

How to design for the quasi-market setting in humanitarian relief:

Lessons from a case study in Ethiopia

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ABSTRACT

A “humanitarian market” for off-grid renewable technologies has emerged and with it a need for well-fitted products and services. A case study from a design project conducted by the authors in a refugee settlement in Eastern Ethiopia during fall 2013 illustrates the challenges of designing appropriate products and systems for this market.

Our case study involves the distribution of ethanol stoves within the Kebribeyah refugee camp. We consider this to be a quasi-market as the criteria of quasi-markets are fulfilled; Quasi-markets are established and maintained by the public sector, services produced in quasi-markets usually implement the objectives of social profitability and welfare, the public sector is usually the subscriber, regulator, and purchaser of the service. Public sector is here comparable to the United Nations and donor countries' role within the customer-supplier relationship.

Even though there are similarities designing for the humanitarian market and the conventional consumer market, there is one significant difference that affects the design process: in the humanitarian market the end-user is not the customer. Not having defined and understood the correlations and differences between what the end-user needs and what the customer wishes to invest in may lead to contextually inappropriate solutions, poor technical performance or products not reaching the end-user. There is a lack of convenient guidelines for designers and product developers to use when designing for the humanitarian market.

In this article we aim to discover the challenges a designer might face in the humanitarian market. As mentioned, there is a gap in the information regarding designing for this market, where the purchaser is not the end-user. We want to use what we observed and the lessons we learned in our case study in Kebribeyah combined with relevant theory and articles to advise designers on how to best go about designing for the humanitarian market.

KEYWORDS: humanitarian market; off-grid energy; Ethiopia; Kebribeyah; design process; quasi-market;

1. INTRODUCTION

1.1 Background

At the end of 2009 there were more than 10 million refugees in the world (UNHCR). People become refugees as a result of war between countries, civil war, persecution from religious or political reason, famine or other natural disasters. About 80 percent of refugees come from developing countries and most refugees remain relatively close to their home region, fleeing to neighboring countries or even within their own country. About one third of the world's refugee population lives in refugee camps. Refugee camps are temporary communities built to provide shelter and aid for refugees (National Geographic, 2013; UNHCR, Displacement - The New 21st Century Challenge, 2012).

Refugee camps are intended to be temporary solutions, with the repatriation or resettlement of refugees as the ultimate goal. However, because of ongoing conflicts most refugee camps end up becoming more or less permanent settlements, often merging with local communities in the surrounding area. In fact, the average refugee spends 17 years living in a refugee camp (UNHCR, UNHCR - The UN refugee Agency, 2009).

Aid given to refugees is paid for by donations from public fundraisers, governments and UN funds. This money is normally channeled through NGOs, the UNHCR or the public sector in the host country (Global Humanitarian Assistance, 2013). One of the environmental officers of UNHCR in Addis Abeba stressed the fact that earmarking donations is one of the big struggles of sustainable off-grid energy solutions for cooking, as they are rarely a priority for the donors. Furthermore, the use of traditional fuels impacts the health of the refugees. Indoor pollution from firewood and charcoal kills more than 2 million people each year worldwide (WHO, 2011).

We are currently working on a project on

off-grid energy solutions for refugee camps and one of the first steps of the research was an eight weeks field study in Ethiopia. The research took a starting point in a case study of distribution of ethanol and ethanol stoves in Kebribeyah refugee camp in eastern Ethiopia. Kebribeyah was constructed in 1991, and today has a population of almost 16,000 Somali refugees (O'Brien, 2005). The camp is run by the United Nations High Commission for Refugees (UNHCR) in collaboration with the government arm responsible for the implementation of refugee protection and assistance activities in Ethiopia; the Administration for Refugee and Returnee Affairs (ARRA). Upon arrival the refugees are provided with basic supplies such as pots and pans, tarpaulins, wood for constructing shelters etc. A non-governmental organization (NGO) called Gaia Association has been providing the households in Kebribeyah with ethanol stoves since 2005 and currently distributes ethanol. Unfortunately the supply of ethanol is insufficient and the refugees still rely on the use of charcoal and collection of firewood in order to cook their meals.

When designing for a different context than the developed world, there are other parameters to take into consideration; meaning traditional design methodology might not be successful. We are seeing an increased focus on designing for the developing market with the emerging of design methodology for this setting, but the same can not be said for the humanitarian market. Although there are similarities between the two, there is one big difference: in the humanitarian market the purchaser is not the end-user. This changes the game, and there is a lack of convenient guidelines to use when designing for the humanitarian market.

1.2 Aim of article

In this article we aim to explore the challenges a designer might face in the humanitarian market. There is a gap in the information when designing for this market and we will use what we observed and the

lessons we learned in our case study in Kebribeyah combined with relevant theory and articles to advise designers on how to best go about designing for the humanitarian market.

2. RELEVANT TERMINOLOGY

2.1 Quasi-markets

Quasi-markets are often known as a situation where the efficiency of the free market is combined with public administration and funding. Quasi-markets are created when the public sector opens its own service production to other producers by abandoning its monopoly and hierarchical way of producing services. The main purpose of quasi-markets is to raise competition between existing or potential providers, which may be private or public, for profit or non-profit organizations (Kähkönen, 2004).

Kähkönen look to other theorists in order to create five criteria that distinguish quasi-markets from conventional markets:

1. Quasi-markets are established and maintained by the public sector.
2. Services produced in quasi-markets usually implement the objectives of social profitability and welfare.
3. The public sector is usually the subscriber, regulator, and purchaser of the service.
4. There may be different kinds of producers in quasi-markets competing with each other (for-profit and non-profit organizations, public and private).
5. The user of the service does not normally pay for service at the point of consumption; money flows between the (public sector) purchaser and provider.

Christopher Lubienski states in his analysis of the quasi-market structure of educational systems that: "Quasi-markets have, in recent decades, become a popular approach with policymakers for addressing delivery, access, innovation, effectiveness and efficiency

problems with state administration of public services, including education" (Lubienski, 2009).

2.2 Humanitarian market

The humanitarian market can be defined as "the market created between humanitarian actors and suppliers to fill the need of staff and beneficiaries" (Nielsen & Santos, Key Challenges of Product Development for humanitarian markets, 2013). Every humanitarian market is heavily represented by international and national non-governmental organizations (NGOs). Other actors include donors, service providers and enterprises that develop, purchase, and distribute goods such as food, shelter, medical equipment, and energy generating devices. (Nielsen & Santos, Designing for multiple stakeholder interests within the humanitarian market: the case of off-grid energy devices, 2013). A humanitarian market emerges in the aftermath of a crisis, such as natural or industrial disasters, national or international conflicts.

In the humanitarian market we define humanitarian customer as the purchaser of the product or system, and the end-user as the person aimed to be using the product or system. This definition will be used throughout the rest of the article.

2.3 Kebribeyah, a humanitarian quasi-market

A refugee camp is normally established and run by the host government, UNHCR, another international organization, an NGO or some sort of collaboration between the former. These actors are providing for their basic needs like food, supplies, tools for cooking etc.

Kebribeyah was established and is maintained by the Ethiopian government in collaboration with UNHCR. NGOs such as Gaia Association are also involved in the maintenance of the camp and its services. The objective of the camp management can be said to be the same as the mandate of

UNHCR: to pursue protection, assistance and solutions for refugees (UNHCR, 2006). Lastly, the different organizations and their donors provide funds; the refugees do not pay for the assistance they receive.

We consider Kebribeyah refugee camp to be a quasi-market as the four criteria of quasi-markets are fulfilled; Quasi-markets are established and maintained by the public sector, services produced in quasi-markets usually implement the objectives of social profitability and welfare, the public sector is usually the subscriber, regulator, and purchaser of the service. As well as the service is not paid for by the end-user but the public sector/purchaser and provider (Kähkönen, 2004).

2.5 Human-centered design

Human-Centered Design (HCD) is a process and a set of techniques commonly used to create products, services, environments, organizations and modes of interaction (IDEO, 2011). The HCD toolkit from IDEO is presenting the three lenses that we need to

see the world through in order to achieve a successful human centered design process; desirability, feasibility and viability. In our design project and case study we have considered this methodology, as well the three factors when looking at other designs in the humanitarian market.

This method is created by the developed world designing for the under-developed and developing world. The perspectives presented might therefore be both biased and not contextually fitted. Furthermore it is not aimed at the humanitarian market and as a consequence will not consider the issue of the end-user not being the customer.

3. METHOD

3.1 Field research: Kebribeyah refugee camp

Approximately six days in total was spent researching in Kebribeyah refugee camp and the surrounding area, divided into two visits. During the first visit the main goal was to understand the end-users need for off-grid

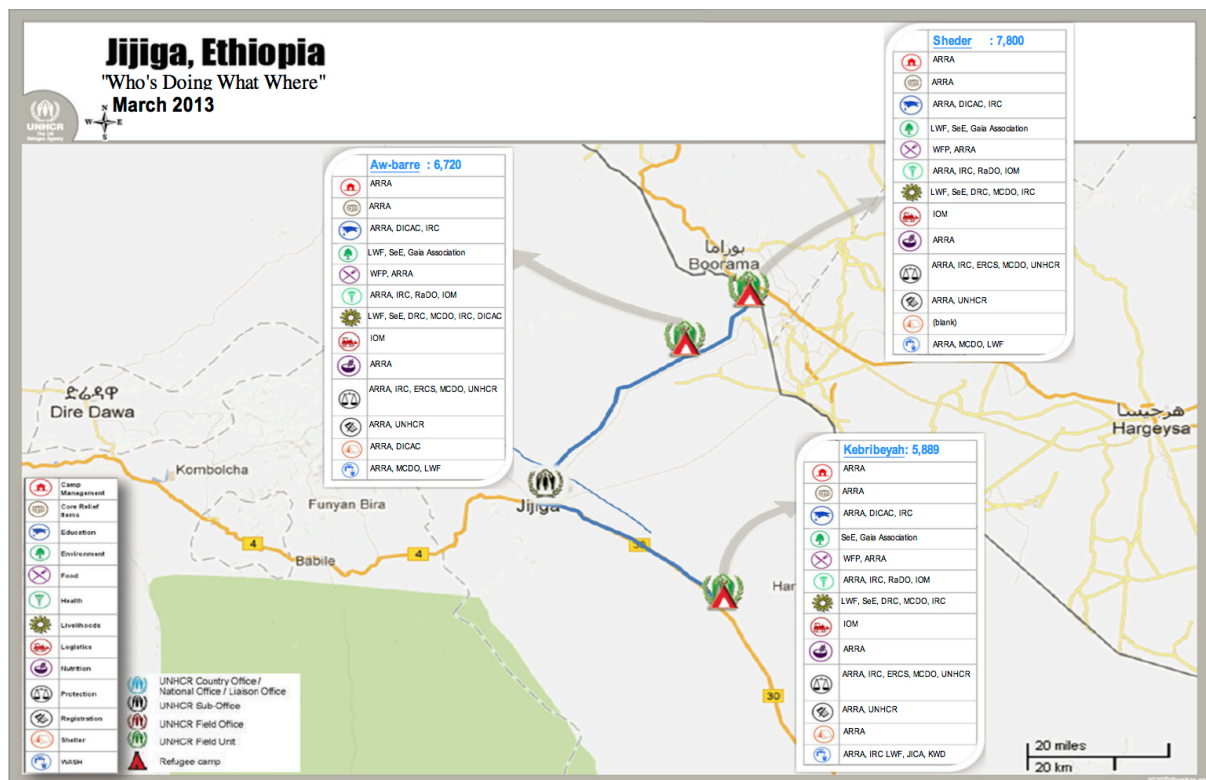


Figure 1: Map of Jijiga area

energy solutions in regards to cooking as well as achieving a greater understanding of their cooking habits, culture and environment. In order to do this we completed five semi-rigid interviews with refugee women, each interview lasting about 45 minutes. Later, a group discussion with three of the former interviewed women was conducted. To better understand the organization of the camp and to map the current energy situation we spoke to key people in the camp, including but not limited to: field staff from Gaia, United Nation High Commissioner for Refugees (UNHCR) and Administration for Refugee and Returnee Affairs (ARRA) officials and incentive workers amongst the refugees. With Abdirizak Mussa-Eid Ardaale, one of the field staff from UNHCR, we conducted a structured interview where we requested him to prioritize what he thought to be most important when implementing a new product in Kebribeyah refugee camp.

For the second trip we visited the two other camps in the area, Sheder and Aw-barre, in addition to a second visit to Kebribeyah. This was to see the similarities and differences between them as well as different projects that already had been or would be implemented. We also observed the refugee women cooking injera, their regular breakfast dish.

3.2 Research in Addis Ababa

The remaining research was mostly done in Addis Ababa, apart from a two days visit to the University of Mekele. In Addis Ababa we met with many different stakeholders, the goal being to map out their work and relationships and collect information within our field of research. These included Horn of Africa Regional Center/Network (HoA-REC/N), Gaia, Danish Refugee Council (DRC), Save the Environment Ethiopia (SeE), local and national governmental agencies and different branches of the UNHCR.

We also participated in a stakeholder workshop on energy for humanitarian relief and development held by Brita Fladvad Nielsen in Addis Ababa. Other participants of

the workshop were representatives from the following organizations: ARRA, UNHCR, Gaia, University of Mekele, Former Women Fuel wood Carriers Association (FWFC), HoA-REC/N and Norwegian University of Science and Technology (NTNU).

3.3 Literature review

To date only a limited amount of literature regarding design methodology for humanitarian markets exists. Our literature review is therefore primarily based on research from similar contexts. We argue that even if this might prove to be helpful, it has its limitations. We hope to widen the search on humanitarian design literature for the future.

4. FINDINGS: CHALLENGES WE OBSERVED IN THE FIELD

4.1 Multiple stakeholder agendas

Over the last decades the humanitarian aid environment has become an increasingly complex and competitive marketplace. A significant number of stakeholders are engaged in humanitarian operations including, but not limited to, NGOs, private sector organizations, inter-governmental organizations and military contingents (Gottwald, 2010). We call this a multiple stakeholder environment and define a stakeholder as any person or organization with an interest in the particular project or that can be affected by choices made regarding the project.

Kebribeyah refugee camp is a good example of a multiple stakeholder environment. The biggest stakeholders being the refugees, UNHCR, ARRA, the local community and government, donors and NGOs like Gaia Association. Other stakeholders that we observed include but are not limited to; the Ethiopian government and citizens, manufacturers of products used in the camp (like Dometic), other smaller NGOs and international organizations such as USAid.

There are some challenges connected to a multiple stakeholder environment, amongst others complex power structures and multiple stakeholder agendas. Understanding these structures in the case of Kebribeyah proved a demanding task. It is our impression that the relationships between the different stakeholders in Kebribeyah are unclear not only from an outsider's perspective, even the stakeholders themselves struggled when attempting to explain the complex power structures.

In particular the relationship between ARRA and UNHCR is challenging to map out. Who disposes of the funds, who makes the final decisions and who run the different services? These are some questions we struggled to understand fully. For instance, in order to be permitted entrance to the camp we needed to clear our intentions with three levels of UNHCR and ARRA separately. UNHCR was always the first office we visited and they decided whether or not they would encourage ARRA to approve our visit.

In addition, deciding which stakeholders should or should not be included at what time was a challenge. All stakeholders have their own "entry point(s) and criteria for participation" in humanitarian operations (Bellenca & Garside, 2013). This is what Nielsen and Santos calls "multiple stakeholder agendas". They state that the increasingly complex stakeholder environment is "an important characteristic of the humanitarian market" and that attempting to satisfy the many different stakeholder agendas may result in "poor technical performance, accountability issues and increased mistrust between stakeholders". (Nielsen & Santos, Key Challenges of Product Development for humanitarian markets, 2013)

4.2 Hierarchic structures within the camp

Ethiopian and Somali culture is fundamentally hierarchical and vertically oriented. (IDMC, 2004; Gundel, 2006). This was apparent in most social settings and formal meetings we

attended. In Kebribeyah we observed these hierarchical structures in many ways. They were present within each organization, within the refugee community as well as shown in the interaction between the refugees and staff from the different organizations.

When conducting our research we got the impression that permissions given from camp officials gave us a "free-pass" to act in ways we normally would consider intrusive behavior, such as photographing the refugees and entering their homes. The refugees seemed to have little authority over these decisions, even if they were not forced to accept visitors they might have felt obliged because of their gratitude towards the organizations providing for them.

Traditionally, clan structure is the main foundation for the pastoral Somali society (Gundel, 2006). Governance in the Somali region of Ethiopia is a complex relationship between state and traditional institutions, such as councils of clan elders (Deveraux, 2006). We have reason to believe these social structures also play an important part in the lives of the Somali refugees in Kebribeyah. This was pointed out to us by one of the UNHCR officials of Somali descent, who advised us that in order to gain support for our project amongst the refugees, involving the elders and the most respected women would be a good move. However, Bloom and Betts argue that there is a fear that participatory methods may enhance existing power structures within communities instead of empowering those who are the most marginalized (Bloom & Betts, 2013).

4.3 Dynamic environments

Humanitarian work is characterized by existing in an unstructured, unpredictable and dynamic environment. Humanitarian crises may emerge or change rapidly and the organizations operating within it need to master operating within this uncertainty. The big challenge might not be the lack of resources, but rather how to use them within these dynamic environments with the best

possible outcome (Mays, Gugerty, & Racadio, 2012).

Prolonged humanitarian crises, where whole populations rely on international financial support, will result in donor fatigue. (Nielsen & Santos, Key Challenges of Product Development for humanitarian markets, 2013) More urgent crises will receive more of the funds, as we observed in Kebribeyah. The UNHCR staff there expressed that the amounts of funds they receive has decreased since the appearance of the war in Syria in 2011, who has forced approximately 2 million people to flee and become refugees (BBC, 2013). This is considered a more acute humanitarian crisis and thus receives more funds.

4.4 Short-term thinking, long-term settlements

Even though refugee camps are meant to be temporary solutions, reality is that most camps become more or less permanent settlements. This is what has happened to Kebribeyah refugee camp, it has existed for more than 22 years (O'Brien, 2005). Even though many refugees have been resettled to other countries, the majority will most likely spend several more years in Kebribeyah.

In spite of this, many of the refugees we met expressed a hope to be resettled to the USA in the near future. One of the women we interviewed had just gotten her application declined and even though some of the younger refugees had grown up in the camp, it seemed they were considering it a temporary home.

Most international organizations working in the humanitarian market operate with annual or biannual budget terms. For local partitions of these organizations, long term planning is therefore a challenge, and one of the results is a decreased will to invest in cost-intensive solutions of high quality (Nielsen & Santos, Key Challenges of Product Development for humanitarian markets, 2013). Services are in general relatively short-term, which implies that humanitarian supply chains mostly are

intended to be temporary (Mays, Gugerty, & Racadio, 2012).

4.5 Building capacities and creating livelihoods

The approach towards designing for the developing market is changing, with increased focus on economical viability. Multi-National Corporations see the developing world as an emerging market, even if the individual consumer has very limited purchasing power. In a new study, researchers from MIT suggest that designers will have more success in the developing market by creating products that enable people to become micro-entrepreneurs. People are more likely to invest in more expensive products if an opportunity for them to create or increase their own income is incorporated. (Yang & Austin-Breneman, 2013). In the case of the humanitarian market, because of its quasi-market features, the buying power lies outside the individual consumer. The idea that products will sell more if they help create micro-enterprises, disappear when there is a centralized buying power and all end-users receive the same products and services. However, a possible scenario can be to create a system within the refugee community that entails micro-enterprises.

The report "Financing for Humanitarian Operations in the United Nations System", a review of funding mechanisms and sources of humanitarian operations within the UN system, points out that capacity building and restoration of livelihoods often goes unaddressed or underfunded by development aid (United Nations, 2012). However, promoting human potential through education, training, livelihoods support and income generation is one of the global strategic priorities of UNHCR (UNHCR, Global Appeal 2012-13).

Refugees come from all parts of society and most of them have capacities that go unused. During our visits to the camps, we observed many refugees who had created their own livelihoods, as well as livelihood programmes

set in motion by UNHCR or NGOs. Some of the refugees owned small shops, others had animals or produced vegetables and one man sold electricity from his own generator. We also encountered people building stoves from old USAid tin cans. Enabling refugees to create a livelihood is also beneficiary for the local community as a whole. Increasing the range of products and enhancing the purchasing power of the refugees will stimulate the local market, thus enabling a more healthy economy.

In the Aw-barre and Sheder refugee camps the refugees, in addition to some food-aid, receive 100 birr (approx. 5.2 USD) per family member per month in order to purchase the goods they need. The refugees we met in these camps seemed satisfied with this system, as it enabled them to make a choice as to what food and other items they would purchase. It is also our impression that this system stimulates the local market, where non-refugees from the local community, as well as the refugees, will come and sell their crops and goods.

4.6 The need for contextually fitted designs

In her article "Engineering in Context: Engineering in Developing Countries" Parsons point out that there are many problems related to "expert assistance" and that there is a "tendency to think that anything you might try is helpful and much better than no help at all". This mindset has been proven malfunctioning many times by failing projects. Parsons also point out that projects fail for a number of reasons, one of them being a lack of ability to take a step back to see the "overall context". Lastly she states "there is a tremendous need for engineers to look more deeply at what they plan to remedy. Otherwise, their solutions only begin to scratch the surface" (Parsons, 1996).

Even though an increased focus is being put on this issue, it can still be observed in the humanitarian market in Ethiopia. Many of the technology-developers we encountered seemed to have a quite narrow idea of

"context", limiting it to the "where" of use. This is in contrast to the "contextual design methodology", developed by Karen Holtzblatt and Hugh Beyer, a method that focuses solely on understanding end-user needs, tasks, intents and processes (Beyer & Holtzblatt, 1997).

Our observations indicate that a broader understanding of "context" is needed, especially when designing for unfamiliar environments. Matthew Grant Green supplies this in his work "Enabling Design in Frontier Contexts: A Contextual Needs Assessment Method with Humanitarian Applications", where he defines context as "the circumstances or setting in which an object occurs, and which influences its value". (Green, Jensen, Seepersad, & Wood, 2009).

He presents three categories in which he divides factors influencing customer attribute preferences: "(1) usage context factors that covers the application and environment in which the product will be used such as task frequency, weather and infrastructure, (2) customer context factors, which include consumer values, practices, and demographics such as wealth and education level, and lastly (3) market context factors, which include aspects of competing products." This gives a more holistic understanding of the context in which a product is to function (Green, Jensen, Seepersad, & Wood, 2009).

Many different products have been attempted introduced in Kebribeyah. Common to them was their level of adaption to context was the ultimate test to their success or failure.

Solar cookers are a technology under development, and it is based on using a reflective material to gather radiation from the sun in order to heat food. There exist many different types of solar cookers, ranging from relatively cheap and small box cookers to big, expensive dish types. They are all intended for areas with much sun, like

Kebribeyah. A couple of years ago UNHCR tried to implement a cardboard type solar cooker, but due to the heavy winds that frequent Kebribeyah, the majority of the solar cookers blew away within the first few days. The dish types have experienced other kind of problems. In other camps there have been examples of refugees taking the cookers apart and selling the materials. Furthermore, if the cookers are expensive and big, like the dish types are, they will most likely have to be shared between families. We were told this has functioned well in refugee camps for Eritrean refugees, but the general opinion amongst the UNHCR staff was that this would most likely not function well in Kebribeyah, as the Somali refugees prefer cooking inside their own home with their own family.

The ethanol stove introduced to Kebribeyah by Gaia Association, the CleanCook stove was originally designed for camping use. It is well adapted to the cooking habits and culture of the refugees, because cooking on an open flame is their tradition. The stove set on ground level, which is well suited for the Somali women, as they normally sit on the floor when they cook. However, one problem with the design is that compared to what can be produced or repaired in the area around Kebribeyah, it can be characterized as technology- and cost-intensive. Not all parts can be locally repaired or replaced. Still the biggest problem lies in the supply chain of ethanol; there is not sufficient ethanol on the market.

4.7 The advantages and disadvantages of pilots

When a product or system is developed to be universally adaptable and not for a specific context, pilot studies of product or system in the specific context is useful. This is a relatively cheap way of understanding whether or not a product should be implemented on a large scale. The following example shows the values of having small pilots before introducing products on a large scale.

The Save80 stove is designed to save 80

percent of firewood. The system consists of a specially designed stove with pots that fit perfectly. It also comes with the wonder-box, a Styrofoam insulation box designed so that the user will heat the food on the stove and then put the pot into the wonder-box in order to finish the cooking process. 10 Save80 stoves and wonder-boxes were distributed to chosen families in Aw-barre refugee camp. The project was terminated for several reasons. Although the system is very effective, it is not adapted to the cooking culture and habits of the Somali refugees. Some of the reasons mentioned by the refugees for why they did not use the stove was that the input hole for firewood was too small, the stove produced too much smoke (the Somalis prefer to cook inside), the stove is too tall (the Somalis prefer to sit on the ground or on a short stool) and they couldn't use their regular pots and pans.

However, UNHCR officials expressed discontent on the number of pilot studies (and other kinds of research) conducted that did not evolve into a permanent solution. "Research projects and pilot studies are great, and we highly encourage them, but we would like more of this to turn into something useful for us", one UNHCR official stated.

4.8 What the end-user need vs. what the humanitarian customer want

When designing for the conventional consumer-market, part of the motivation for having a user-centered design process is to create well-functioning products that the end-users will genuinely want to pay for. Designs that are not desirable for the end-users will not sell and will be considered failures. But when the end-user is no longer the customer, as is the case in the humanitarian market, this part of the motivation is no longer present.

Today we consider there to be a gap between product development enterprises perspective and the one of the end user. Nielsen and Santos' article consider the top priorities of a product from the product development

enterprises point of view to be safety, manufacturability and robustness (Nielsen & Santos, Key Challenges of Product Development for humanitarian markets, 2013). Whether that is the viewpoint of the end-user is uncertain. Further research should therefore be done on end-user needs in humanitarian market.

4.9 Sustainability

When Kebribeyah refugee camp was established in 1991 (O'Brien, 2005), the priority of UNHCR and the government was to cover the basic needs of the refugees: food, water, shelter, sanitation and health care as in all crisis situations (UNHCR, Global Appeal 2012-13). Other, more long-term solutions were not a main concern. In order to cook their food, the refugees harvested wood from the surrounding trees, which has led to complete deforestation of the area. As a result of the deforestation, fuel for cooking has received more attention, and for the last 7 years Gaia Association has worked on providing ethanol as an alternative fuel for cooking. Unfortunately the supply of ethanol does not nearly cover what is needed, so the refugees still rely on collecting firewood.

Short-term budgets and thinking results in a decreased focus on long-term sustainability partly because the long-term impacts are difficult to measure. Complex stakeholder environments and relations result in unclear roles as to where the responsibility of securing sustainable solutions lies. This is apparent in the responses from the NRC shelter experts, interviewed by Nielsen and Santos in the article "Designing for multiple stakeholder interests within the humanitarian market: the case for off-grid energy devices". Some of the problems they repeated were: "We don't have sufficient knowledge of what sustainability means in this context or long term benefits of such products and projects in order to choose"; "The host government is responsible for the waste management, not us" and "We have insufficient resources to monitor and follow up for test results and effects". It is apparent that responsibilities

are vague and knowledge for sustainable thinking is missing.

5. REFLECTIONS ON WORKING IN THE FIELD

5.1 Bias

Creating an environment completely free of bias is a challenge. In the case of our field-study in Kebribeyah there were many parameters that affected the outcome of our studies.

We used translators from Gaia, ARRA and UNHCR that were all familiar to the refugees. This seemed to confuse the refugees as to what was our role. This might have affected their answers, as the refugees may have answered in the way they assumed would benefit them the most. Also, the translators were mostly men, and we got the feeling that some of the women were quite uncomfortable having not only us, but also them in their homes and kitchen.

In addition the translators were not trained interpreters and should have been better briefed by us beforehand on how to act towards the refugees in order to not compromise our results. It seemed they did not interpret every word of the refugees' responses, but rather gave us a summary of what was said. Occasionally we needed two interpreters as Somalis and Ethiopians speak different languages.

"Appropriate behavior" in any given situation is defined within the frames of human interaction. The more similar the people interacting are, the more intuitive is the understanding of these frames and how to act and react within them. On the other hand, with people from very different backgrounds interacting, how to behave appropriately and analyze reactions becomes a challenging task. Body language, spoken language as well as what is "read between the lines", varies between peoples and cultures and thus provided us with little help

when we were interacting with the refugees of Kebribeyah.

5.2 Participatory design

During the field-study in Kebribeyah, we attempted a participatory design session with one of the refugee women. The value of the results can be discussed, but it was apparent that other skills are needed in order to conduct participatory design with participants from an unfamiliar culture especially when interpretation is needed. Understanding the culture of the participants and having a clear idea of the context in which the participatory design session will take place might increase chances of such methods to be successful. In our case, we tried to get the refugee woman to help us identify key aspects of her cooking habits as well as how she wanted a stove to perform through drawing. The woman was reluctant to engage in the process and was not particularly interested in drawing. In addition, trying to engage someone who is not easily engaged when not speaking directly to her, but through an interpreter, was another challenge. Not all people are used to state their opinion. In a context where the end-user has little power over their own livelihood and way of living a general belief that their contribution will not be taken into consideration was apparent.

5.3 Ethics

During our field study in Kebribeyah we got the impression that it was only the permission of ARRA/UNHCR office and field staff that was needed in order to conduct research that affected the refugees. In a situation where the refugees have lost much of the jurisdiction over their own daily life and future, further preventing autonomy may create a situation where they are viewed and treated like objects rather than subjects.

We felt that we were put in an ethical dilemma, which we did not feel we had appropriate tools to handle. Instead we relied on what we would call common sense and

sensitivity, which we have no reason to define as either appropriate or inappropriate.

6. DISCUSSION

In this section we will further discuss some of the challenges we faced and observed during our field-study in Ethiopia that are relevant for designers. From this we will give some suggestions for designers operating within the humanitarian context.

The first challenge we identified was that of the multiple stakeholder environment and their individual agendas. For a designer working in the humanitarian market, it is a demanding task to understand who needs or wants what, who makes the final decisions on purchases and who should be informed about what and when. Mapping out the stakeholders and the connections between them in addition to what their relation to the designers project might be, is therefore a good idea.

When attempting to understand the stakeholder relationships it is also of importance to consider the hierarchical structure between them. In order to gain access to information regarding end-users needs, the perspective of the humanitarian customer should be understood. Our experience is that in these types of environments, contacts are key. We were able to visit the refugee-camps solely because of our connections to Gaia and UNHCR, and we are of the belief that without these contacts we would not have been permitted to enter the refugee camps as easily.

The hierarchical structures within the camp management and refugee relationship also raised some ethical discussions. Should the designer as an outside party respect and adapt to the norms and rules he encounters, even if they compromise an autonomous design process?

Another challenge when designing for the humanitarian market is short-term thinking in long-term settlements. This is applicable for

camp management as well as the refugees themselves, who often consider their situation temporary. In some cases this might lead to them selling or not taking care of the product they receive. The humanitarian customer, on the other hand, could further be of the belief that the refugee settlement is temporary and thus not be willing to invest in more cost-intensive products that take long-term sustainability into account. Many products available on the humanitarian market are not built to last, only to provide immediate aid. It seems sustainable thinking is solely the task of the designer.

A way to prevent this short-term mindset is to assist the refugees to create their own livelihoods, using the capacities available amongst the refugees as well as the local community to create what is needed locally instead of relying on aid and donations. Valuing the knowledge already present result in more sustainable products and services that benefit more people. Local production means strengthening the local market, and brings with it the possibility of local maintenance. The downside of local production is often the lack of available technology, which means many products can no longer be mass-produced, which in turn might imply an increased price. In the case of Ethiopia import taxes are relatively high, and importing materials and machinery needed for production will increase price further. Wages on the other hand are low and will contribute to decrease production costs. It is apparent that when deciding on whether or not local production should be considered, pros and cons in relation to context should be assessed.

This raises the question of when we can consider a design to be contextually fitted. We have already pointed out in section 4.2 that we see the need for a broader understanding of context, including the work of Matthew Grant Green: usage context factors, customer context factors and market context factors. Our opinion is that without considering all three aspects of the context, a design cannot be called contextually fitted.

The scale of the context, or rather “how deep to dig” should also be regarded. In the case of Kebribeyah, can we consider stoves to be contextually fitted if they are designed for “the refugee setting”, for “Ethiopia”, for “the Somali region” or “Kebribeyah”? The cooking culture and habits of the Somali refugees are very similar to the Ethiopian cooking culture apart from one thing: the injera, which is considerably smaller for the Somalis than the Ethiopians, who cook injeras of nearly 60 centimeter in diameter. This implies that the stoves needed for Ethiopian cooking are not the same as the ones for Somalis.

A participatory design approach is often used to extract information and knowledge from a community, even though the result of this research could only be for the benefit of project planning and upwards accountability to donors and not contribute to the community directly (Bloom & Betts, 2013). However, most projects are reliant on and will greatly benefit from a thorough information gathering process in order to provide a detailed problem description. Processing the gathered information in a good way will also help designers provide the most fitting solution and thus hopefully avoid the problem of failing pilot projects (Aurich & Fuchs, 2004).

The HCD IDEO toolkit emphasizes that for a human centered design to be successful there are three lenses that need to be fulfilled: desirability, feasibility and viability (IDEO, 2011).

For the humanitarian customer a product is desirable if it is necessary, functional and relatively cheap. These are rational criteria for choosing the designs they consider to be most appropriate. For the refugees on the other hand, there are additional criteria for when a product is desirable, such as appearance and other more irrational facts. The evaluation of whether or not a design is technically or organizationally feasible lies neither with the refugees nor the humanitarian customer, it is determined by the surroundings and existing possibilities.

Financial viability changes according to perspective, it is different from the end-users view and the one of the humanitarian customer. In quasi-markets the perspective of the end-user is negligible. The refugees will receive products according to what the humanitarian customer decides to purchase. If the product is not viable he will simply receive another product, while the humanitarian customer relies on the designs being financially viable and in some cases even profitable. In other words, we have two big downfalls when implementing new products in the humanitarian market: desirability and viability.

In many quasi-markets a situation occurs in which it is considered easier and cheaper to replace rather than to repair products. Within the humanitarian market this is a result of a complex financing model and products that are not contextually adapted in the way that the skills, materials or machinery needed for repair is available in the local community. Making sustainability a priority is a challenge in the humanitarian market, where there seems to be confusion as to whom bears the responsibility for this. In many ways we therefore believe that sustainability should not have to be stressed from the customer, but be a matter of course for the designer.

7. CONCLUSION

In this article we have discussed some of the challenges a designer meet when designing for the humanitarian market, in the light of a case study we performed in Kebribeyah refugee camp in Ethiopia. We have discovered a gap in design methodology literature regarding how to design for these types of context.

By defining the humanitarian market as a quasi-market we wanted to create a greater understanding relative to what it entails to be a humanitarian market. From this we hope to better enlighten designers and help them contrive ideas that benefit all relevant stakeholders, including end-users and host community stakeholders.

Further, we would like to give some recommendations on how to design in similar contexts, and what the designer should take into consideration.

8. RECOMMENDATIONS

When designing for the humanitarian market the aim of the designer should be to design sustainable solutions that have a holistic approach on being contextually fitted, while they are desirable for the humanitarian customer. As of today, there are no design guidelines directly targeting designing for the humanitarian market. We believe many people, including designers, humanitarian customers and refugees, will benefit from such a guidelines. Further research should be conducted in order to create these tools.

In the absence of such tools, the designer will need to adapt the already known design methodology in order to try to obtain the best results. In this process we believe certain factors are often not included or considered, resulting in poorly performing products that in some occasions do not reach the end-users.

Through our case study we have identified several issues regarding designing for the humanitarian market. Some of these we have translated into recommendations for other designers wishing to engage in the same market.

- Understand the context.
 - o Assess end-user needs and wants
 - o How are the surroundings? Climate?
 - o What materials / production processes / knowledge is available
 - o Analyze the existing market. How can you work with this market?
- Map out the stakeholders, their connections and agendas
 - o Who can be useful collaboration partners?

- Find out what the humanitarian customer wants
 - o Try to understand that what he thinks the end-users wants/needs might not be the case
- First hand information is always better
- Consider the financial prospects
- What capabilities exist? Is creation of livelihoods a possibility?
- How can you create a sustainable design within this framework?
 - o Analyze the life cycle of the design
 - o Can it be repaired locally?
- Consider feasibility, desirability and viability from different perspectives

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Figures and illustrations:

Figure 1: UNHCR, retrieved November 29, 2012, from <http://data.unhcr.org/horn-of-africa/region.php?id=11&country=65>