wi-Fi hotspots offer the means to find safe routes, receive money transfers and contact missing family members or friends (Cernigoi, 2017). Phones, social media, mobile apps, online maps, messaging, translation websites, wire money transfers, cell phone charging stations, and Wi-Fi have created a new infrastructure for movement as critical as roads or railways (Latonero, 2016). There is a lack of knowledge of the ways information telecommunication flows shape irregular movements of people around the world.

This paper looks into the role of ICT in irregular migration and the type of telecommunications approached. This leads to the following research question: What type of ICT use shapes irregular mobility? The paper is structured in such a way that it first investigates the meaning of information and ICT. Then researches the role of ICTs in irregular mobility by a conceptual theory from authors Ros, González, Marín and Sow and looks into empirical surveys in Africa, India and Greece. This is followed by an overview of type of telecommunications use by irregular migrants arrived from documentary analysis of fieldworkers.

2.2 understanding ICT

The term “information” appears in many understandings. We live in an information soaked existence, it is in our lives through television, radio, books, and the Internet (Floridi, 2010). But what is information? The word “information” occurs in many forms and has many meanings. Information plays a key role in the ways we understand, model and transform reality, with its related concepts like computation, data, communication, etc. (Floridi, 2004). Current notions of information can be traced back to Claude Shannon (Casegrande, 1999). Information has been given different meanings by various writers in the field of information theory. It is hardly expected that one concept of information would cover the numerous possible applications (Shannon, in Floridi, 2010). Information in the sense of mathematics of signal transmission associated with Shannon and Weaver is different than the understanding of it with a content such as Bar-Hillel; as the historical bibliography that studies books as physical objects; and statistical analysis that identifies patterns in populations of objects (Buckland, 1991). According to Rogers, information itself lacks of physical existence of its own and it can only be expressed in a material form (such as ink on paper) or in an energy form (such as electrical impulses) (1986). If a thing can be touched or measured directly, it is physical, information expressed in such a form falls within the categories of Buckland possibly as “information-as-thing”, such as data and documents. The intention may be that user becomes informed (category “information-as-process”) and that there will be knowledge gained (category “information-as-knowledge”). In this distinction what is handled and operated upon, stored and retrieved, is physical information. Beliefs, opinions and knowledge are subjective and conceptual. For that reason, to communicate them, they have to be expressed in some physical way, in the form of a signal, text or communication (1991) Here, the term “information is understood as a message that is filled with content and “information process” as an user that becomes informed by some thing communicating.

Information and Communication Technologies (ICT) is another term that is universally not understood in the same meaning. ICTs are driving forces in developments in the current society (Floridi 2010; Ros et al., 2007; Hamel, 2009). It powers social and organization networks in ways that allow endless expansion, because it does not stop at the border of states (Castlles, 2009). In this paper ICT refers to the technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies: the Internet, wireless networks, phones, and other communication mediums (TechTerms, 2010). ICTs are tool that facilitate the production, transmission, and processing of information (Floridi, 2010). Communication processes are facilitated and sustained by a network of individuals, institutions, and technologies that provide the mechanisms for formulating, exchanging and interpretation information, and the necessary linkages between these activities (García, 2002). The concept of interconnection refers to the mechanisms which facilitate communication between people regardless of where they are (Ros et al., 2007).

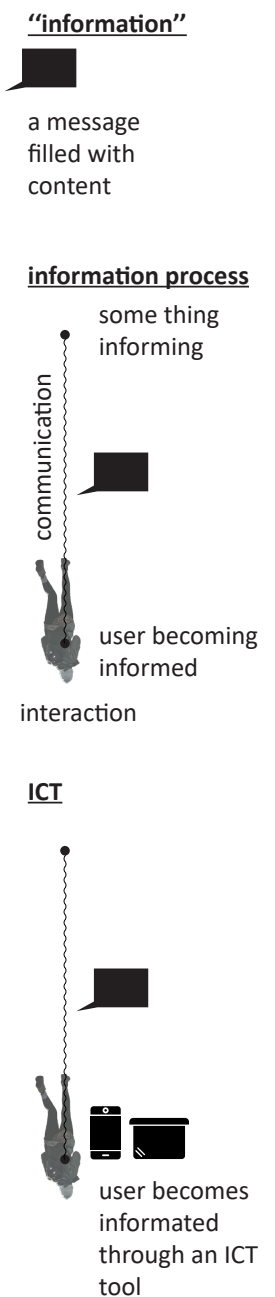


fig. 13 understanding of terms “information” and “information process” and “ICT” (Architecture People, 2018) edited by author

2.3 role of ICTs in irregular mobility

A theory conducted by the authors Ros, González, Marín and Sow conceptualizes the ICT network in irregular mobility. Before this is elucidated, is looked into another theory by Castells that considers the approach of networks in telecommunications forming urbanism. It states that our understanding of contemporary urbanization should start with the study of networking dynamics and proposes a theory of urbanism based on the distinction of areas of “places” and “flows”. Cities form their onset communication systems, increasing the chances of communication through physical contiguity, these areas Castells calls “areas of places”. On the other hand, communication processes take also place at a distance through transportation and messaging. The development of electronics-based digital communication, advanced telecommunication networks, information systems, and computerized transportation that transformed the spatiality of social interaction. This new form of spatiality gives Castles the name of “areas of flows”. This involves the production, transmission and processing of flows of information. The decision-making process takes place in the location of advanced services, linked to a network of decision implementation. What is fundamentally new is that these nodes interact globally, instantly or at chosen times throughout the planet. This spatial architecture explains the concentration of some metropolitan places and network diffusions. Infrastructure of communication develops because there is something to communicate and is a functional need that calls the development of infrastructures (2010).

The concept of “migration information network” addresses the ICT network in irregular mobility. It takes into account not only the migrants themselves, but also the dynamic relationships that they maintain within larger wholes and technologies (networks as well) that expand this migrant network. A network is made up of a set of nodes that are interconnected by links. These links are continuously renewed through interaction between individuals who are part of the network (Hily et al., Colin, Karensenti, & Calonne, in Ros et al., 2007). The network concept provides insights into the migration process because it allows combining two central aspects: the multilayered contexts that characterize the migration networks that is different in kind (political, economic, social, cultural) and scale (micro, mesa, macro); and the multi-directional interactions of migrants within these networks (Hily et al., Colin, Karensenti, & Calonne, in Ros et al., 2007). Migrants have the necessity for communication and the emerged telecommunication flows provide this interconnection. They need to use technology for their travel, to keep in contact, send money home or receive it from home, get information on the societies. It enables them to: read in their own language and thus have an easier access to information; keep up to date with events; supports them in the struggle against discrimination; helps to receive information on regularisation such as procedures, jobs or housing; and removes distances and constitutes virtual communities (2007). As Hamel similarly says, ICTs have not replaced older forms of communication but they have greatly increased the range of available option for communications (2009). Migration information networks are formed by the need for communications through telecommunication flows and these networks migrate themselves as well (Tilly, in Ros et al., 2007).

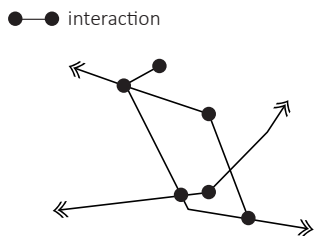


fig. 14 migration information network of nodes and links drawing by author

The theory also proposes new elements for analysis of migration processes. One, is the proposal of the analysis of flows by the use of the categories of from Held from a transnational perspective in order to understand how communication and information flows are changing the nature migration flows. Migration transnationalism theories deal with the maintenance of cross-border relationships and explain the economic, social and political impact that these interconnection cause. Held points out that the “extensiveness”, “intensity” and “velocity” networks and connections are dimensions or patterns of transformations. The rapid development of technology infrastructure has had an effect on the “extensiveness” of flows, the spread has shaped a different map. The availability and accessibility of ICTs facilitates a great number of everyday contacts, which changed the “intensity” of communication and has drawn a new map in migration processes. The increasing “velocity” of communication and information flows is a new source of migrants that gives constant information to prepare migration projects. Then, secondly, the inclusion of interconnection in migration processes entails that actors who shape and help them with communication and information flows and networks should be considered as new migration agents. Following this logic, migrants agents are technology providers such as mobile phones and transport companies, internet café owners and employees, migration webmasters, formal and informal information providers and remittances bank intermediaries. The first migrants develop interconnected nodes that provide information to other migrants about several country destinations or facilities for findings jobs or accommodation. Previously, these networks did not exist to this extend and with this structure of international nodes. The properties of information flows such as speed influences the flows of migrants and actors providing these

flows can be called migrant agents, these are elements that are relevant to study when analysing migration (Ros et al., 2007).

Several projects and empirical surveys are developing ICT for irregular migrants, for instance a very successful project in India built Migration Information Centres that functions as information points for migrants. These centres were run by NGO offering migrants work information on for example job opportunities and conditions. This in order to assist them in their migration experience and aiming to reduce the risks they face, such as uncertainty in work finding. These centres are equipped with a telephone line, have access to internet, and possess an employment database wherein opportunities were registered in. By doing this, centres have effectively reduced the costs of internal migration in India and have established safety nets for migrants. It is reported that the key to their success is an appropriate sized ICT architecture and evolution techniques (Hamel, 2009). These centres in migration nodes in India offering work related information for migrants, connected through a sophisticated ICT infrastructure, was successful in assisting information and economic resource needs of migrants.

Recent research from Moppes and Schapendonk following the major regional and transcontinental migration routes of Africa and Europe has revealed that ICT services in migration is big business. The quantity of people making the journey from various corners of Africa towards African countries or Europe is substantial enough to have generated clear markets and substantive profits for services that target migrants embarking on these missions. Many of these services facilitate communication and remittances between areas of origin and destination, such as internet cafés or money transfer agencies. As their research shows, these services are not only important to migrants who have reached their final destination. These services are being used every step of the way and are serving to reduce many of the risks involved, especially with irregular international migration. Opening up doors to employment, transportation, and money transfers, services offered along the way, very often through ICTs (such as access to computers and the Internet or mobile phones), mean that migrants are for example less likely to be victims of theft since they no longer need to carry large sums of money with them to cover all expenses of their crossing. What is particular of this trend is the fact that these hubs are not only present in major cities that characterise major migration destinations and points of departure. Equipped with communications technology, smaller towns, many of which are located in rather isolated desert regions are emerging as important mid-points for regional and international migration. Offices of Western Union are present in most of these locations. The business model of the one-stop communication shop has been replicated all over Africa. Migrants are therefore able to coordinate their journey and mobilise resources by visiting small businesses that act as both internet café and telephone booths (Hamel, 2009). Along the route of irregular migration trajectories in Africa have spread networks of telecommunication flows by the emergence of small businesses.

Another project is called the Instant Network project deployed by The Vodafone Foundation in 2015 that had send equipment and staff to meet the connectivity needs of irregular migrants that arrived on the shores of Greece. The Instant Network is an easily deployable kit that consists of an antenna, a foldable mast, a computer and a base transceiver station, that is all powered by a portable generator. The migrants would be best served by providing Wi-Fi, rather than just traditional mobile network based voice and connectivity services. There was also a high demand for charging services. A key finding following from this project in Greece is the need for long term sustainable forms of this type of services that can pick up emergency projects like Instant Network (GSMA, 2017).

2.4 type of telecommunications use

Having access to telecommunications in irregular mobility varies per individual. Smartphone ownership is widespread among refugees, those originating from Syria is it almost universal. Most of these devices are Android phones. Refugees from less prosperous countries such as Afghanistan do not always own a smartphone, some have a older type of phone. The ownership of smartphones is best understood in terms of a household. In many cases a family shared one device, which is commonly kept by the male against the case of theft, but also used by other family members. Empirical findings in field studies shows that children and younger family members are often the most tech known and users (Better Place Lab, 2016). Access to the use of their smartphone depends on the resources available to them at different moments, for instance to buy a local SIM card. Connectivity involves the issue of access, usage and affordability of ICTs, ranging from a mobile and SIM card ownership to charging facilities. In the European context,






message	type of telecommunications	required ICTs
socialise	social media messaging apps	 smartphone with charged battery, prepaid phone data plans or Wi-Fi, social media account
socialise	text message and voice call	 (smart)phone with charged battery, local SIM card
navigation	Google Maps and GPS	 smartphone with charged battery, prepaid phone data plans or Wi-Fi
local understanding	Google Translate	 smartphone with charged battery, prepaid phone data plans or Wi-Fi
money	mobile money transfer	 smartphone with charged battery, prepaid phone data plans or Wi-Fi

fig. 15 type of telecommunications used by refugees and required ICTs
 (Better Place Lab, 2016; GSMA, 2017; Danish Refugee Council, 2016)
 table by author

affordability and access to mobile phones and SIM cards are major barriers for refugees. Given that a great proportion of refugees arriving in Europe were mobile users in their home countries, it is a challenge to continue access to mobile services while refugees are on the move (GSMA, 2017). Some arrive with only a smartphone anxious to find a place to recharge it. Most people attend to access mobile network when arriving in a new country with local SIM cards. For instance on encampments in Lesbos, does Vodafone sells SIM cards with basic prepaid phone data plans for around 5 euros (Better Place Lab, 2016). The extend of migrants have ownership of a smartphone and other required ICTs for an interconnection variates.

Type of telecommunications that are populair mobile-based tools for refugees are mobile applications. These vary from aid agencies to volunteer groups that provide services for access to legal support, translation, or information about asylum processes (GMSA, 2017). Migrants and refugees on the move are using social media to collect up-to-date information on the best routes, border closures, risks and weather conditions. Many use ICT for preparation for further travelling and through the process. The availability of ICT services reflect on the demands of migrants. By sharing information on social media and using Google Maps to navigate, smartphones provide migrants and refugees with information on where to go next. Social media platforms are used at different stages of the trajectory for different purposes such as acquiring falsified passports and documents, information about the best destinations and for in transfer, costs of routes, smuggler contacts, warning about scams and closed routes. Social media provides refugees to be informed about everything before they get there, for instance they know where to connect to free Wi-Fi, where to sleep and eat, change or receive money. According to a field worker in Hungary, they know these places better than locals (Danish Refugee Council, 2016).

Information flows are often peer-to-peer, seeking for answers within their own social network rather than for instance Google it. Presumably is this an issue of trust due to previous condition where people lived in with situations of media reported in the form of propaganda. Using ICT devices mostly for direct communication with known contacts. Television and radio are limited in use for refugees in their home countries. State media are not trusted but are used for news and interpreted via prior political views. The most trusted media are refugee activists groups, volunteers of refugee aid organisations, friends, family and other refugees (GSMA, 2017).

The use of smartphone by refugees is focussed on social messaging apps. These apps conclude Facebook and WhatsApp and small numbers of people using other apps including Viber, Telegram, Twitter, Line, Skype and Wechat (Danish Refugee Council, 2016; Better Place Lab, 2016). They are using these channels to communicate with their friends and family, with people staying in the same place and others who they have been separated with (at home or refugees elsewhere) (Better Place Lab, 2016). Thereby rely refugees on social media to find out about routes and border closures, avoid police or border guards and find reliable smugglers (Danish Refugee Council, 2016). WhatsApp messages are sent one to one and in groups to people in their direct social personal network. Otherwise, Facebook is used more than a social network in which users consume public content. It is used to crowd source information, for instance refugees share maps, contacts and advice both in groups. Many suffer from health issues and require information about where they can receive medical or legal assistance. Other people are seeking for answers on what cities may provide the most security, food and shelter, language teaching or job options. On Twitter they exchange news from trusted sources, mainly by friends and family that send links to international news agencies such as BBC. However, trust in media and information is in short supply among refugees (Better Place Lab, 2016).

Other type of telecommunications that are widely used by refugees are the following. Functions such as text message and voice call are often used by refugees, because of the inability to type in Arabic or Latin letters (Better Place Lab, 2016). For refugees are their phones also a crucial tool to help them navigate their routes (GSMA, 2017). They are seen using Google Maps and global position system (GPS) to find their way crossing several countries in Europe (Schapendonk and Moppes, in Danish Refugee Council, 2016). Refugees use their mobile phones to communicate also with local people such as volunteers in refugee camps and officials by using Google Translate. It helps them to phrase question to ask locals about directions, where they can find a cheap restaurant or sleeping place, where there is access to Wi-Fi and power to charge battery. Also the service helps them to understand road signs and other informational sources (GSMA, 2017). International money transfers are another critical facility for refugees, which can be accessed more affordable and easy through a mobile phone. Those living in refugee encampments are unlikely to have permission to work and often rely on receiving remittances from family and friends elsewhere (GSMA, 2017). Being in interconnection, the three tools most used by refugees are Google Maps, Facebook and WhatsApp (Better Place Lab, 2016).

Type of ICTs that are observed to be used less frequently are for instance E-mail. Most refugees do not have an e-mail address and those who have do not check it often. Downloading new apps is not common behaviour. Some seemed to frequently surf the web accessing websites through a browser. Though, some were unfamiliar with the concept of a website and the internet. In Lesbos in interviews taken with refugees was asked why people did not use the refugeeinfo.eu service, despite their prominent boards with advertisement. Some of the asked people did not recognise refugeeinfo.eu as an URL. This connects with a broader point about information-seeking behaviour (Better Place Lab, 2016).

2.5 dangers of technology

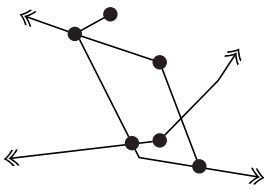
Information access through ICTs such as mobile phones have a paradoxical presence in the lives of refugees, being both a tool and a threat (Better Place Lab, 2016). Not all migrants have smartphones and virtual online lives, however Syrians tend to have the most many and best kit on the route, while Afghans, Pakistanis, Bangladeshis, Eritreans and Somalis are among the poorest and their journey are usually the slowest and toughest with little help from ICTs (McLaughlin, in Hagen-Zanker & Mallett, 2017). These capacities rely on refugees having sufficient resources to buy a SIM card in each new country in which they arrive (Better Place Lab, 2016). Thereby, a mobile phone may ensure mobility but can also get refugees in trouble (GSMA, 2017). The digital traces that refugees' phones leave behind make them vulnerable to surveillance and other dangers. Using the navigation function may compromise the refugees' safety because they are traceable by authorities (Better Place Lab, 2016). Which apps are secure and which are open to scrutiny from external organizations is movable. For instance, WhatsApp is fully encrypted, meaning only the people communicating can read the messages. Facebook Messenger also offers end-to-end encryption, but not as a default. Snapchat and text messages are not encrypted, making refugees more vulnerable for tracking. Although, even end-to-end encryption does not guarantee that the communication will stay private. A mobile phone can be seized and data is then accessible by someone else. According to studies, in the journey refugees' phones might be taken by police or guards with fatal consequences. Giving the extreme liability many migrants try to protect themselves by sticking to encrypted apps, using pseudonyms and avatars, avoiding open social media groups and changing SIM cards as often as possible, concerning about digital surveillance (MacGregor, 2018). Another factor are technical problems with smartphones. It can stop working due to some fault or is lost damaged by water as frequently occurs (Better Place Lab, 2016). Or suppliers lie about their product, for instance an SIM card that should work access Europe but stops working after a border crossing. Another problem with phones are the necessary dependence on a charged battery. One of interviewed refugees in field research reports that everyone has two or three batteries with him and a charger. Phone charging services are not always free. Another refugee states that it costed 5 euros in Macedonia to charge his battery (Open University, 2017). Various reasons can lead to refugees being offline and are depending on local information (Better Place Lab, 2016).

2.6 conclusion

The aim of this chapter is to seek an answer to the question: What type of ICT use shapes irregular mobility? In order to answer this question is it of important to establish an understanding of the many meanings of terms "information" and "information process". Information is defined as a message that is filled with content and the process is that of an user becoming informed by some thing that is communicating. ICTs are a tools that facilitates communication. The emergence of this technology has changes the way migration is organised. Writing by scholars conceptualize the emergence of ICTs in a theory about migration information networks. A network emerges at the need of communication and is renewed by interaction. It is made up of set of nodes that are interconnected by links. Nodes are areas of decision-making and these are implemented in the whole network. The theory continuous to propose properties of the information networks varying in its extensiveness, intensity and velocity. It is stated that these characteristics are important aspects in analysing migration processes. Information in the context of an existing spread network in extensiveness, intensity and velocity is of different appearance than in a network that is limited in those properties. Information processes are facilitated and sustained by a network of individuals, institution and technologies that provide necessary linkages. The concept of migration information networks also proposes that in analysis of migration it is important to note that actors who shape and help with communication and information flows should be considered as new migration agents.

migration information networks

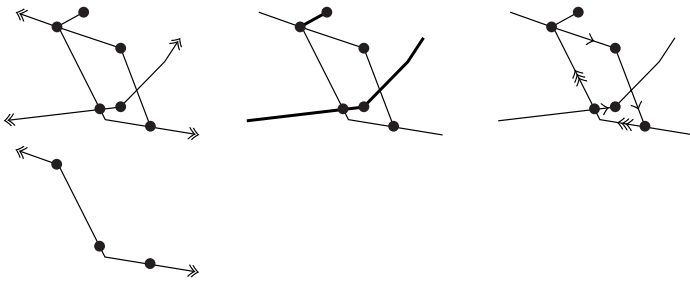
●—● interaction



● location of decision-making

┌──────────┐
decision implementation

properties

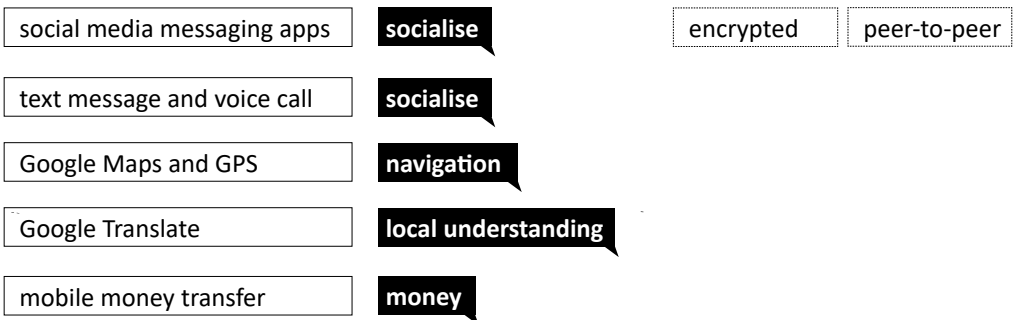


extensiveness rate

intensity rate

velocity rate

●—● type of ICT use



●—● other local forms of information

fig. 16 framework of ICT use in irregular mobility table by author

Empirical studies conducted findings on the type of telecommunications that are consulted by refugees: social media messaging apps such as Facebook and WhatsApp, text and calls, Google Maps and GPS, Google Translate and mobile money transfer. These telecommunications are used for different purposes depending on what is in need. Information flows are often peer-to-peer by reason of trust and dangers of technology use. Information access through ICTs are both a tool and a threat for refugees. The development of affordable ICTs extends options has not replaced older forms of communication. By reason of the dangers of the use of technology for refugees it is relevant that other forms of reliable information are available in an alternative spatial and social forms besides that of ICT.

Surveys of empirical work show projects implemented that provide information for migrants with use of ICTs. For instance in the form of pick up emergency projects such as the Instant Network project, a provider of interconnection using little resources. Another striking development is the emergence of information hubs facilitating ICTs along the trajectory in Africa. Similar to this development is the project of Migration Information Centres. Although this project was planned to support inland movement of migrants in information providing in their resource needs such as jobs. It was successful for its purpose by reason of having an up-to-date online database that had contact with job openings. ICT shape the organisation of irregular mobility through interaction by refugees using telecommunications and by organisations providing support in that way.

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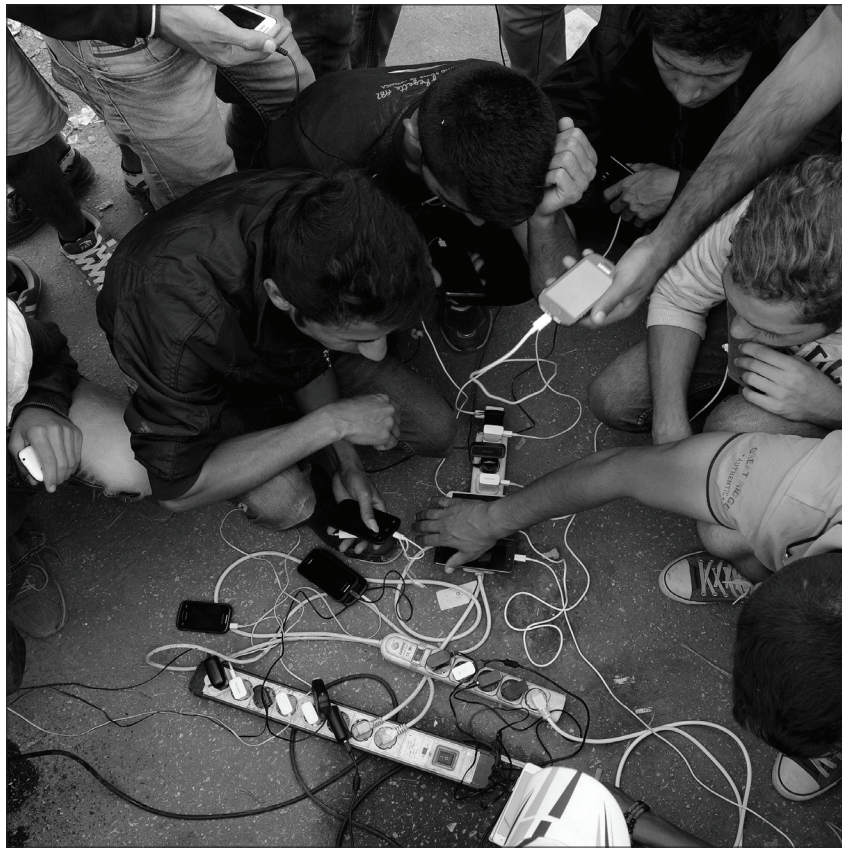


fig. 17 refugees gather around chargers uploading their phones in Lesbos
(Avramidis, 2015)
edited by author



fig. 18 refugees using social messaging apps
(Kahnert, 2016)
edited by author



legend

- immobility
- mobility
- country of origin



fig. 19 map locality of Greece in the Eastern Mediterranean trajectory
 (Bodde, 2018)
 edited by author

3 empirical framework

3.1 introduction




One of the routes fleeing to Europe is the Eastern Mediterranean route, taken by migrants originating from the Middle East, mostly originating from Syria, Iraq and Afghanistan (European Commission, 2017) (see fig. 19). Many refugees from Iraq come from the northern parts including the Kurdistan Region of Iraq. A study into the demographics of this migration flow shows that families were found to be more prevalent among the travelling groups than individuals travelling alone or with friends. People interviewed came from households that had a stable employment in the area of origin. A minority of the interviewees (38%) came from households depending on unstable labour. An increasing number of migrants are arriving without enough means to continue their journey. In general, those who are travelling from Iraq and Syria appear to have more financial resources than people from Afghanistan. Drivers of displacement are insecurity and conflict at home, the main push factors. Reported reasons for choosing to come to Europe mirror these reasons, with security and safety as the most prominent pull factor (REACH, 2015). There is a lot of variation in terms of velocity in the journey travelling through the Eastern Mediterranean route. For instance, one travels to Germany via Turkey, Greece and the Balkans around two weeks, and others spent months taking the same route (Hagen-Zanker & Mallett, 2017).

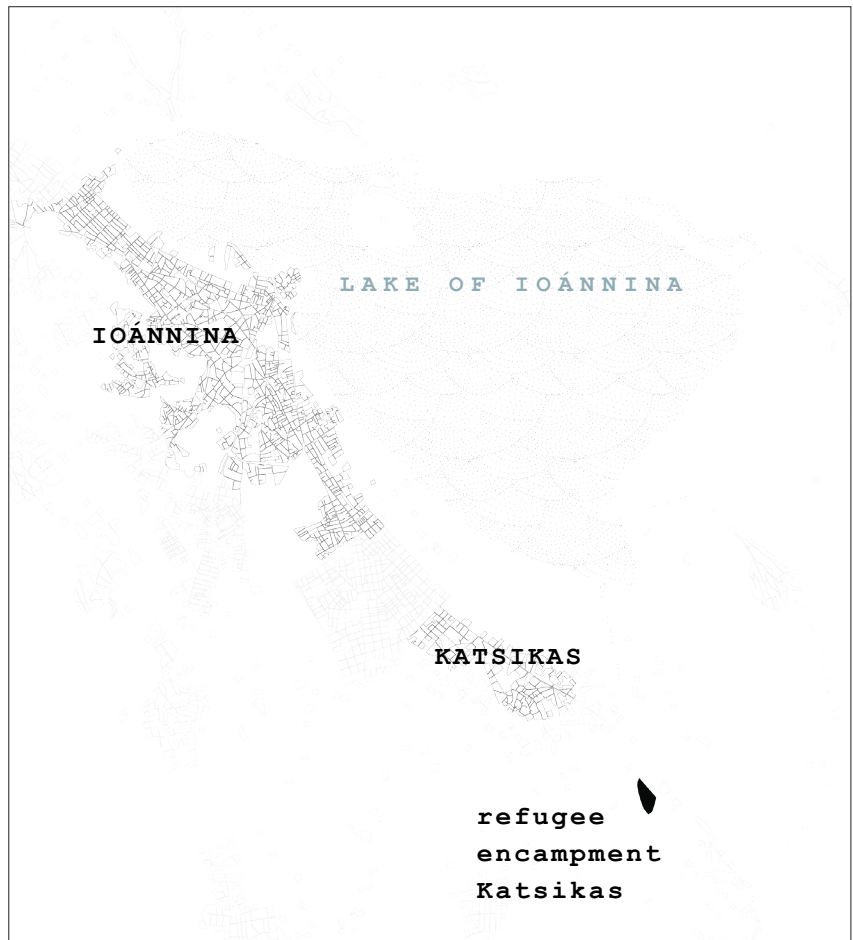
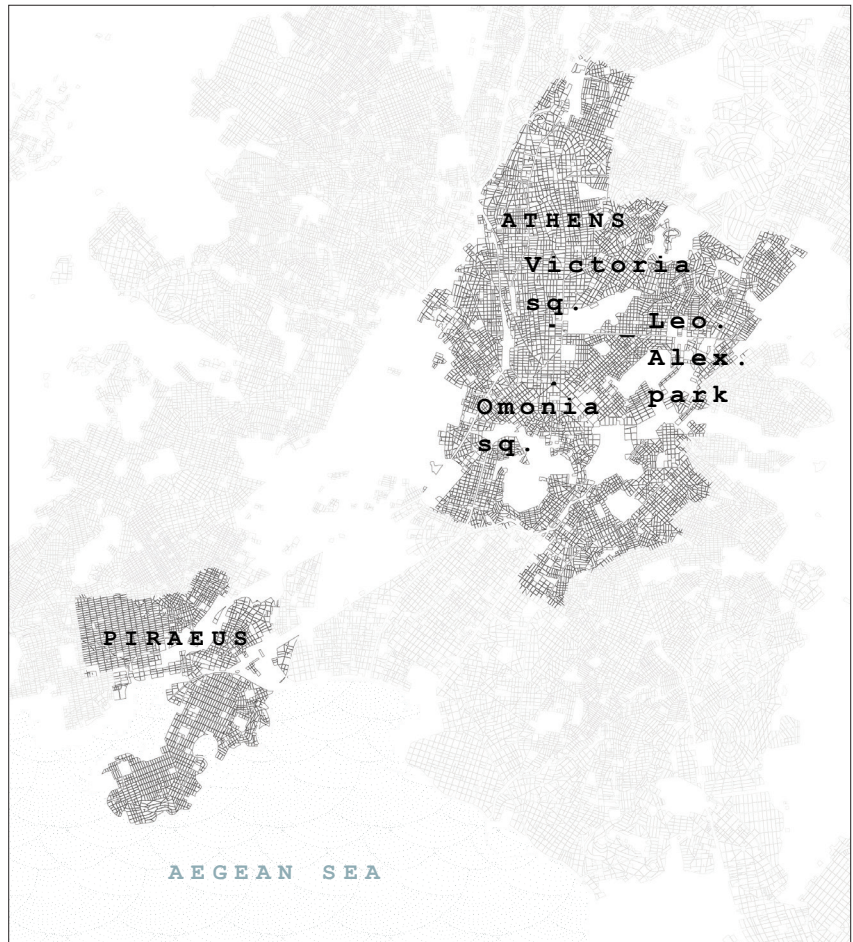
The first country where Europe is entered on the Eastern Mediterranean route is Greece. The number of "migrants present" in Greece today, documented by IOM, is 54,225, which is an extremely higher number than in other European countries (IOM, UNHCR, & National Authorities, 2018). For Greece, the refugee crisis is a period after an acute economic crisis which is still having its influences on society, through high rates of young unemployment. Integrating refugees into the labour market of the host community is a challenge that is determined by the local context. In Greece, refugees are not seeking work because they do not intend to stay and employment opportunities are scarce in the Greek economy (Better Place Lab, 2016). A field study in Greece finds that refugees in Greece stated that they planned to migrate onwards (Koser & Kuschminder, 2016). Greece does not receive any Official Development Assistance (ODA). The policy that the Greek government proposed, addressing these issues to the European Union in order to receive funding for support, is only partly fulfilled. Consequently, the EU has only given the percentage of the budget that is fulfilled. As a result, many authorities and society groups dealing with refugees are doing so with constrained resources (Better Place Lab, 2016). There is a lack of budget to support all refugees, e.g. in accommodation or other needs. UNHCR works with the Greek local authorities and NGOs to provide urban accommodation and cash assistance to refugees and asylum-seekers in Greece, funded by the European Union Civil Protection and Humanitarian Aid (UNHCR, n.d.). The arrival registration takes a long period of time in Greece and once refugees are in the procedure of getting official papers, it is not unusual for them to spend months or even years in Greece (UNHCR, 2017). The procedure starts in the identification centres where people are fingerprinted and by a set of interviews scheduled in a few months. This period is a time of waiting for refugees and being in uncertainty about the outcome (Aida, n.d.). By the reason of being excluded in that time from, for example, the job market or schools, it is a time of boredom. Areas that accommodate refugees are spread around the country (UNHCR, 2017). Encampments vary in size, form, conditions, locality and demography. To illustrate, some encampments are tents, while others are built up with containers, there might be heaters or not, bathrooms are often shared but sometimes private per household, the number of residents varies, certain areas are specifically for families and others are reserved for those refugees who are traumatized and need support for that. The encampments in the worst conditions are located on the islands, where some areas are overcrowded with too little space given and facilities (UNHCR, 2017).

The Eastern Mediterranean journey for refugees mapped shows flows of mobility and areas of immobility (see fig. 19). The capital Athens is one of the areas in Greece where many refugees find themselves in immobility. The city of Athens is located not far from the Aegean Sea, north from the harbour city Piraeus (see fig. 20). The capital counts around 3 million inhabitants (Worldatlas, n.d.) and thousands of refugees or migrants are living there on a temporary basis (IOM, 2017). The lack of accommodations to host all refugees results in many refugees not being hosted and ending up living on the streets. Some not-hosted refugees have the opportunity to rent an apartment if they have the option and financial resources. The case study of Athens focuses on the group of refugees that live on the streets, that happens at around three public spaces in the city: Victoria square, Omonia square and Leoforos Alexandras park (Help Refugees, n.d.).

Another area of immobility in Greece is an official refugee encampment in Northern

legend

-  city boundaries
-  urban areas outside the city
-  water



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fig. 20 map of Athens and Katsikas
(copernicus, 2012)
edited by author

Greece near the village Katsikas. It is located not far from that is the city of Ioánnina that finds its location along the “lake of Ioánnina” (see fig. 20). The population of the Ioánnina counts around 100.000 and the near village of Katsikas has about three thousands inhabitants (Council of Europe, 2011; Municipality of Ioánnina, 2011). The encampment is surrounded by mountains and hosts a varying number around 350 residents (Refugee Support, 2018). The accommodation has the form of containers that are designed to host one family, sharing a kitchen and bathroom. Although the encampment is meant to host families, some other groups of people share a cabin not being a family.



fig. 21 refugees in transit sleeping on the streets at Omonia square in Athens
(Epoca Libera images, 2015)
edited by author



fig. 22 refugees in transit sleeping on the streets at Victoria square in Athens
(Bicanski, 2016)
edited by author



fig. 23 refugees in transit sleeping on the streets at Leofros Alexandras park in Athens
(Smallman, 2012)
edited by author



fig. 24 refugees that are residents of the official encampment Katsikas
photo by author

3.2 information processes

In information processes is the user getting informed with a message filled with content by interaction with some thing that communicates. On the following pages are information processes mapped used by refugees while approaching economic, social and knowledge resources. Analysis are structured that it first focuses on the users as refugees collecting resource, then deals with the local forms of informing and the actors that facilitate these (see fig. 16).

3.2.1 user

For the act of collecting through the city takes information-seeking behaviour place to the localities where resources can be collected. Refugees approach other information sources for other purposes. For instance, knowledge on the route or public transport is gathered with another source than money, or contact with other migrants (see fig. 17). Besides information seeking movements to localities that offer services for the needed resources, it is significant to note that information-seeking happens also around the movement to basic human needs. The UNHCR Result Framework defines basic needs in terms of access to basic services and assistance in health, food, shelter, wash, energy, education, domestic items and specialised services for people of specific needs. In the basic needs formulated in the The UNHCR Results Framework is also long-term well being considered, including needs of protection, sustainable livelihoods and solutions (UNHCR, n.d.).

The structure of resource collecting in Athens happens around the public spaces Victoria square, Omonia square and Leofros Alexandaras park where many homeless refugees spend their daily routines around while being in immobility. On the following page is shown the available and unavailable resources and other drivers of movement in the city. Directly around the three squares are multiple functions located, such as ATMs or money transfer offices, metro and bus stops, supermarkets and cafeterias (see fig. 19). In Athens are a few distribution places that support refugees in food, drinks, clothes and recreation (City Plaza, Khora, Orange House, Hope Café). Many refugees in Athens do not meet their needs when it comes to education, health care and protection. Some distribution fill some of these gaps by offering workshops or courses. Refugees living on the streets are in need for shelter fall out of official accommodation option and do not have the money or possibility to rent an apartment. The three described main public spaces become social gathering spaces for refugees in Athens. Some of the gaps of unavailable resources are filled through ICTs, such as contact with home or knowledge on the next destination. Movement to these localities can often be walked to, or otherwise reachable with metro or bus (see fig. 20). Except the asylum services that is located far on the edge of the city.

In the refugee encampment Katsikas have most of the localities been introduced to the area since the emergence of refugee residents. Localities specifically for refugee needs such as medical assistance, protection by the army and police, a classroom and a distribution place in food, drinks and clothes. In terms of resource collecting, some of these emerged localities also offer resource options. Not far is a recreation cultural centre for refugees offering some education and entertainment of social activities. Residents of the encampment live in a cabin that is well facilitated with beds, a kitchen, toilet, bathroom and electricity. Drivers other than these that support refugees are all located in Katsikas, except one supermarket (see fig. 21). In the centre of Katsikas is a bank with an ATM. There is no available knowledge on the procedure of the refugees and for further development they need to go to Athens to the asylum service there. Due to the small size of the encampment it function as a small community and has a strong local social network, however isolated from other local residents. Movement to many localities are close to the encampment and easy to reach by foot. Others that are in the village takes 30 minutes walking, or by other transport such as by bike and bus only a few minutes (see fig. 22). There are not many public transport options because of the isolated location of the encampment. For that reason is a bus line introduced for refugees that starts at the encampment and goes to Katsikas and Ioánnina and runs a few times a day.



fig. 25 elements of information processes
(Architecture People, 2018) edited by author



fig. 26 resources and other drivers of movement
(Collyer, 2007; UNHCR, n.d.; Architecture People, 2018)
table by author





↑
N. schaal 1:10000
fig. 2 / satellite photo Amiens
(Google Earth, 2018)
edited by author

(UN) AVAILABILITY:

- ⊕ money
- ⊕ contact with home
- ⊕ other migrants
- ⊕ local people
- ⊕ route
- ⊕ public transport
- ⊕ procedure
- ⊕ next destination
- ⊕ food and drinks
- ⊗ shelter
- ⊗ clothing
- ⊗ wash
- ⊗ health
- ⊕ education
- ⊗ protection

Hope Café
⊕ ⊕

Victoria square

City Plaza

Leo. Alexander park

Orange House

Khora

Omonia square

legend

- ⊕ available economic/social/knowledge resource
- ⊗ unavailable economic/social/knowledge resource
- ⊕ available other kind of resources
- ⊗ unavailable other kind of resources

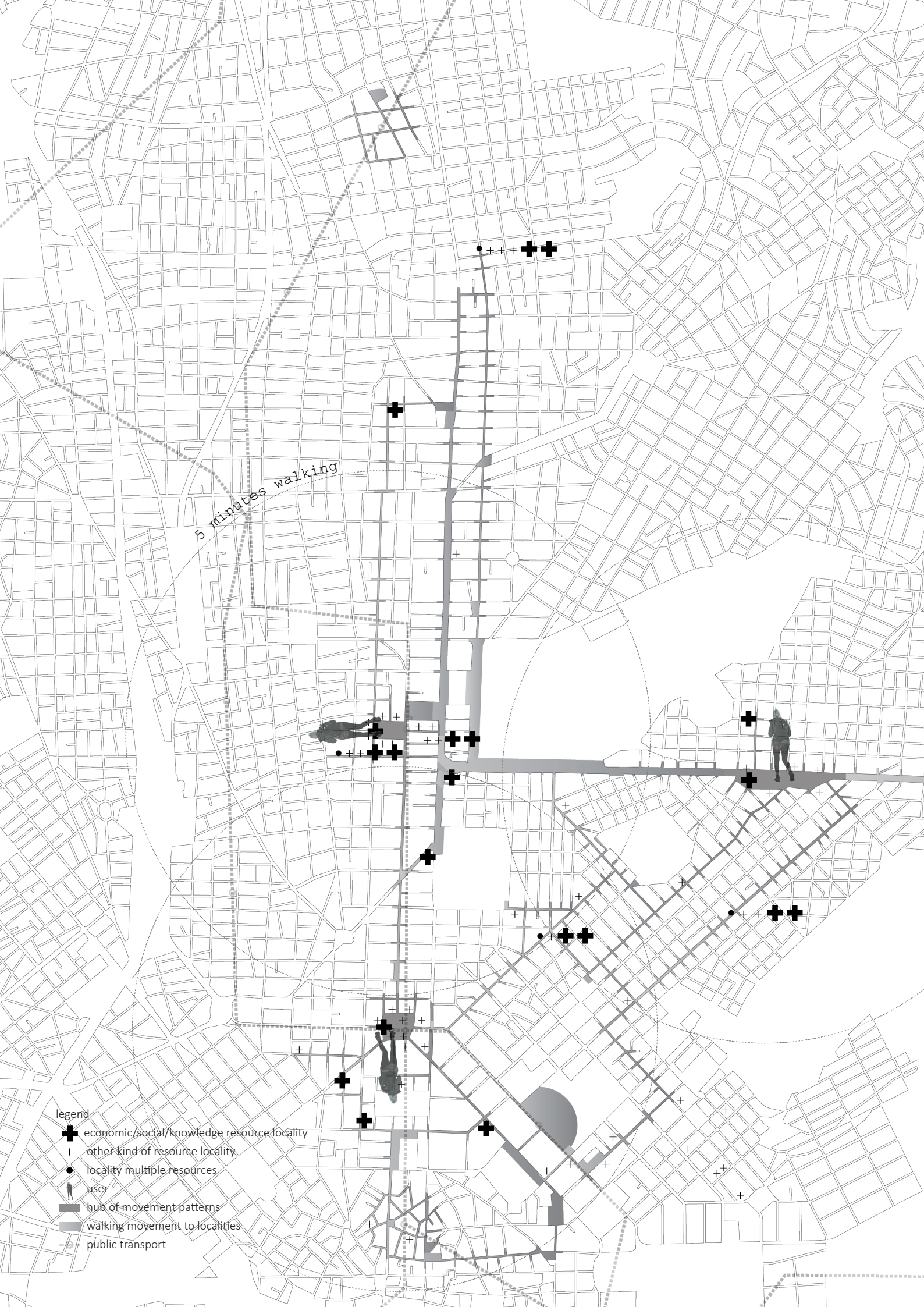


asylum service



↑
N schaal 1:10000

fig. 28 map localities of resources and other needs in Athens
drawing by author



5 minutes walking

legend

- ✚ economic/social/knowledge resource locality
- + other kind of resource locality
- locality multiple resources
- 👤 user
- ▬ hub of movement patterns
- ▬ walking movement to localities
- ⊖ public transport



↑
N schaal 1:100000

fig. 29 map information-seeking movements in Athens

(Architecture People, 2018)

drawing by author



fig. 30 distribution and accommodation place for refugees City Plaza
(Hilton, n.d.)
edited by author

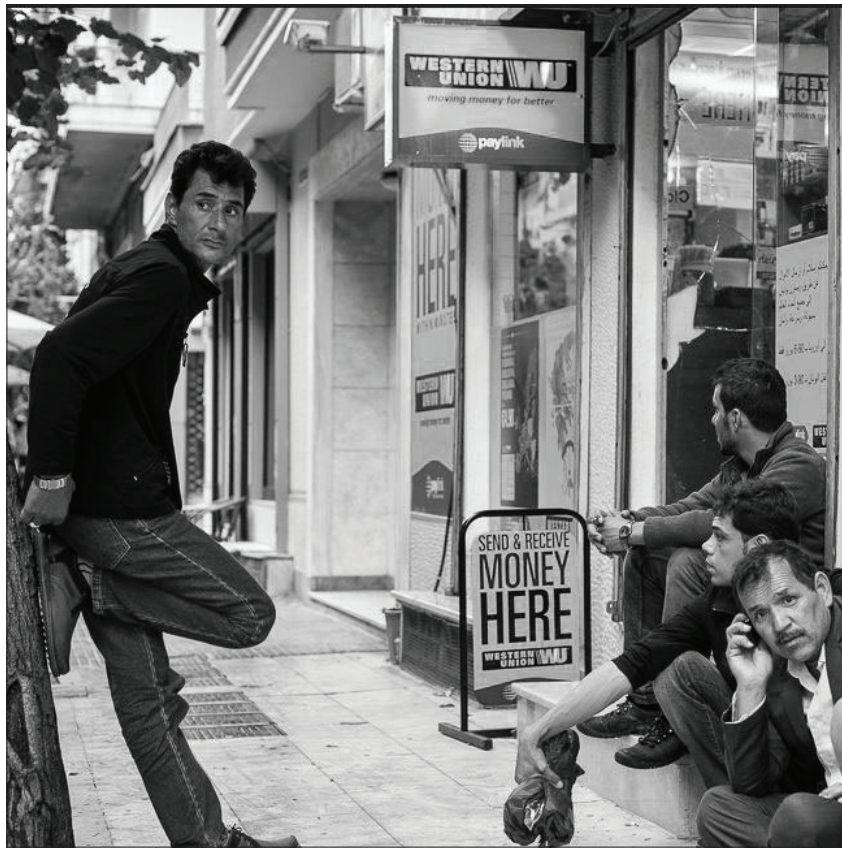


fig. 31 refugees near Victoria square waiting for money transfers to arrive from homeland
(Van Eijden, 2015)
edited by author





↑
N schaal 1:10000

fig. 28 satellite photo Katsikas
(Google Earth, 2018)
edited by author

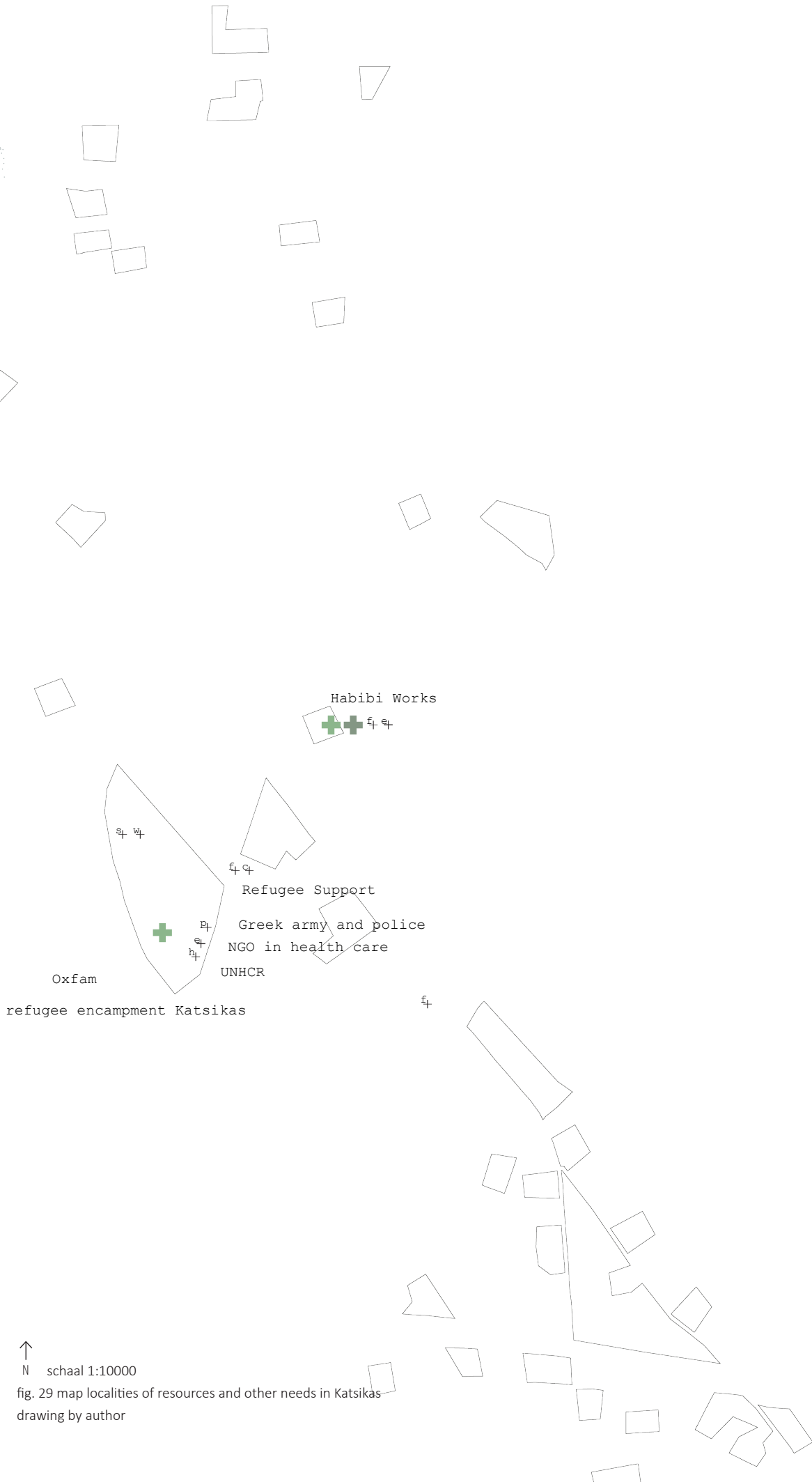
(UN) AVAILABILITY:

- ⊕ money
- ⊕ contact with home
- ⊕ other migrants
- ⊕ local people
- ⊕ route
- ⊕ public transport
- ⊕ procedure
- ⊕ next destination
- ⊕ food and drinks
- ⊕ shelter
- ⊕ clothing
- ⊕ wash
- ⊕ health
- ⊕ education
- ⊕ protection



legend

- ⊕ available economic/social/knowledge resource
- ⊕ unavailable economic/social/knowledge resource
- + available other kind of resources
- × unavailable other kind of resources
- multiple resources



↑
N schaal 1:10000

fig. 29 map localities of resources and other needs in Katsikas







drawing by author

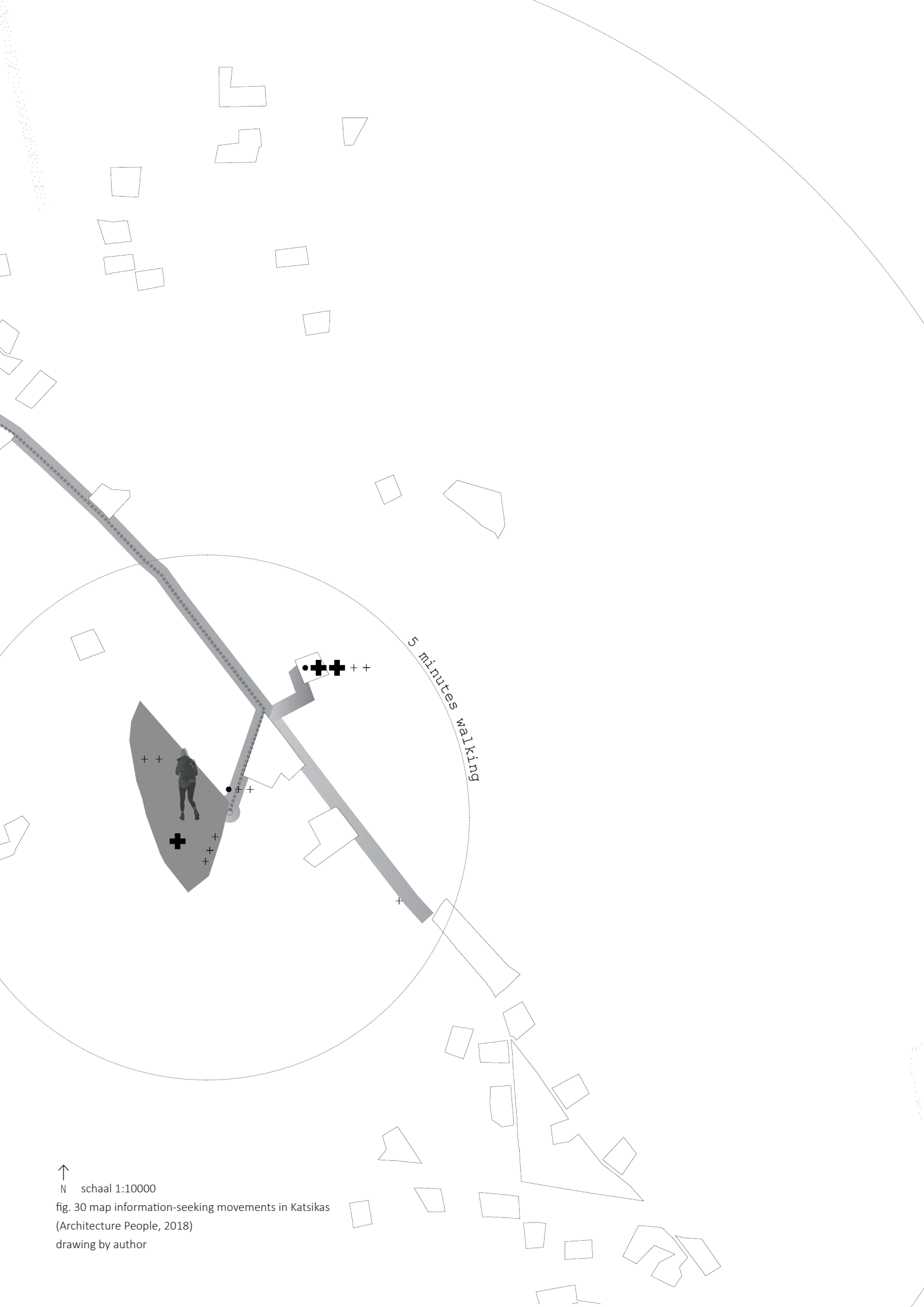


bus line to Ioannina

5 minutes cycling

legend

-  economic/social/knowledge resource locality
-  other kind of resource locality
-  user
-  walking movement to localities
-  public transport
-  -o-



↑
N schaal 1:10000

fig. 30 map information-seeking movements in Katsikas
(Architecture People, 2018)

drawing by author



fig. 31 cultural centre Habibi Works for refugees
(Hoeher, 2017)
edited by author



fig. 32 containers used by the Greek army and police and UNHCR
photo by author

3.2.2 something communicating

In information-seeking behaviour many forms of communication can be consulted in order to meet the information needs. Things that communicate can be of physical form, for instance the street plan that is part of the city structure or a sign selling a product that is offered. The urban environment communicates with its users in many elements; urban blocks, streets, etc. As are passersby in the streets that are filled with messages of information that could be communicated; residents, other travellers, migrants. Thereby are telecommunications and important form in seeking for information. Different forms of communication give other information (see fig. 33).

In the case of Athens, the environment expresses a lot of information such as in the facades (see fig. 35). It offers many different options in forms of communication because of the density of people and organisations. By reason of extensive load of information, but also a sense of continuity in the urban blocks with little striking landmarks, it is of difficulty to filter the important useful and reliable information that is needed. It might be for that reason that hubs appear where many refugees gather in the city. Elements in the urban environment such as the street structure and landmarks give information in terms of orientation and navigation, or the physical organisation of elements relating to sightlines. Except the surroundings of the public space, many localities are not within sightlines from where seeking movement patterns happen and are located with some distance. In that case it requires positive conditions for navigation. This aspect of information is for those refugees who have arrived and need to get familiar with the city; what is where and how to get there. Once refugees are more settled in the area and are familiar with the city, their information need change towards re-informing, social contact, etc. (see fig. 34). They consult forms of communication that give news on changing developments such as their procedure, situation of countries, or an apartment that became free. People that pass by are able to give all kind of information, such as for local understandings or for the need of socialising. A difficulty that appears here is the possible language barrier with local residents or other migrants from other countries. Forms of telecommunications often fill the gap of unavailable communication that could give the needed information. In the case a language barrier might appear, then is Google Translate an online tool that could be used. Also contact with home is maintained through social messaging apps.

In Katsikas is the environment limited in its information expression (see fig. 36). The encampment is accessible by one main car road. For pedestrians and cyclist in the area is this the one option to use. Forms of communication along this 80/km per hour street is focused on car speed and eye sight and thus not for the users of slower traffic that refugees take. The area offers little resource options to choose from and also to get informed by. For the reason of little availability in the area and localities of needs that have been introduced close to the camp, have new arrivals less interest in navigation information. The area is less complex to comprehend and after arrival change the information needs quickly towards needs when being settled. For refugees is Habibi Works an important locality in their daily routines and peer-to-peer information flows. Thereby takes telecommunication here an important role in filling gaps for needs with contact with home or other individuals, money transfers and information about the next trajectory or destination. One difficulties that appears in using Google Maps is that the area is not up-to-date with the current changed localities.

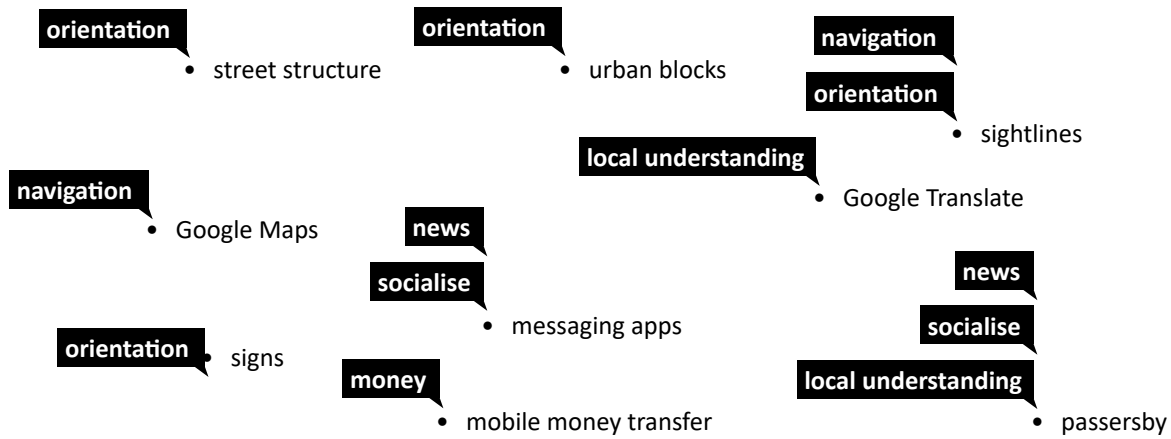


fig. 33 forms of communication and its information telling
drawing by author

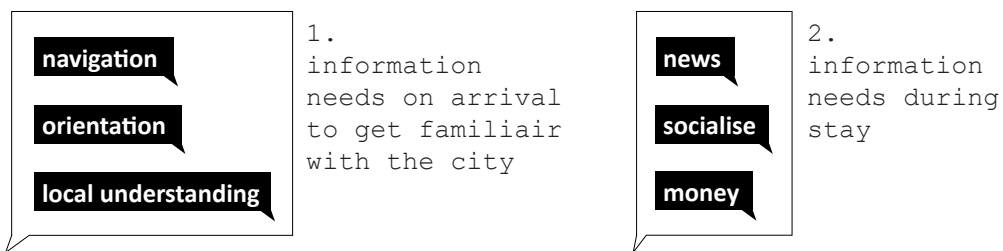
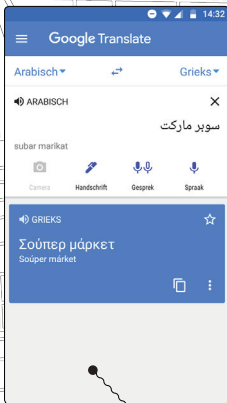
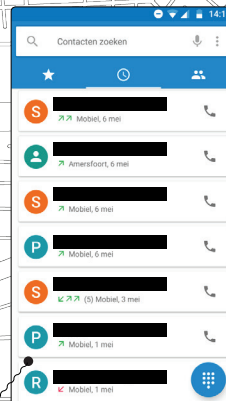


fig. 34 distinction in information needs of arrival and during stay
drawing by author



Google Translate might improve language barrier

socialise



call and text

local understanding

socialise

passersby possible language

socialise

barrier

local understanding



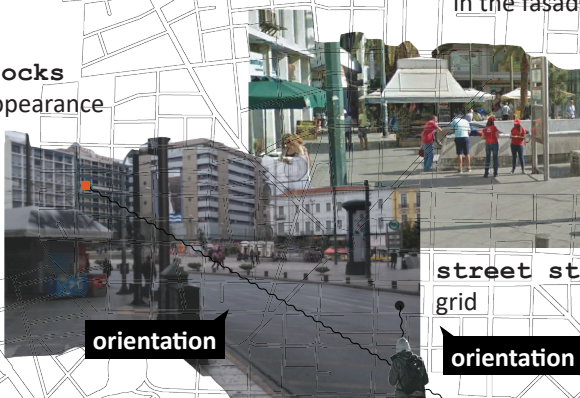
navigation

local understanding



signs extensive communications in the facade

urban blocks similar in appearance



orientation

street structure grid

orientation

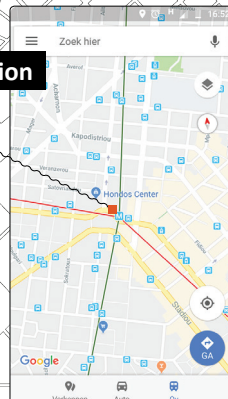


navigation

orientation

navigation

sightlines end points are not within sight

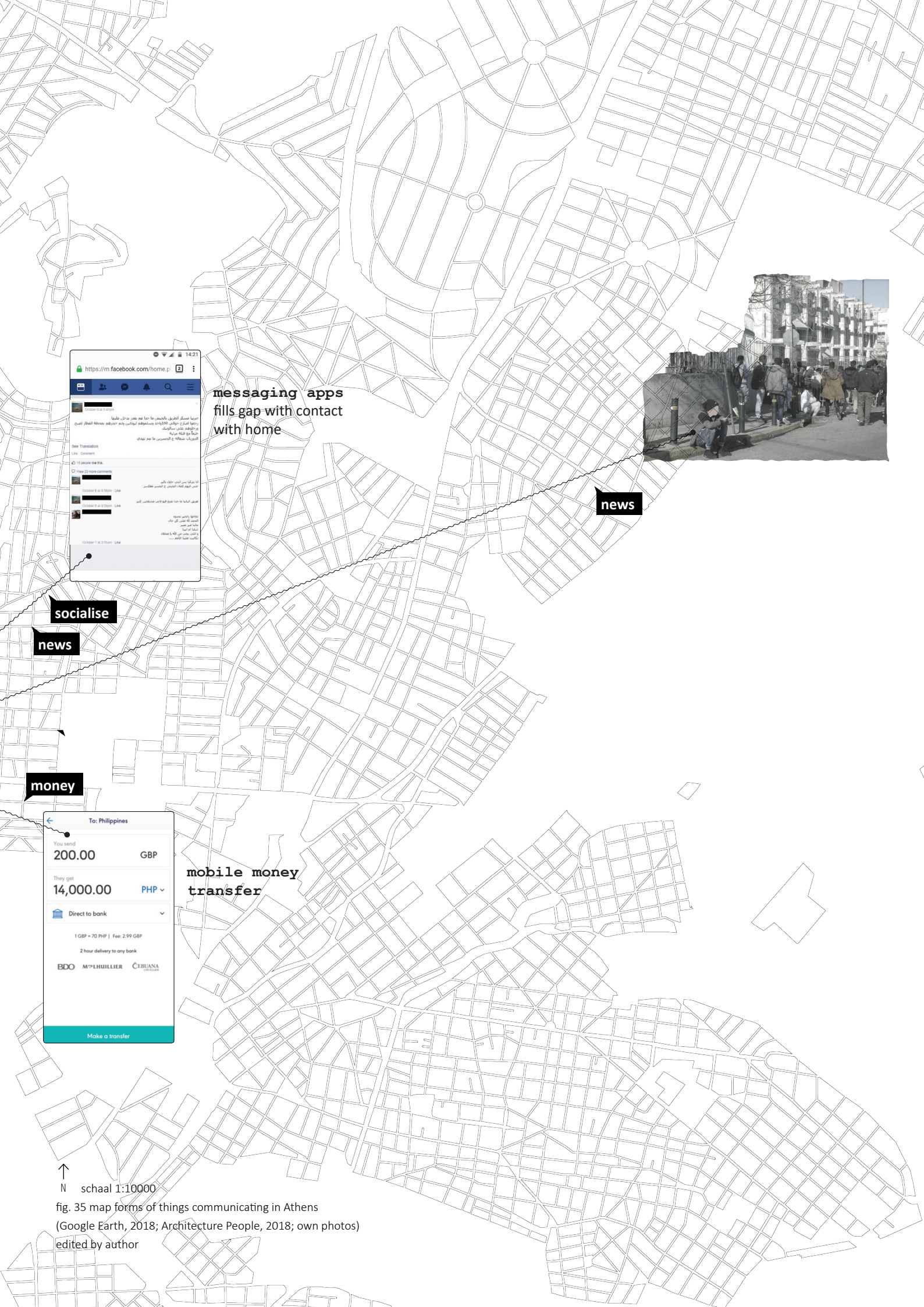


Google Maps many stops on the map

money



- legend
- information
- some thing communicating
- communication
- user
- information process
- difficulty in informing



messaging apps
fills gap with contact
with home

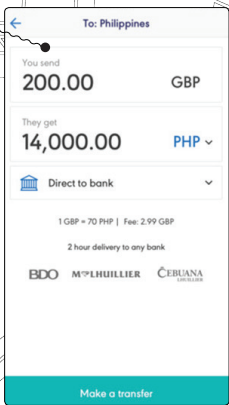


news

socialise

news

money



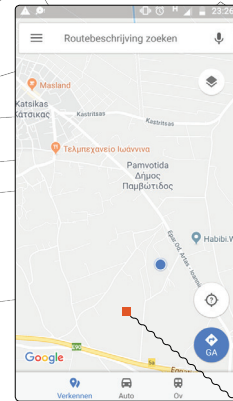
mobile money
transfer

↑
N schaal 1:10000

fig. 35 map forms of things communicating in Athens
(Google Earth, 2018; Architecture People, 2018; own photos)
edited by author



Google Maps
many localities not updated on the map



navigation

passersby
possible language barrier

socialise

local understanding

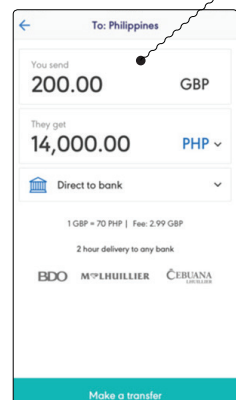


messaging apps
fills gap with contact with home

socialise

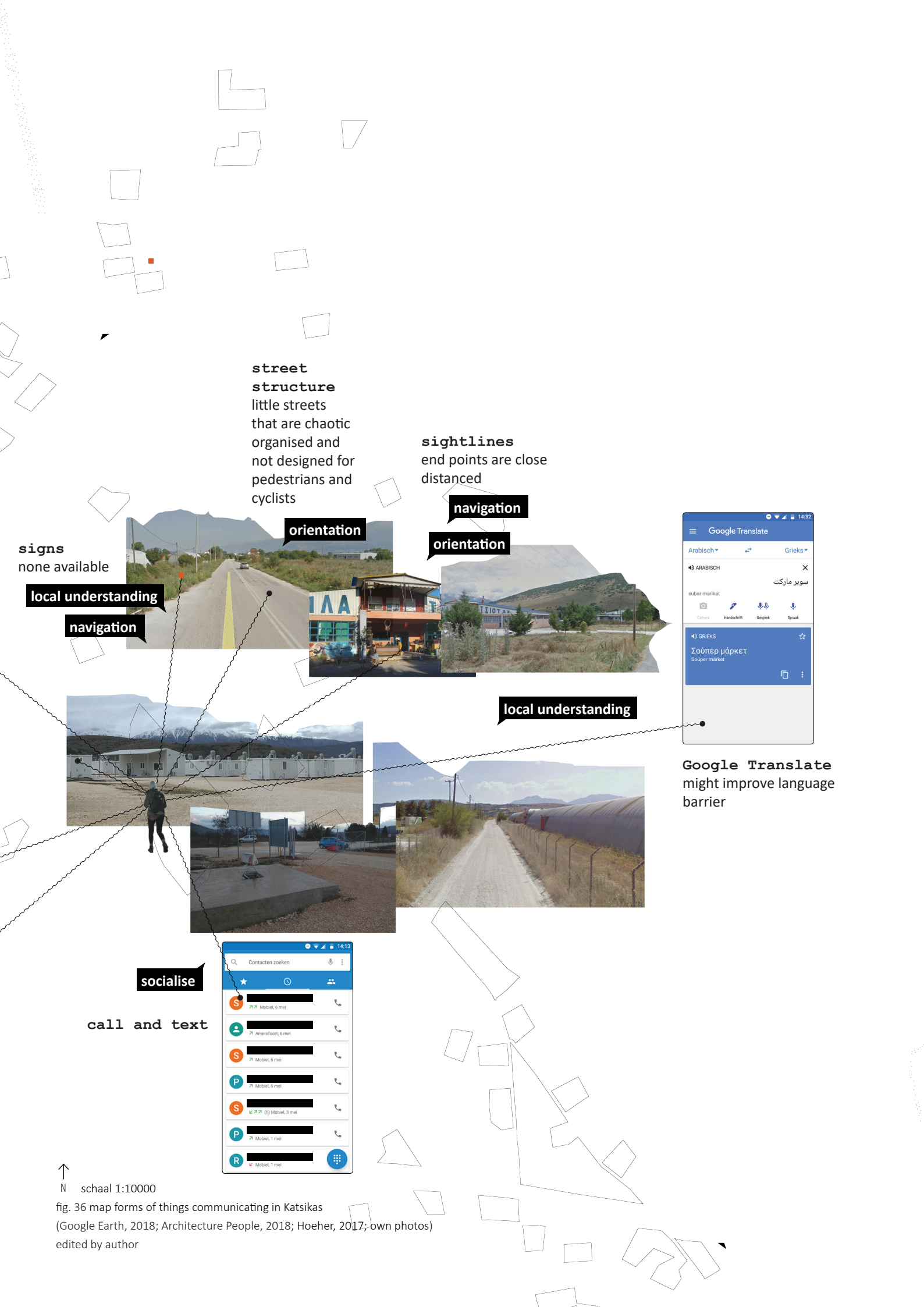
news

money



mobile money transfer

- legend
- information
 - some thing communicating
 - communication
 - user
 - information process
 - difficulty in informing



street structure
 little streets
 that are chaotic
 organised and
 not designed for
 pedestrians and
 cyclists

sightlines
 end points are close
 distanced

navigation

orientation

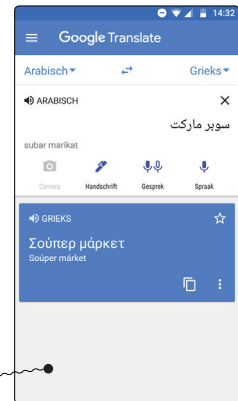
signs
 none available

local understanding

navigation

orientation

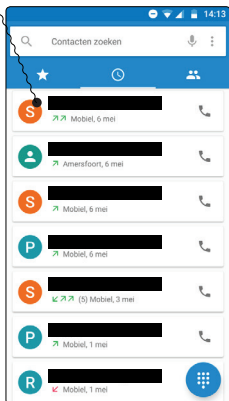
local understanding



Google Translate
 might improve language
 barrier

socialise

call and text



↑
 N schaal 1:10000

fig. 36 map forms of things communicating in Katsikas
 (Google Earth, 2018; Architecture People, 2018; Hoehner, 2017; own photos)
 edited by author

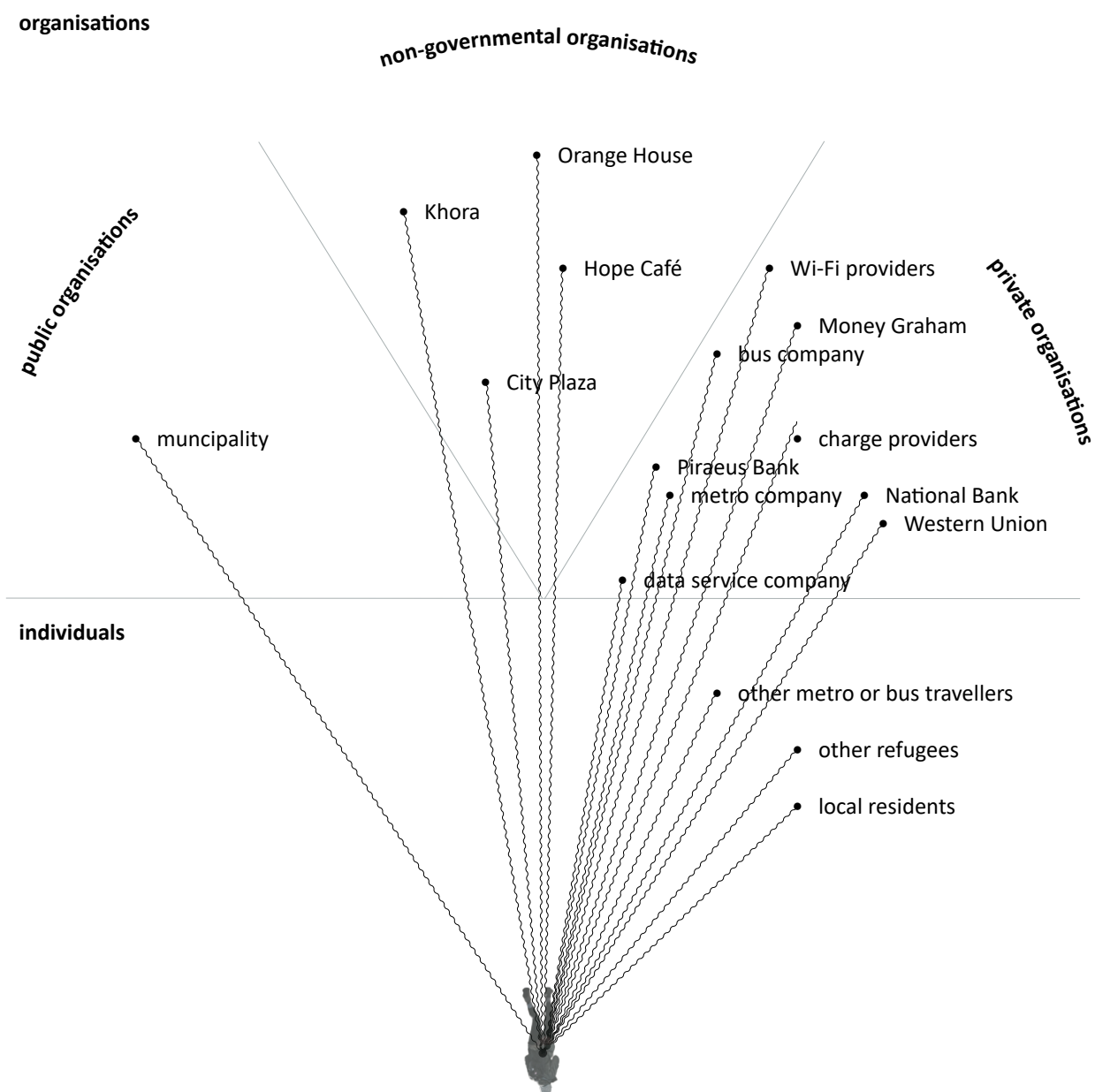


fig. 37 map migration information agents in Athens
 (Architecture People, 2018)
 drawing by author

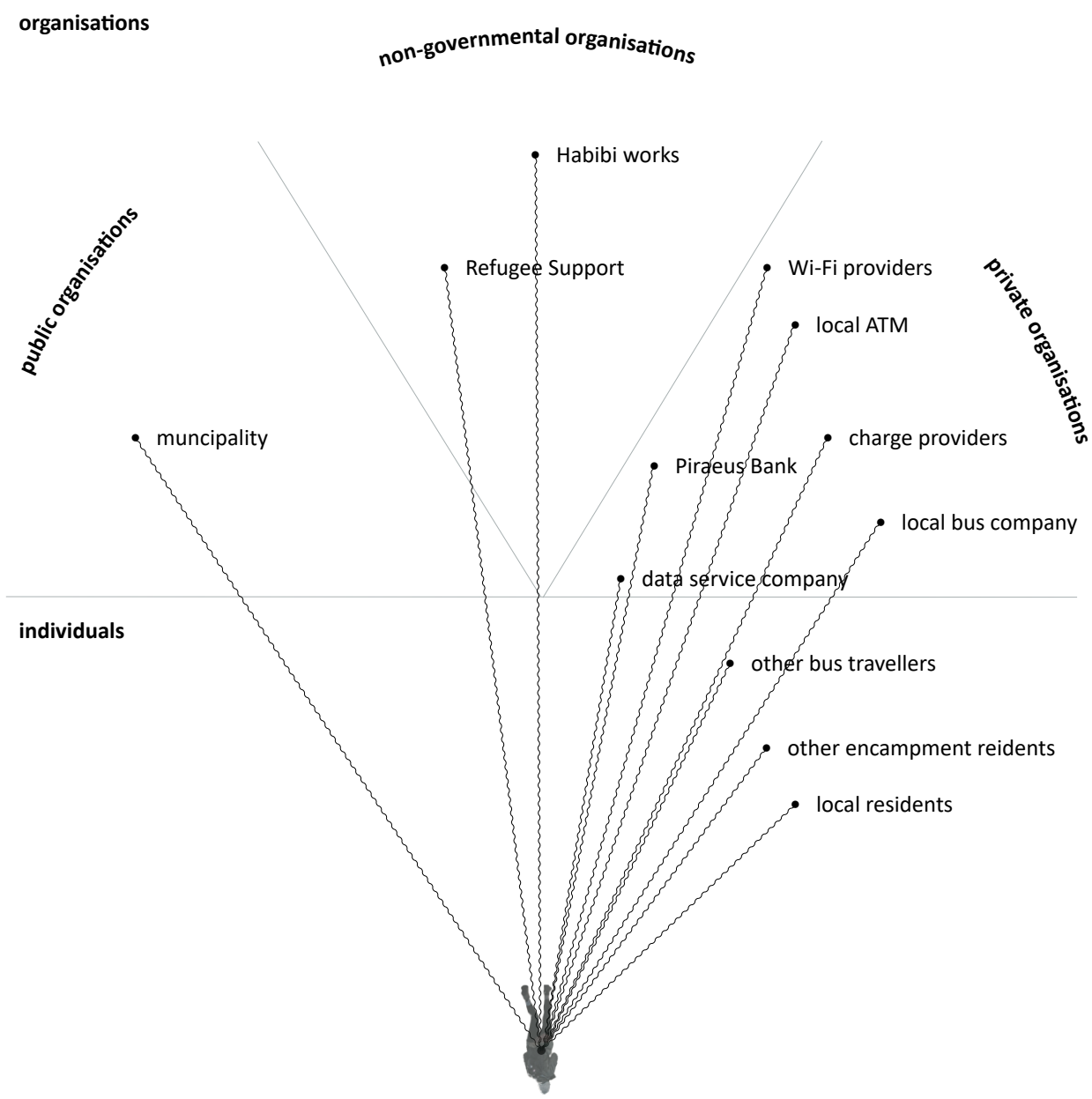


fig. 38 map migration information agents in Katsikas
 (Architecture People, 2018)
 drawing by author



fig. 40 Vodaphone data selling stand near the metro entrance on Omonia square in Athens
(Google Earth, 2018)
edited by author



fig. 40 Vodafone data selling stand near the metro entrance on Omonia square in Athens
(O'Keeffe, 2017)
edited by author

3.3 conclusion

The aim of this chapter is to look into local information processes, meaning the spatial structure of refugees approaching resources and local forms of information refugees depend on provided by various actors.

Mapping information-seeking behaviour in collecting resources structures elements in resource localities, the point of location that offers a certain resource, and seeking movements, traffic that takes place in the public space towards a location (see fig. 41). Seeking behaviour differs in cities and in rural areas (see fig. 42). In an inner city surrounding, facilities are spread leading to a pattern that is expanded. The system of seeking movement is of high complexity, it might be for that reason that hubs emerge. These hubs are a meeting place and have for that reason an important role in exchange in information flows. This is in contrast with rural areas, where facilities are clustered and have for that reason a less complex system. Patterns of movement follow areas of clustering. Provision of information should form a starting point in these situations. Some resource localities are rooted in the city structure (e.g. government buildings, hospitals, etc.) and should be considered as established elements that are part of the network. Other resources are flexible such as ATM machines, internet cafés, distribution places, etc. and give potential to meet the information needs near hubs. Seeking behaviour depends on characteristics of the local environment formed by the street structure and orientation elements, for instance seeking through a grid street structure is more easy than chaotic organised street plan.

Communication appears in many forms; signs, sightliness, streets, urban blocks, passersby, apps, etc. A distinction could be made concerning the content of the information message in arrival and during stay. Arrivals are unfamiliar with the area that seek for navigation, orientation and local understanding. Refugees during stay pursue news that re-informs them, maintain social contact and money to sustain themselves. The use of communication for other information needs differs in urban and rural areas. In a city with an extensive network it takes a period of time before familiarity with the city has been acquired. For that reason is in these areas the communication offering navigation and local understanding a bigger role than in rural areas. Many actors that are involved in providing information flows for refugees are often not from the migration field. Meaning that most of the information processes that take place are provided by organisations that are rather interested in profit than in supporting refugees. An important role telecommunications have that is facilitates information that lacks in the area.

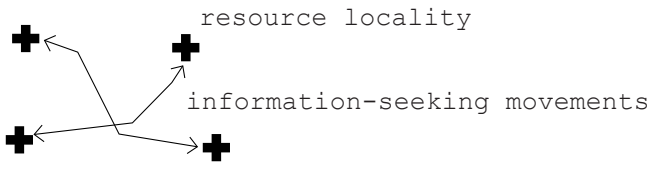
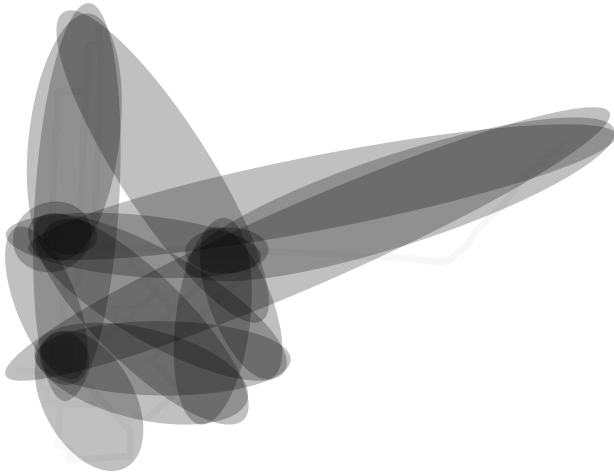


fig. 41 elements of the process of resource collecting
drawing by author

urban area



rural area

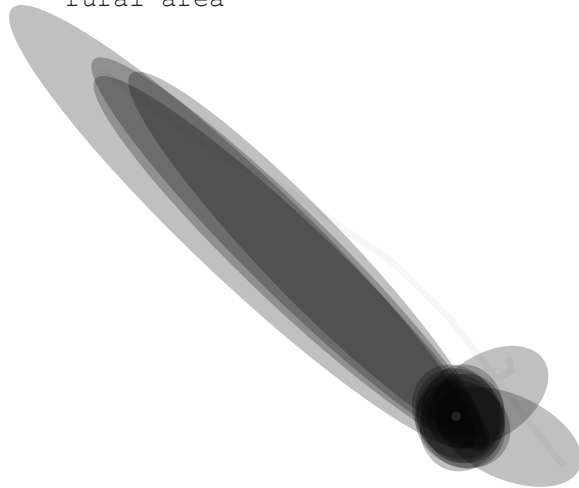
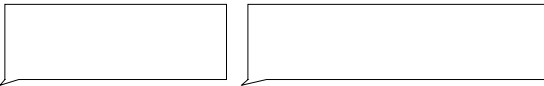


fig. 42 pattern of collecting movement of refugees in Athens and Katsikas
drawing by author

urban area



rural area



time period of immobility

fig. 43 change of information needs of arrival towards stay
drawing by author

4 proposal

4.1 design principles

4.1.1 waypoints

Design principles are here proposed for areas of immobility introducing information provision that supports informative movement through a structure of waypoints. A “waypoint” is understood as an intermediate point on a route or line of travel (Merriam Webster Dictionary, 2018).

The structure of waypoints crosses information-seeking movement of refugees and leads to resource options (see fig. 44). It is structured in a sequence within eye sightliness of the user. The structure is formed by local spatial structures of the seeking movement patterns.

The system of information processes in Athens is of high complexity, the inner city offers many options in information and facilities are spread and distanced. In the rural area of Katsikas this system is less complex in terms of the rate of options of information and facilities are clustered around the encampment. The structure of waypoints has another form in these settings. Applying the principle to Athens follows to a network of waypoints (see fig. 45). In the city appear multiple areas where movement patterns by refugees appear. These routines are more likely to change by reason of the availability of more options. The structure crosses these areas with a waypoint that is flexible for transfer. The localities of resources are spread over the city and in order to guide refugees to these with the structure many waypoints are needed. The structure of waypoints follows the grid street structure. In Katsikas the principle structures waypoints in a curving line form from rural towards urban areas (see fig. 46). Clustering of facilities are located along this structure. By reason of the availability of little option and clustering a lower number of waypoints are needed. The line is shaped by the chaotic street structure and nature landscapes. The long distance and street plan might increase the waypoint rate in order to being able to follow the sequence within eye sightlines.

I. LOCATIONS OF INFORMATION PROVISION:
INTRODUCE A STRUCTURE OF WAYPOINTS THAT CROSSES
INFORMATION-SEEKING MOVEMENT OF REFUGEES LEADING TO
RESOURCE OPTIONS. IT IS STRUCTURED IN A SEQUENCE WITHIN
EYE SIGHTLINE OF THE USER. THE STRUCTURE FORMS BY LOCAL
SPATIAL STRUCTURES.

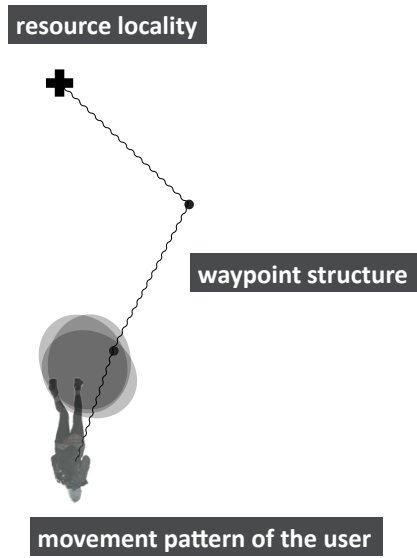


fig. 44 principles locations of waypoints structure
(Architecture People, 2018)
drawing by author

ATHENS:

SETTINGS OF THE CASE OF ATHENS SUCH AS AVAILABLE DISTANCED AND SPREAD RESOURCE LOCALITIES IN THE CITY THAT ARE ORGANISED IN A GRID AROUND MULTIPLE EXISTING HUBS, GIVE THE WAYPOINT STRUCTURE A FORM OF A NETWORK

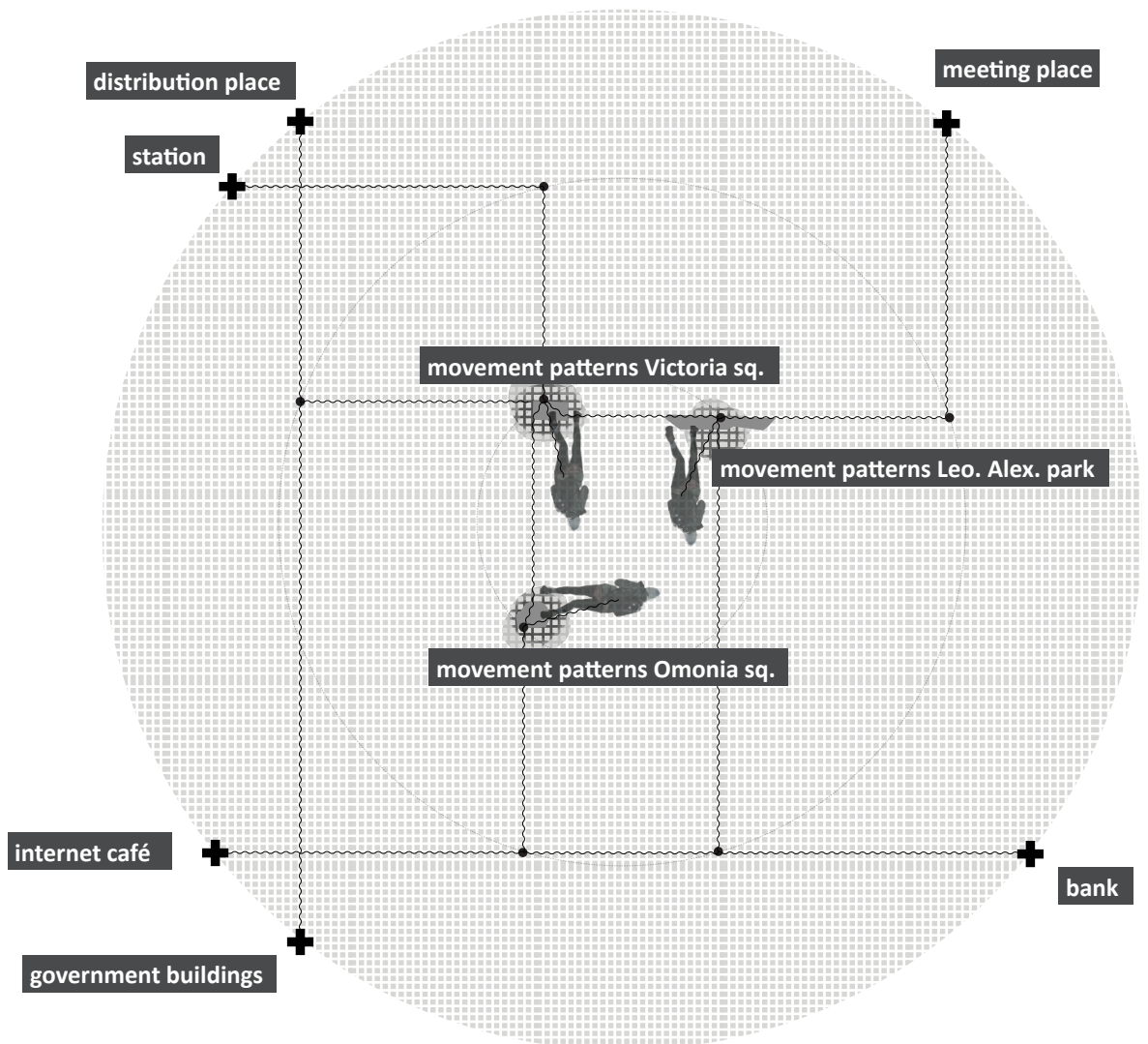


fig. 45 illustrated structure of waypoints in Athens
(Architecture People, 2018)
drawing by author

KATSIKAS:

IN THE CASE OF KATSIKAS THE STRUCTURES IS FORMED BY CLUSTERING OF FACILITIES WITH LITTLE OPTIONS ALONG ONE STREET IN A NATURE LANDSCAPE, THAT FORMS A CURVING LINE FROM RURAL TOWARDS URBAN AREA.

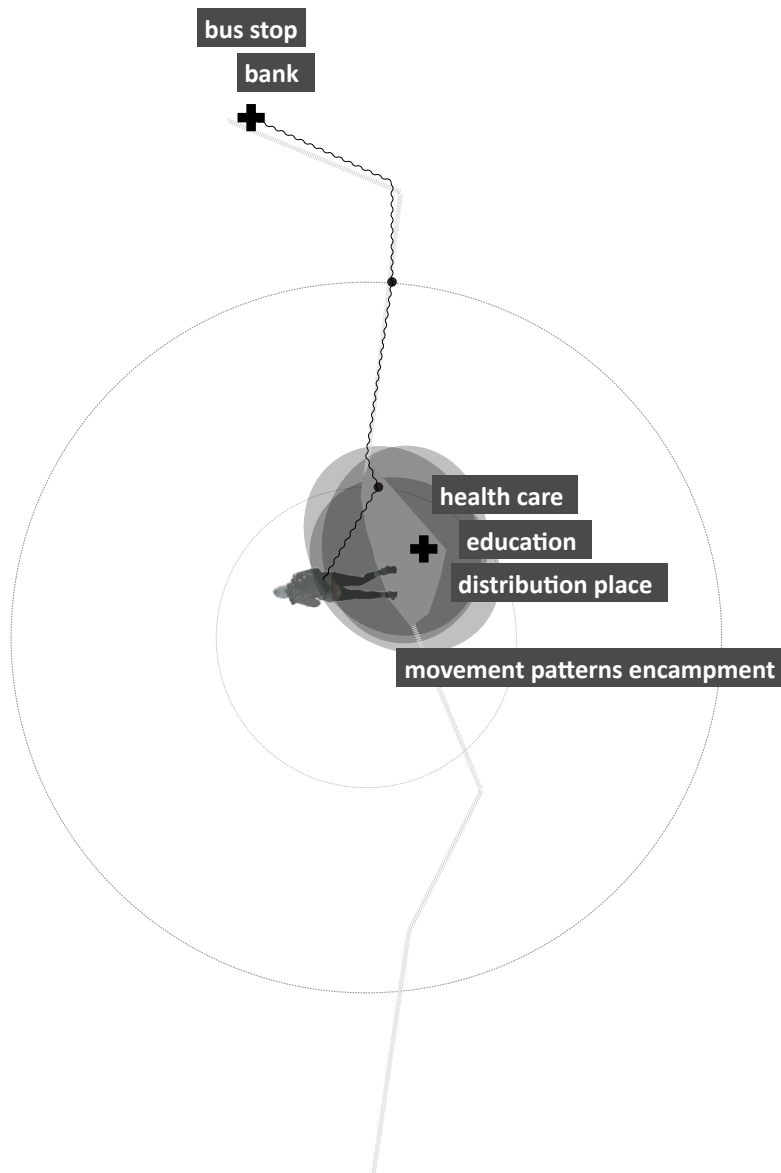
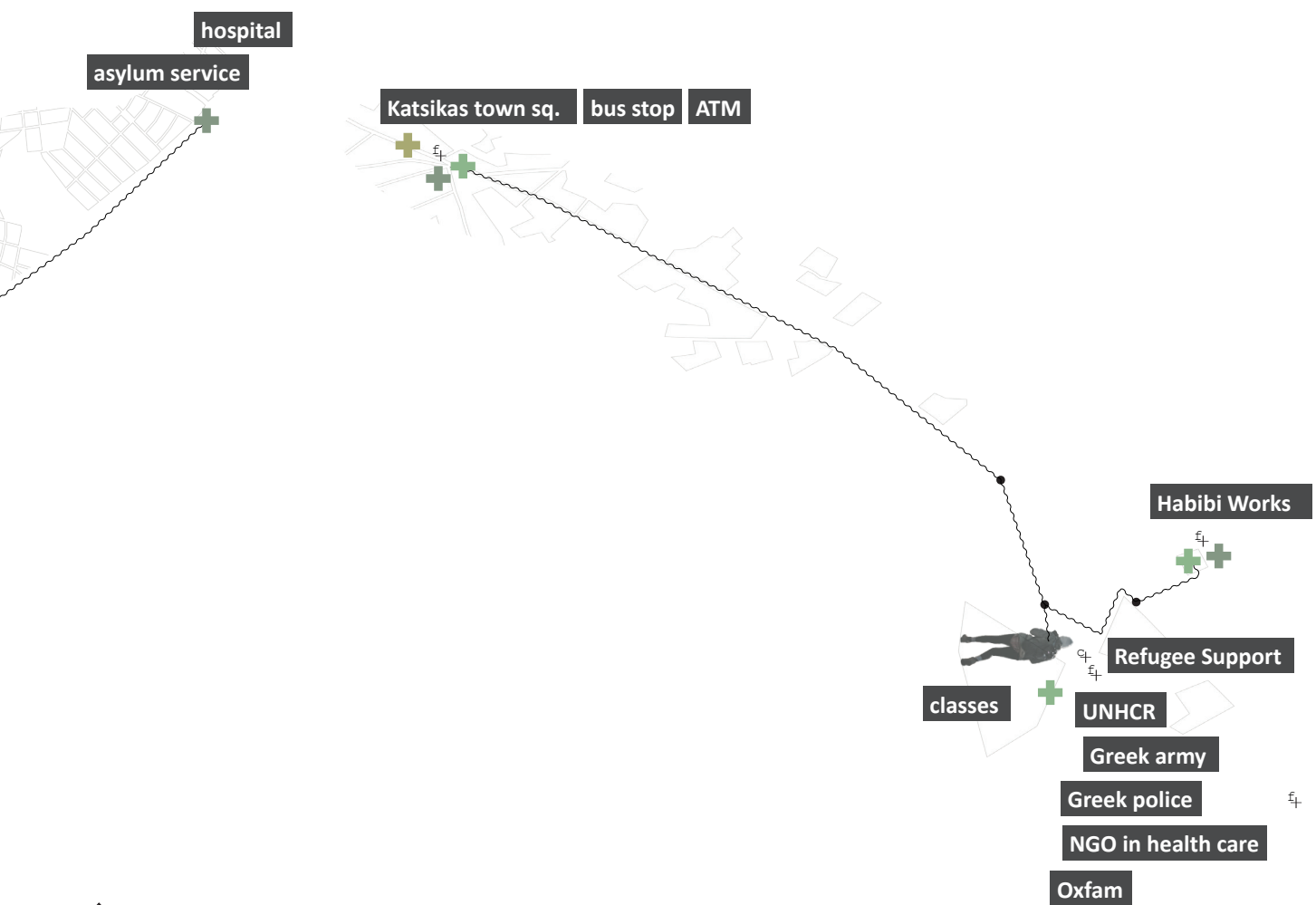


fig. 46 illustrated structure of waypoints in Katsikas
(Architecture People, 2018)
drawing by author



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N
schaal 1:7500

fig. 47 map structure of waypoints in Athens
(Architecture People, 2018)
drawing by author



↑
N schaal 1:7500

fig. 48 map structure of waypoints in Katsikas
(Architecture People, 2018)

drawing by author

The structure functions with three type of waypoints: a type that serves the information needs at the start, one that fulfils information intermediate and a third that leads one being a resource locality. The first type of waypoint described here is one in the form of information kiosk building (see fig. 49). It is where attention of the refugee is crossed along seeking movement patterns and fulfils information for: 1. refugees that have arrived and need to find the way in the area. Information is provided in orientation, navigation and local understanding in order to guide to localities of need and get familiar with the city. 2. It sustains wayfinding during the stay, meaning deliver news of changes in order to be up-to-date and socialise needs. To give an example, changes in the procedure that are communicated by, or developments of countries, or an apartment gap that opened up, or other information needs for resources. The kiosk meets these information needs by providing forms of communication, wherein is important that these cover peer-to-peer forms and offer alternative forms to technology or encrypted ICTs. Changes of routines of refugees in the city require the kiosk to be temporary establishment. The kiosk is implemented by an actor that has the ability of organising the centre of the whole waypoint structure and has the interest in support of refugees, such as non-governmental organisations in the migration field or UNHCR. It cooperates with smaller actors that are either providers of resource localities or communication forms, this in order to reach a wide range of reliable information to report.

The role of an information kiosk is different in the context of an urban area where there are many existing facilities, than in a rural area with little available options. In Katsikas the kiosk functions as a facilitator of missing information that introduces forms of communications that extends resource options for refugees (see fig. 51 and 53). It provides communication that introduces new arrivals with their facilities and during cooperates with actors on national level in order to update its facility. The encampment is lead by NGO Oxfam and in extension of that could run the kiosk. While in Athens the kiosk serves information provision that strengthens the link of the spread facilitations or existing communication forms with the users of refugees (see fig. 50 and 52). The kiosk communicates to the refugee routes and localities in the city and re-informs the user of changes by cooperation with other involved actors in the area.

II. TYPE OF WAYPOINTS:

A WAYPOINT IN THE FORM OF AN INFORMATION KIOSK. IT IS THE FIRST WAYPOINT CROSSED IN THE SEQUENCE. THE PURPOSE OF THE POINT IS TO FULFILL INFORMATION NEEDS IN: 1. WAYFINDING IN THE AREA AND 2. SUSTAIN WAYFINDING DURING STAY. THE KIOSK PROVIDES INFORMATION THROUGH FORMS OF COMMUNICATION THAT COVER PEER-TO-PEER FLOWS AND ALTERNATIVES OF TECHNOLOGY. THE KIOSK IS IMPLEMENTED BY A NON-GOVERNMENTAL ORGANISATION THAT IS LEADING THE WHOLE WAYPOINT STRUCTURE.

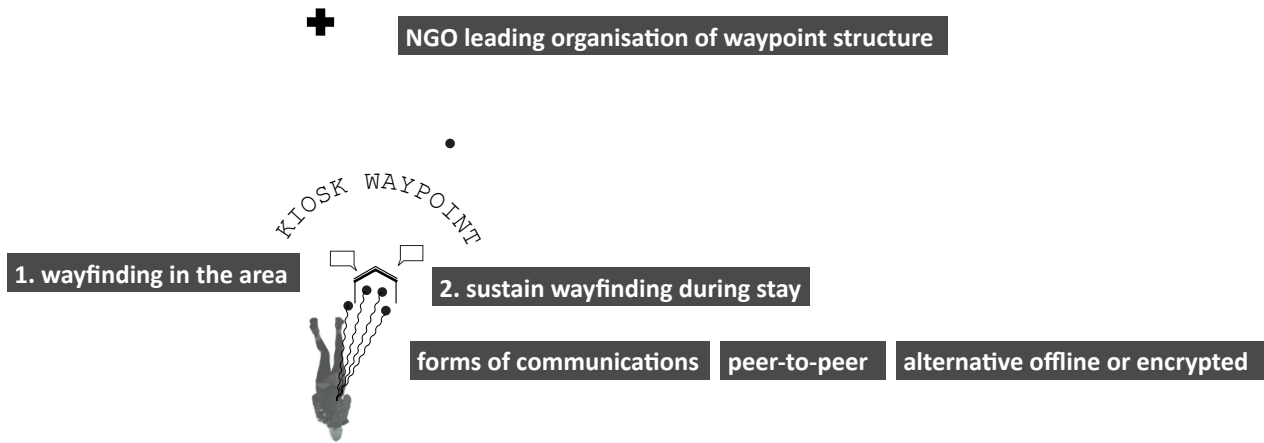


fig. 49 principles kiosk waypoint type
(Architecture People, 2018)
drawing by author

ATHENS:

THE INFORMATION KIOSKS STRENGTHENS THE LINK OF THE EXISTING PROVIDERS AND THE USERS OF REFUGEES. THIS BY 1. INTRODUCE USERS WITH ROUTES AND LOCALITIES AND 2. COOPERATE WITH PROVIDERS IN THE CITY AND RE-INFORM REFUGEES OF CHANGES.



fig. 50 illustrated kiosk type waypoint in Athens
(Architecture People, 2018)
drawing by author

KATSIKAS:

THE KIOSK FUNCTIONS AS A FACILITATOR OF MISSING INFORMATION BY 1. INSTRUCT THE USER OF THE FACILITIES THAT ARE OFFERED AND 2. COOPERATE WITH ACTORS ON A NATIONAL LEVEL IN ORDER TO UPDATE THE FACILITIES' INFORMATION.

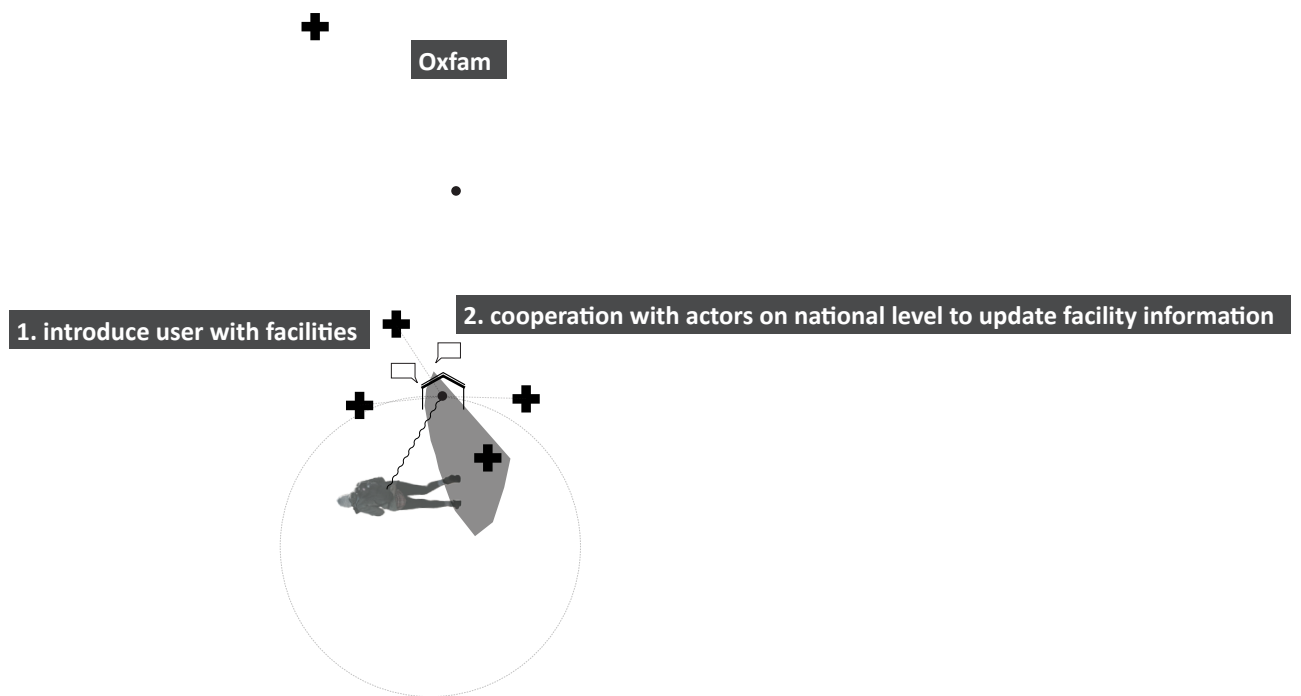


fig. 51 illustrated kiosk type waypoint in Katsikas
(Architecture People, 2018)
drawing by author

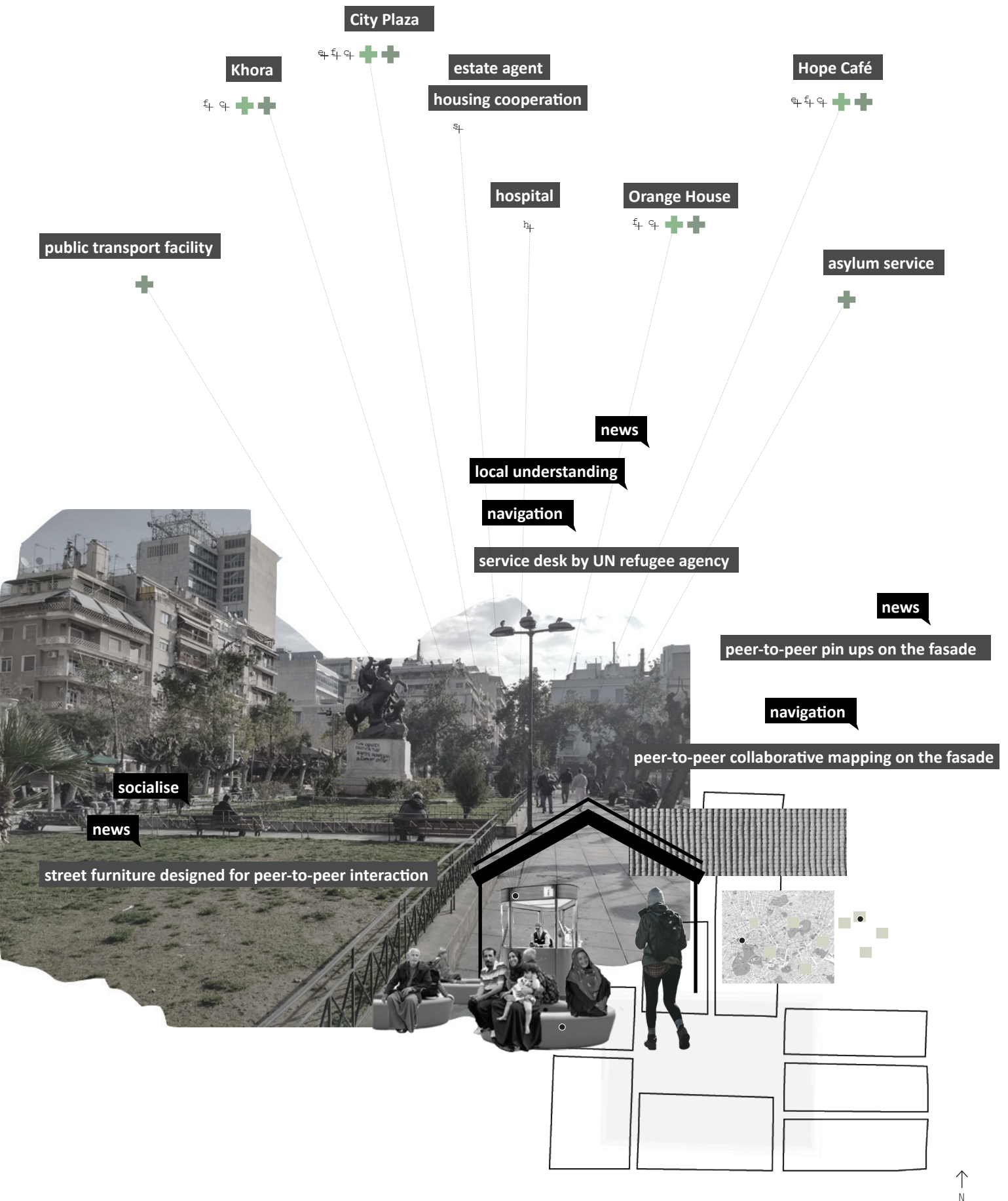


fig. 52 map kiosk type waypoint in Athens
 (Google Earth, 2018; Architecture People, 2018; Tjinco, n.d.; Unicef Afghanistan, 2017; Calabrese, n.d.; KezCreative Com, n.d.; Cepezed, n.d., "Tourism Website", n.d.)
 drawing by author

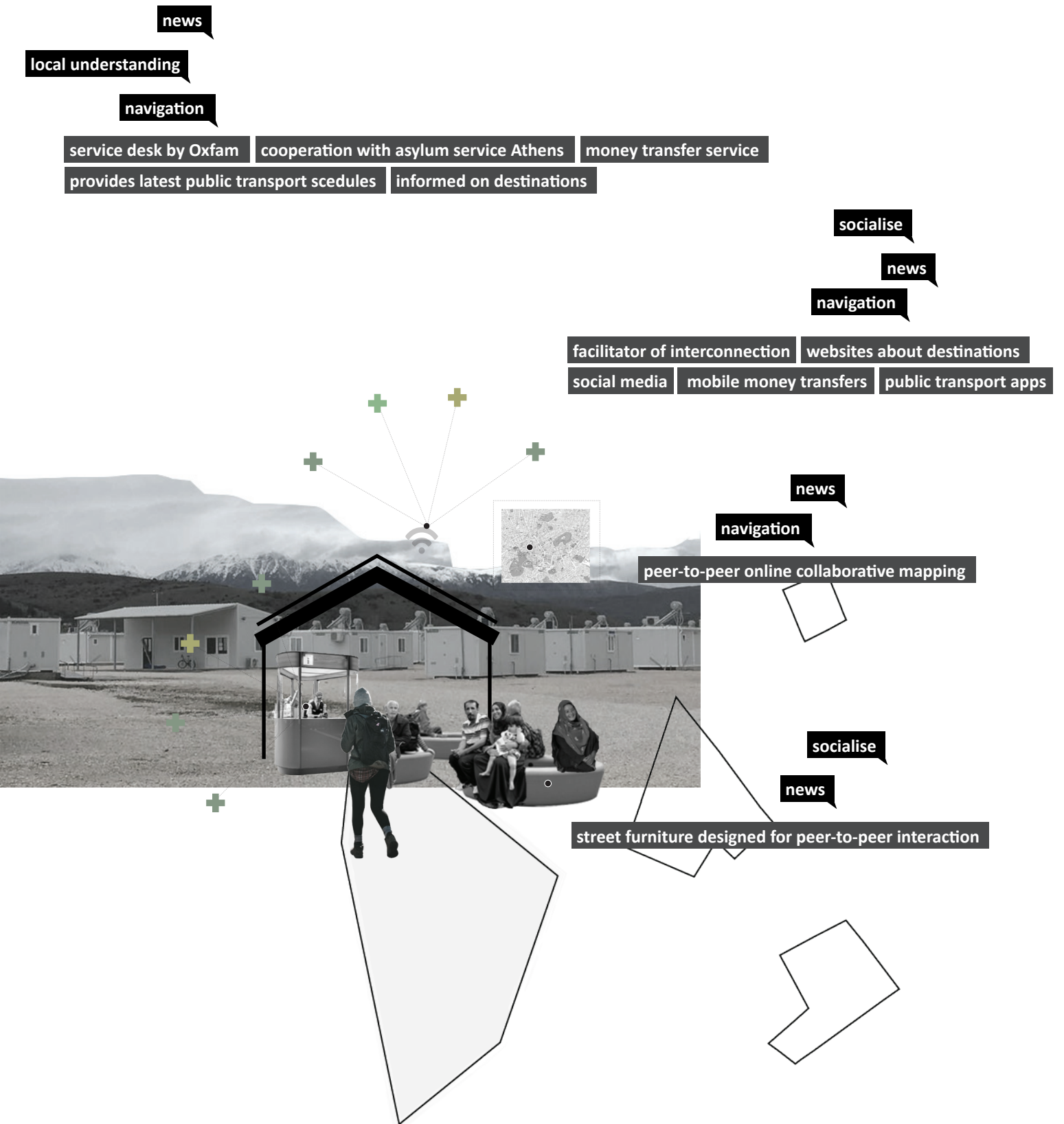


fig. 53 map kiosk type waypoint in Katsikas

(Architecture People, 2018; Tjinco, n.d.; Unicef Afghanistan, 2017; Calabrese, n.d.; "Tourism Website", n.d.; Nacto, n.d.)

drawing by author

Intermediate of the kiosk waypoint and resource localities is the type of waypoint that informs by giving direction (see fig. 54). It support the information need of arrivals to get familiar with the city in instructing the way. It is an extension of the kiosk waypoint, also in its organisations. The implementation of interventions for direction informing is lead by the actor responsible for the waypoint structure. Especially in this type of waypoint is flexibility of significance.

The direction waypoint type is working differently in a surrounding with extensive or little communication processes. In Athens is direction giving down through filtering the important and reliable information (see fig. 55). Where in Katsikas communication forms are introduced in order to inform wayfinding in the area (see fig. 56).

II. TYPE OF WAYPOINTS:
WAYPOINT THAT INFORMS THE DIRECTION BETWEEN OTHER POINTS.

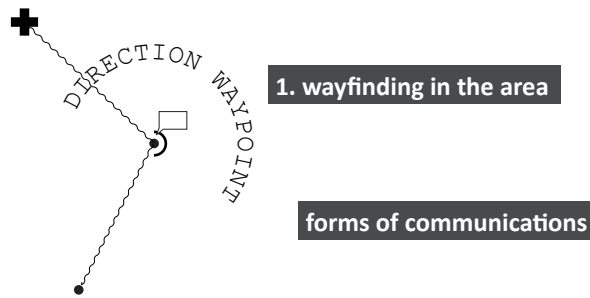


fig. 54 principles direction waypoint type
drawing by author

ATHENS:
DIRECTION IS GIVEN BY FILTERING IMPORTANT AND RELIABLE
INFORMATION.

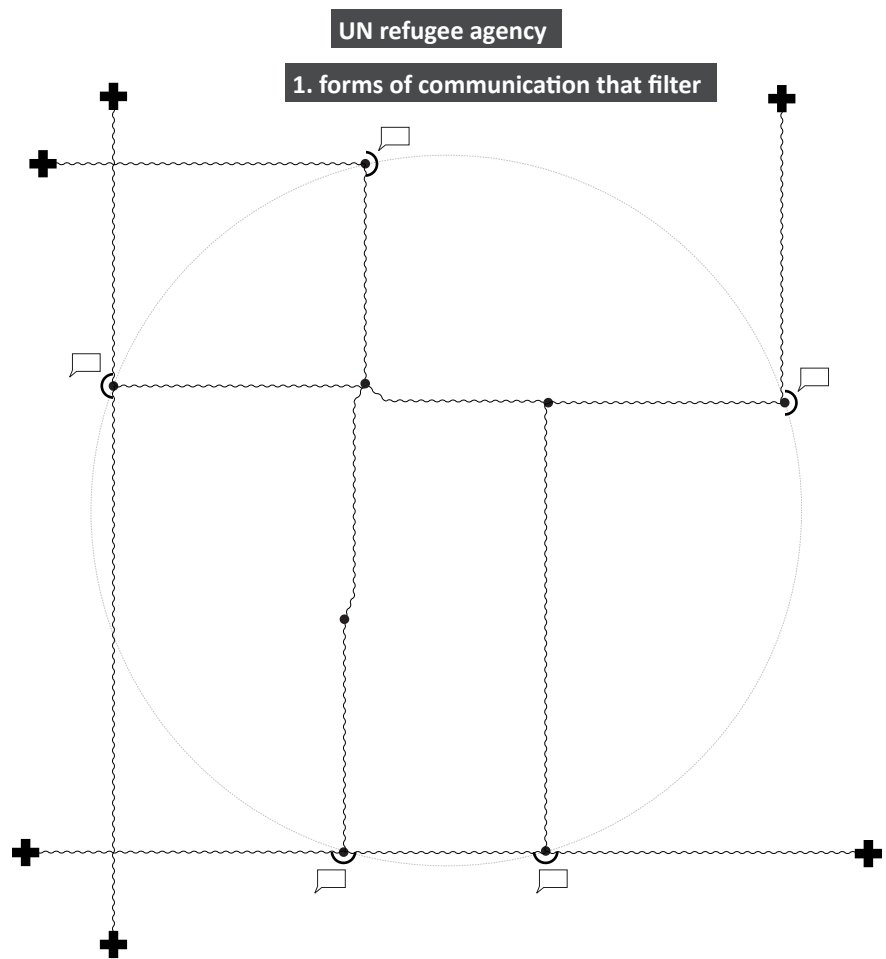


fig. 55 illustrated direction type waypoint in Athens
drawing by author

KATSIKAS:
THE WAY IS INFORMED THROUGH INTRODUCING FORMS OF
INFORMATION.

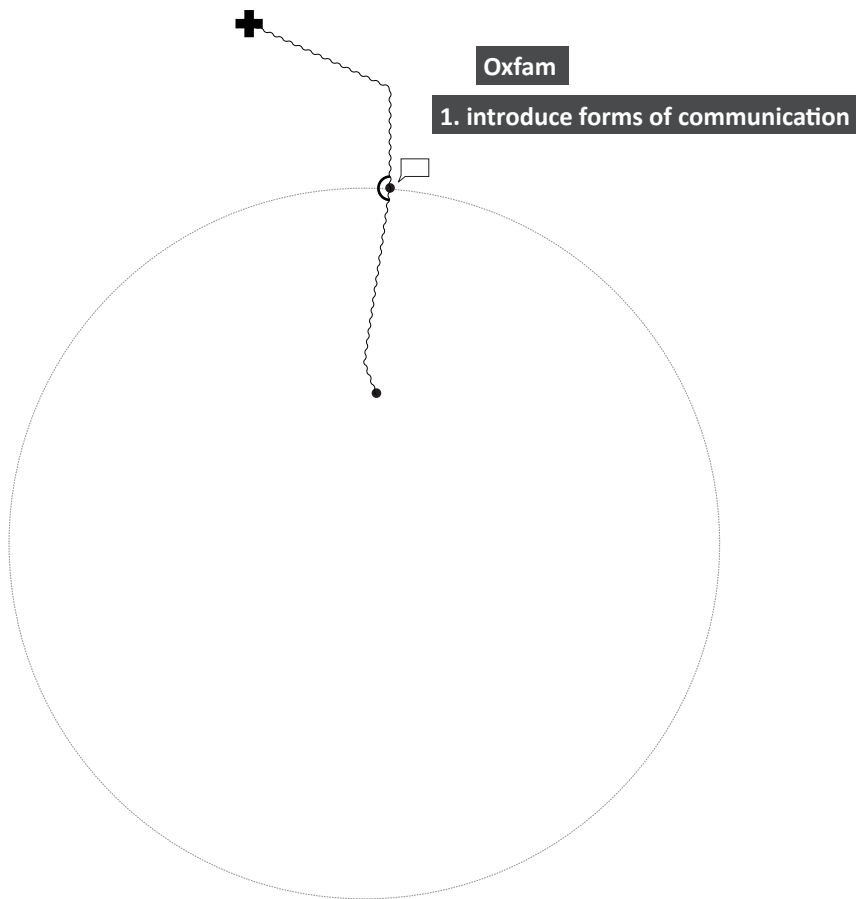
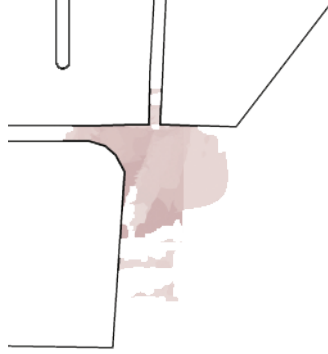


fig. 56 illustrated direction type waypoint in Katsikas
drawing by author

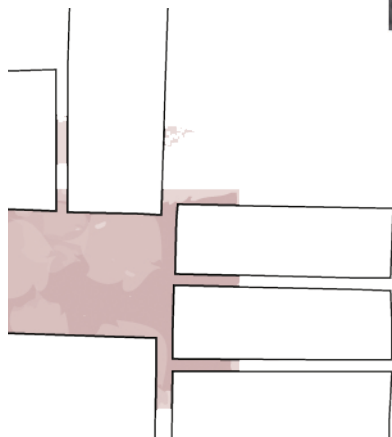


navigation

elements that arrow in the direction

orientation

colouring of existing elements by UN refugee agency



orientation

element that draws attention



fig. 57 map direction type waypoint in Athens
(Google Earth, 2018)
drawing by author

navigation

introduce signs by Oxfam

orientation

high landmark for walking and cycling speed

navigation

open second exit that shortens the route

navigation

walking and cycling lane with paint

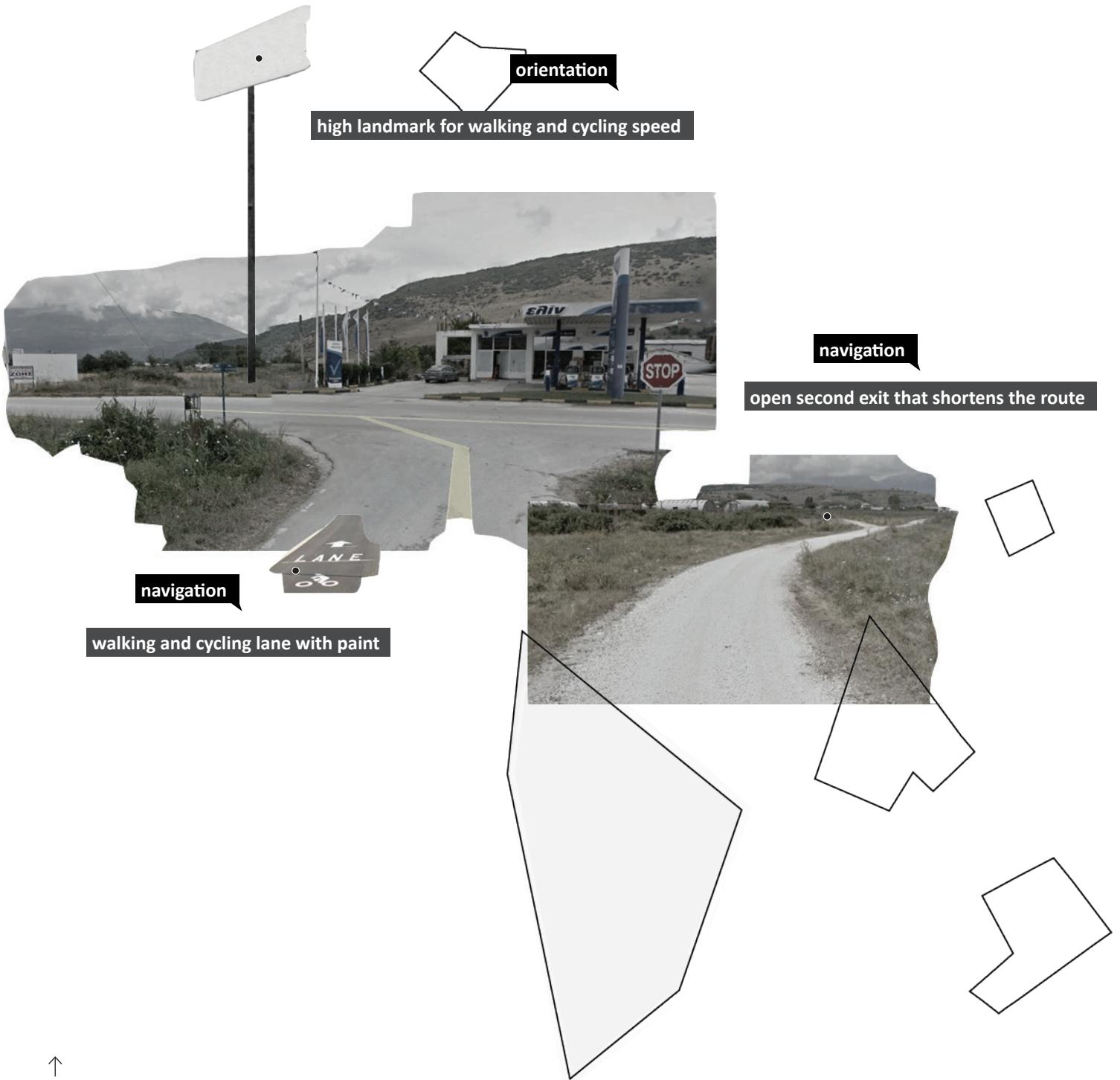


fig. 58 map direction type waypoint in Katsikas (Google Earth, 2018) drawing by author

The last type of waypoint is the resource locality itself that cooperates in organisation with the kiosk (see fig. 59). It is a waypoint that does not inform refugees directly, but fuels re-information at the kiosk by intern communication on a frequent basis. It is therefore to support the information needs of those during stay.

The network of kiosk with resource localities differs in an urban and rural area. In Athens the network of intern communication of the kiosks is focused on those actors within the city and between the kiosks (see fig. 60). In Katsikas are there little actors in the surroundings and by reason of the role of the kiosk function also as facilitator, it maintains a network with actors that inform them on a national level (see fig. 61).

II. TYPE OF WAYPOINTS:

THE LAST WAYPOINT IN THE SEQUENCE ARE THE RESOURCE LOCALITIES. THESE COOPERATE WITH THE KIOSK WITH INTERN COMMUNICATION THAT FUELS UP-TO-DATE RE-INFORMING IN THE KIOSK.

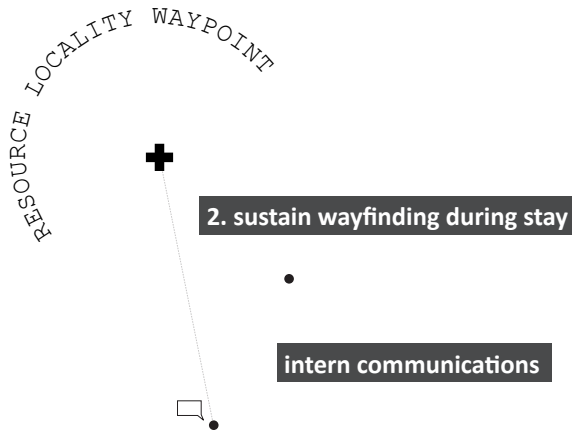


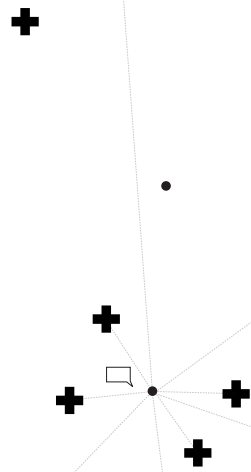
fig. 59 principles resource locality cooperation
drawing by author

ATHENS:
FREQUENT INTERN COMMUNICATION WITH A CONTACT IN THE
ORGANISATION OF RESOURCE FACILITIES IN THE CITY AND THE
KIOSKS.



fig. 60 illustrated resource locality type in Athens
drawing by author

KATSIKAS:
INTERN COMMUNICATION ON A FREQUENT BASIS BETWEEN THE KIOSK
AND PROVIDERS ON A NATIONAL LEVEL



intern contact between kiosk and providers on a national level

fig. 61 illustrated resource locality type in Katsikas
drawing by author

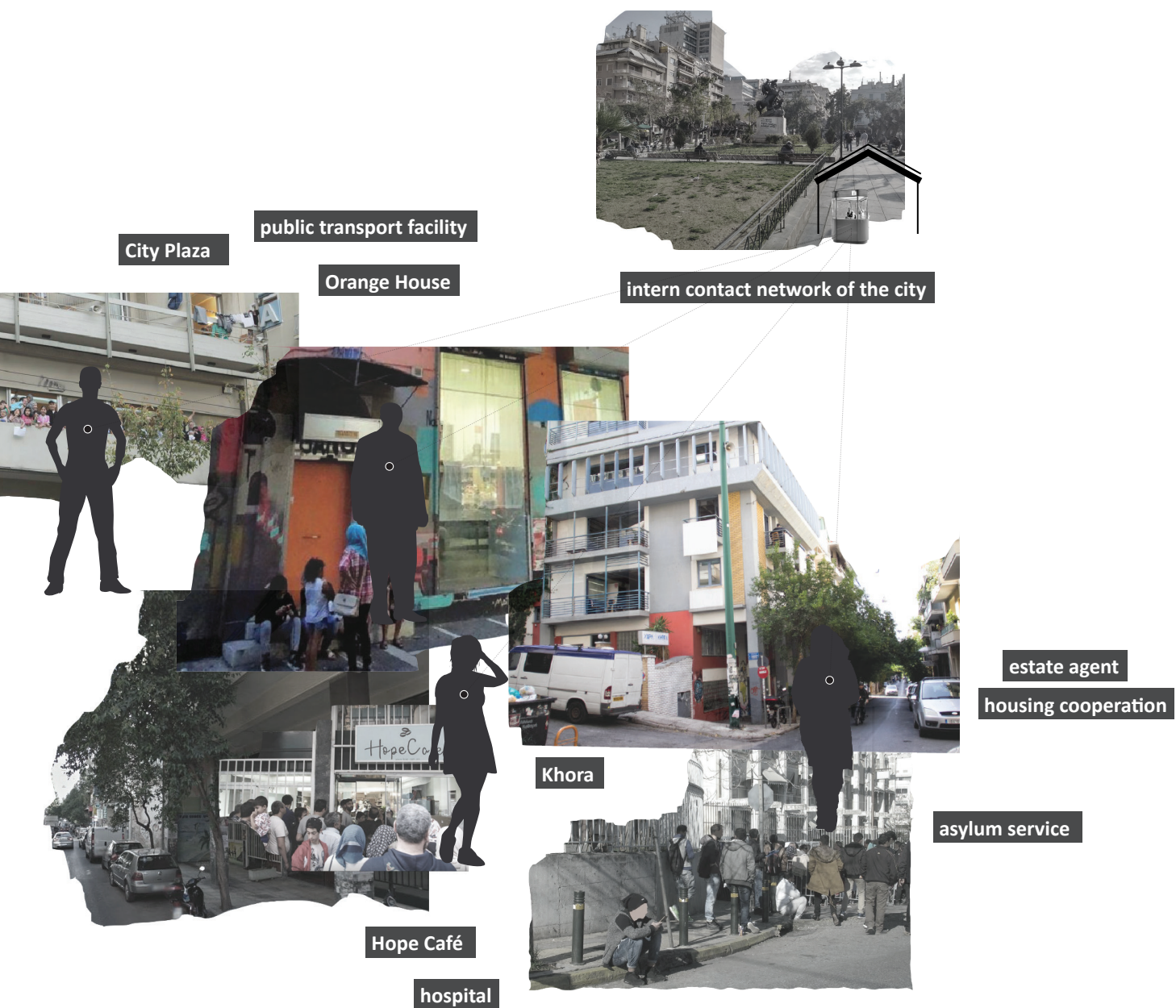


fig. 62 map resource locality in Athens
 (Google Earth, 2018)
 drawing by author



intern contact network national level

Habibi Works



public transport facility in Ioánnina

Refugee Support



asylum service in Athens



kiosk waypoint in Athens



fig. 63 map resource locality in Katsikas
(Google Earth, 2018; Hoeher, 2017; own photos)
drawing by author

4.4 conclusion

This study researches the question: What are information processes used by refugees approaching economic, social and knowledge resources while being in immobility fleeing to Europe and how to redesign in information flows easing resource collecting? Information process is understood as the process of a user getting informed with a message that is filled with content. It is part of a whole network of many interactions communicating information. For the user of refugees information is necessary on instructions, navigation, news, socialising, money, orientation, etc. Providers of information flows for refugees have an influential role in irregular mobility, a big part of that are those facilitating telecommunications. A main distinction could be made in the information that is needed at arrival and during stay, and that requires other communication forms. An information process consist of two points: the user and the provider, and these should be considered as areas for redesign. This gives direction in strategic locations, with as starting point areas where movement patterns of refugees appear. Thereby this indicates the type of communication that should be provided and the actors that should be involved, depending on the need. Knowledge on existing information processes in an area, shaped by the local environment, is required in order to redesign in information flows. By reason of that principles have a different meaning in other settings. In an urban area that is spread in its facilities and information network it is the design assignment to link to other points and filter what is important. That is other than in rural areas that is structured in clusters of functions with little availability, where the assignment is to introduce points and connect these to a wider existing network.

5 reflection

reflecting on “Refugees’ movement in immobility: a study investigating information-seeking movements of refugees in Europe”

5.1 introduction

The purpose of this reflection is to evaluate the results of the research and design of the graduation in product, process and planning. Points that are reviewed are the choice of method - how - and the argumentation - why - and whether it worked to what extend, and the feedback and translation into the work with learning outcomes. Thereby are aspects discussed regarding the relationship of research and design, the relation of the chosen topic with the studio and master track, the transferability in terms of scientific relevance and wider social and professional framework, and lastly the ethical issues in the research, design and results in practice. The reflection is also structured in this way; it first deals with the review that is followed by the discussion.

5.2 review

The approach explores information processes in refugee trajectories. The method of literature study was useful for understanding “information” and formulating an useful form for this project. It also gave insights in “ICTs” and its significant role in the organisation of irregular mobility. However these findings have an abstract level, for that reason was the method of documentary study of value for insights in practical terms and also in the type of uses. The method of an exploratory case study was useful for understanding the local scale of information processes. Through a field trip could observation be done about the local information in the spatial environment and the use. Subsequently, these empirical findings are documented and further analysed through mapping. This method is of value for understanding the structure of the information flows and areas for action. In order to redesign understanding the structure of these flows is of need. The method of actor analysis shows “migration agents” in irregular mobility and their interests. These findings are useful for proposing to actors in order to understand their role. The proposal gives general design principles and those are illustrated in two opposite contexts in terms of information processes.

The following aspect that is reflected on are the learning outcomes of the project and feedback translation. During the project process feedback received motivated the project in its structure and methodology, inspiration and references, etc. In the beginning of the project was the planning component more dominant, which has been for me very instructive for the reason in my study curriculum it has been there to a lesser extent. It gave me the opportunity to develop abstract thinking and mapping, and learning on structuring and writing. Many feedback was received on these aspects and translated into the project as it further developed towards a compact report. The last part of the project was the design part more significant, it has been a instructive challenge to frame the broad body of knowledge into a framework for design. Feedback helped me very in concluding and focus on important parts in specific periods of the process, and thereby in inspiration for developing the design. In general terms, I had the opportunity to spend many time reading, hearing, talking and mapping about the migration crisis and that gave me lot of input to position myself into the this topic of many strong opinions.

5.3 discussion

The project topic addresses information processes in the movement of people through the urban environment, in the scope of refugees moving during the European migration crisis. This topic finds interface with the studio of Imaging European Regions of the research group Complex cities, because of the subject being an on going complex urban issue in Europe that affects regions. It is related to the master track of Urbanism as combining design and planning in an issue perceived from different perspectives. The issue of the way people read and move through the urban environment and the way the environment communicates with the people that use it.

In terms of the relation of research and design, firstly, the research relates to design in the way of theory concepts being explored in designing. Secondly, the research part is concluded

in a framework that gives direction and argumentation to the design, explaining principles and interventions.

The next aspect to be discussed is the scientific relevance. Methods of literature study and comparative exploratory case study through maps and photo analysis are in line of research in the graduation study common. In terms of the work and its content the topic might be divergent from previous studies. Though there has been other graduation topics within the migration crisis in the studio, although the focus on movements of people (refugees) in the city might be from a different angle. Or otherwise, the movement of people through the city might be a frequent topic, but not focused on the target group of refugees.

The following discussed aspect is the relevance in a wider social and professional framework. The local characteristics determines the kind of interventions applicable, in particular the settings of the existing information network. The principles give direction to interventions and the design illustrates its elaboration in different settings. It shows in that way its transferability to other areas of immobility for refugees in Europe. That could be areas with other street structures or typologies of urban blocks and thus information flows. Otherwise, the findings of the relation of people communicating with the city and the other way around is applicable for any kind of user of the urban environment.

Lastly, aspects of ethical issues are discussed. The ethical position of this project is supporting refugees in immobility of their journey. Irregular border crossing is an illegal activity and similarly is using falsified passports, although in the context of fleeing such activities can be argued as ethically correct. Thereby, countries that agreed to the Refugee Convention are legally required to support refugees, although this does not happen by many government officials in Europe and is an illegal act too. As researcher and designer of this graduation project, the position that is taken in this issue is supporting refugees within border areas and take into account these sides of legal and illegal acting. It argues its position in the gap of countries not following their obligations to the Refugee Convention and consequently refugees do not meet their entitlements according to these laws and that of human rights. One of the main ethical implications in the field work is the way of interacting. It is instructed by experienced workers to visit for a short period and to not get close with refugees. By reason of the refugees well being, having to say goodbye many times, people leaving all the time around them and not be able to have this possibility themselves. In addition, there is the obstacle of language barrier and many refugees that speak a little English are minors. Another ethical implications in the work is the use of photos from the field trip in the representation. In the trip were many photos collected, by shooting them myself and receiving some from others. The ones that I took myself were mostly of spatial structures, by reason of that individuals can feel very different of people taking photos of them and it is difficult to confirm this with a language barrier. Also, the ethical dimension of shooting photos of people for the reason of them being a refugee in a difficult position for own education goals is debatable. Another obstacle in terms of photos are using ones I have received from others in my report, wherefore I should have permission. Nevertheless has this material been useful in the process of the project.

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