

# LUM

## Guidance for Asylum seekers

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**Project title :** Lum (Light on/for Asylum)

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## **Project summary :**

“Lum” is an application for smartphones to guide asylum seekers when they need help and protection. This tool facilitates the access to associations for asylum seekers. The project is developed until a final prototype (high fidelity). It was built with associations and asylum seekers located in France, and follows UX methods working processes.

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# 1. Introduction

“Lum” is an application for smartphones to guide asylum seekers when they need help and protection. Our project focuses on the people who left their home country because of critical circumstances (wars, conflict, persecution, climate changes, poverty) and came to Europe. We designed a digital solution based on the insights we obtained mainly from this population.

This project presents all the steps to build this application for smartphones using UX design methods. We organised our work in the following parts : Investigation, Definition, Ideation, Prototyping and Evaluation.

Refugee crisis is one of the crucial matters of our time. In 2019, the forcibly displaced people in the world represented 79.5 million individuals.<sup>1</sup> By working on that topic, we wanted to learn about the context of the crisis and about the individuals involved. We wanted to make a humble contribution under our scope and resources.

We discovered all along the project the difficulties that forcibly displaced people have to face. Their troubles start in their home country, continue during their journey, and after, once they are in Europe. We learned that having a smartphone is essential to them. It allows them to communicate and find information. That’s why we decided to build a solution for this device, in order to reach them. Our intention was to create a tool which could help them and simplify their situations.

The refugee status opens the right to stay on a territory, and is delivered by the state. It implies protection and integration. To grant refugee status, an individual has to request asylum. That’s why all this project is focused on asylum seekers.

States, NGOs, and associations are the stakeholders to manage migration. They were our principal sources of information. We also could meet asylum seekers with the help of social workers. We focused on the west of France because the responsible of the project was living there at this moment (due to the pandemic situation).

Our approach was to be observers and we took our decisions based on our insights. We met forcibly displaced people to try to understand their stories, situations, and needs.

We can attest that the refugee crisis is a complex, political and sensitive matter. It involves people with many different cultures, languages, journeys, and reasons to leave their home

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<sup>1</sup> This point is detailed at the beginning of the Investigation in the Desk Research.

country. Each person is unique, each case is particular. However, as the crisis is global, this population is classified in categories.

Migrants, forcibly displaced people, exiled people, refugees, asylum seekers. There are many designations to name the individuals concerned by the migration crisis. We found during our research that there are several ways to name this population. We use these appellations all along the project because the primary need of these people is common. One day, they leave their home, and expect a better future.

However, we focused on asylum seekers because it's the category of people who are the most vulnerable because they don't have a status yet. They have to launch a request for refugee status and wait for a decision from the state.

"Lum" is the end of the word Asylum. It recalls "lumen" in latin, which means "light". The intention of this project is to put light on asylum, to "illuminate" the path of asylum seekers.

## 1.1 Context

People migrate for different kinds of reasons (work, family, education, economical issues, climate changes, wars, conflicts). Anybody can be a migrant one day. We learned that the arrival of forcibly displaced people to Europe was particularly intense in 2015. It corresponds to the emergence of wars and conflicts in the Middle East (Iraq, Syria, Afghanistan), and Africa (Mali, Sudan, Burkina Faso, Congo, Mozambique, Ethiopia).

Forcibly displaced people move because they are in danger. This population regroup : refugees, asylum seekers, stateless people, returnees, internally displaced people.<sup>2</sup>

All these designations are status. Refugee is a status. A person requests asylum in a host country. He has to prove that he had to flee his home country. Refugee status allows protection, right to work, access to services and aids. It's the first real step towards integration in a society.

An asylum-seeker is someone who tries to obtain the status of refugee, which involves a long path of administrative procedures. We interviewed social workers who support asylum seekers. We understood that if an individual is not accompanied by an association, it's almost impossible to become a refugee. The administration procedures are too complex to do it alone. Consequently, we understood that the associations have a central role.

The European Commission and the United Nations High Commissioner for Refugees (UNHCR) were our principal sources of information for this project.<sup>3</sup>

Over the past three decades, the number of people who had to flee their home country has doubled. Since 2013, particularly since 2015, there has been a high number of asylum applications, notably in Europe. According to UNHCR, by the end of 2019, the number of forcibly displaced people in the world was 79.5 million. There were 16 million new asylum-seekers in the last decade. Europe registered 9.2 million asylum claims between 2010 and 2019.

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<sup>2</sup> The definitions of each category are available in the lexicon

<sup>3</sup> European Commission, "Statistics on migration to Europe", <[webpage](#)>  
Eurostat, "Asylum statistics", <[webpage](#)>

European Parliament, "Asylum applications in the EU", <[webpage](#)>

UNHCR, "GLOBAL REPORT 2019", <[Report online](#)>, "GLOBAL TRENDS FORCED DISPLACEMENT IN 2019".

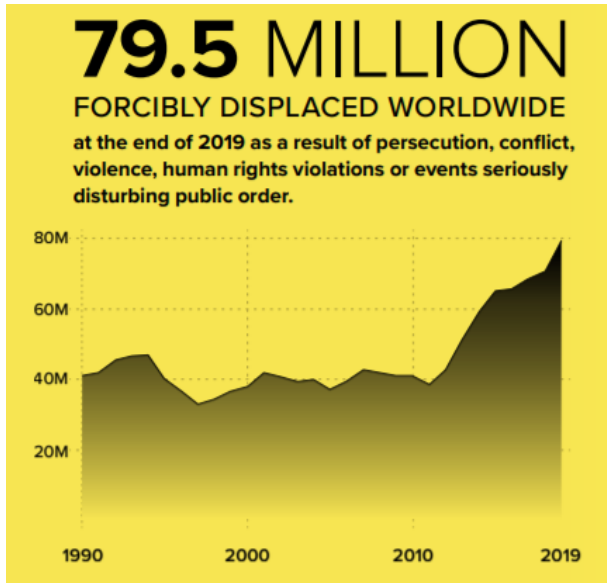
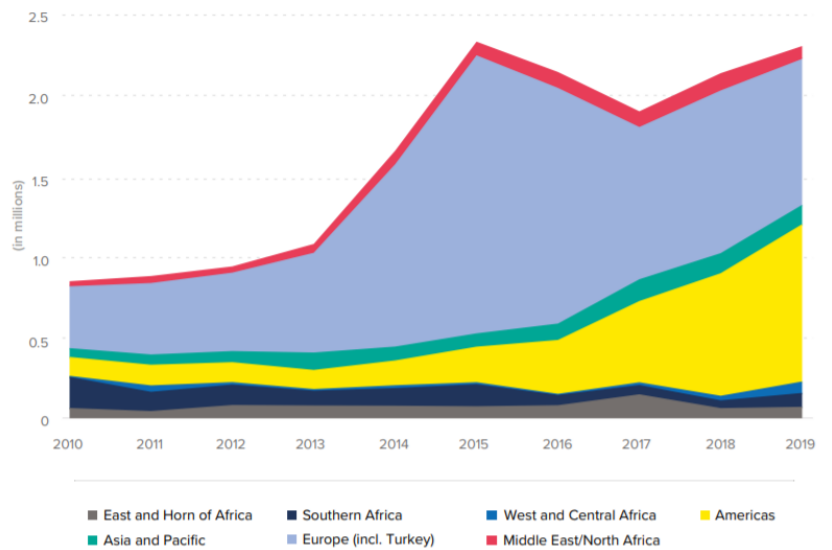


Figure 16 | Asylum applications registered by region



[Figures 1, 2. UNHCR , “GLOBAL TRENDS FORCED DISPLACEMENT IN 2019”, page 2, 38. <Report online>]

[ END DECEMBER 2019 ]

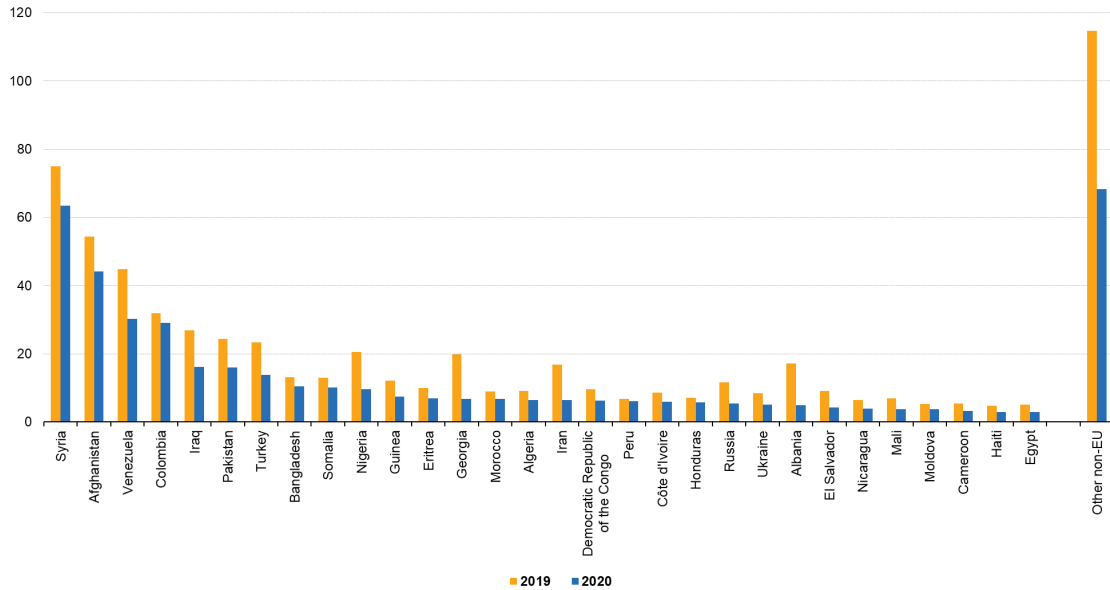
	Africa	The Americas	Asia and the Pacific	Europe	Middle East and North Africa	TOTAL POPULATION OF CONCERN
Refugees	6,348,744	592,892	4,133,666	6,543,455	2,602,424	20,221,181
Persons in refugee-like situations <sup>(1)</sup>	-	108,760	48,659	26,967	40,332	224,718
Total refugees	6,348,744	701,652	4,182,325	6,570,422	2,642,756	20,445,899
Asylum-seekers	529,570	1,902,133	212,396	<b>1,242,168</b>	263,586	4,149,853
Returned refugees <sup>(2)</sup>	211,676	31	10,361	58	95,081	317,207
IDPs protected/assisted by UNHCR <sup>(3)</sup>	18,511,592	8,295,002	3,170,095	1,983,659	11,543,014	43,503,362
Returned IDPs <sup>(4)</sup>	4,234,467	-	127,128	165	982,033	5,343,793
Stateless persons	974,988	4,052	2,284,461*	527,959	370,519	4,161,979*
Others of concern <sup>(5)</sup>	2,540,697	1,165,309	632,492	1,761,024	41,166	6,140,688
Venezuelans displaced abroad <sup>(6)</sup>	-	3,582,203	-	-	-	3,582,203
<b>TOTAL</b>	<b>33,351,734</b>	<b>15,650,382</b>	<b>9,505,943</b>	<b>12,085,455</b>	<b>15,938,155</b>	<b>86,531,669</b>

[Figures 3, UNHCR , “GLOBAL REPORT 2019”, page 68. <Report online> ]

According to UNHCR, asylum seekers in Europe were 1.242.168 at the end of 2019. It represents the people who arrived in Europe during these last years, waiting for a decision regarding their refugee status.



**Top 30 citizenships of first-time asylum applicants (non-EU citizens), EU, 2019 and 2020**  
(thousands)



Source: Eurostat (online data code: migr\_asyappctza)

eurostat

[Figure 4, Eurostat, statistics explained, "Citizenship of first-time applicants: largest numbers from Syria, Afghanistan, Venezuela and Colombia" <[Website](#)> ]

People asking for asylum in Europe are coming from all continents. From Africa (Mali, Nigeria, Somalia, Guinea, Eritrea, Ivory Coast, etc), Middle East (Syria, Turkey, Iraq, etc) and Asia (Afghanistan, Pakistan, Iran, Bangladesh, etc), and from South America (Venezuela, Columbia). The same information is exposed in the reports of UNHCR.

The European Commission, reported in a document called "ATLAS OF MIGRATION 2020"<sup>4</sup> 631.570 first time applications for asylum in 2019, in Europe. We learned that 47% of the demands were rejected.

Based on the data we found, we can affirm that :

- There has been a high amount of requests for asylum in Europe in the last decade and the trend does not seem to reverse for the future.
- Almost half of the asylum applications were rejected by european states in 2019.

<sup>4</sup> European Commission, JRC Publications Repository, (2020). "Atlas of Migration - 2020". <[Report](#)>

## 1.2 Problems

To better understand the situation of asylum seekers, it became necessary to contact associations because they were our entry point to reach these individuals.

We were helped by four associations<sup>5</sup> : **CAMO** (Migrant assistance collective in Ouistreham, Normandy), **France terre d'asile** (support for asylum seekers and defense of the right to asylum in France), **Coallia** (accommodation and administrative support for the asylum application procedure), **CADA Grand Dax** (accommodation and administrative support for the asylum application procedure).

When we asked for more information, we identified the following problems in the testimonies we received :

- Asylum seekers have to find the right association depending on their situation, and it's not always easy for them to locate the places where they can receive support.
- Associations do not always have enough resources to accompany the large number of people in need.
  - Consequently, some people are left behind and are not accompanied. With no support, it becomes almost impossible to obtain a legal status.
- The administrative procedures are very long (1>4 years) and complex.
  - Some individuals get discouraged, renounce and disappear.
- The language is one of the important issues for asylum seekers. In most cases, they speak the language of their home country which is different from european languages.
- These populations are coming from other continents, so they have to understand the codes of another culture. They have also to adapt themselves quickly to this new environment.
- To grant refugee status, they have to prove their reasons to migrate, that they were in danger, and consequently they have to tell their stories.
  - Some people don't want to explain their stories because they are traumatized. They don't want to think about their past or what they went through.

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<sup>5</sup> Websites : [CAMO](#), [France Terre d'asile](#), [Coallia](#), [CADA Grand Dax](#)

We learned that the associations are the principal places where these individuals can find help and support. That's why our project wants to reinforce their visibility and access. If more individuals reach associations, they can receive guidance and support. Consequently, they have more opportunities to build a better future.

## 1.3 Opportunities

This project gave us the chance to learn about the refugee crisis and to meet asylum seekers.

We think it's possible through research and design to contribute to helping vulnerable people. UX Design has the mission to provide the best experience as possible to the users of a product. It was the opportunity to work on a social issue and brainstorm about how technology can be a support in that matter.

We tried to base our investigations and productions as much as possible on a human centric approach. Our main motivation was to apply chronologically different methods of UX design to create a final useful and inventive tool. We based our decisions on data, interviews and tests, and materialized our results in a final prototype.

This project involved contacting associations. It was imperative to collect information about their activities, operations in order to understand how the legal system works. They were also our bridge to reach our future users.

Indeed, one of the most interesting (and difficult) aspects of the project is to reach the population of asylum seekers. Consequently, we had to contact associations, present the project, our goals, and defend our approach. Some social workers agreed to help us and gave us the opportunity to communicate with asylum seekers at different moments of the project.

# 2. The project

## Introduction

In this section, we define the project and specify its different steps of design : Investigation, Definition, Ideation, Prototype and Evaluation.

### 2.1. Proposition

**Lum. Guidance for asylum seekers.**

#### Description

An application for smartphones to facilitate access to associations for asylum seekers.

This project will be developed until a prototype (high fidelity).

The project area is Europe and was built with associations and asylum seekers located in France.

One of our objectives was to take the scalability of the project into account. We wanted to build an approach which could start locally, and then be replicated regionally, nationally or in another european country.

#### Target audience

##### Primary Users

- *Persons who will interact directly and oftenly with the platform.*
  - **Asylum-seekers or Refugees**

##### Secondary Users

- *Persons who will interact occasionally with the platform.*
  - **Social workers** in associations (employees or volunteers)

## 2.2 Goals

To expose and confirm the objectives of the project, the SMART method has been deployed. We verified if each goal was specific, measurable, achievable, realistic and if it could be achieved in time. The following information explains the issues we detected to be able to design a solution.

### Problems of our users

Based on our previous observations, we noticed that asylum seekers have troubles to :

- **Access to associations**
- **Communicate with social workers (languages and understanding of the new environment)**
- **Understand and launch the procedures for asylum**

### Objectives of the project

Consequently, this project will try to provide a solution to :

- **Find easily an association in accordance with the needs of the user**
- **Simplify how to reach and contact an association**
- **Facilitate the communication and the cultural barriers (language, understanding)**

## 2.3 Methodology

The project is a combination of **three productions** :

- *The master's memory (this document and its annexe)*
- *The presentation of the project (on video)*
- *The product : the application for smartphones (an interactive prototype)*

The main **stages** of the project are :

1. **Investigation**
2. **Definition**
3. **Ideation**
4. **Prototyping & Evaluation**

# 1. Investigation

In this section we present the context of the refugee crisis in Europe. We used data to detail our primary group of users : asylum seekers. We tried to define who they are, what their story is, and how they reached Europe. We also wanted to learn about their use of technology.

We tried to have a better understanding of their situations and current needs to dress a first representation of them through the proto personas of our primary and secondary groups of users. These archetypes helped us to interview different people corresponding to our target audience. By doing interviews, we wanted to confirm and refine our knowledge about :

- The profile of our primary group of users
- The procedures for asylum in France
- The role of associations and their activities with asylum seekers

To be able to :

- Get a better understanding of the needs of our target and the answers we could potentially provide with our product.

The section of the investigation contains the following methods :

- A. **Desk research** : study of documents (reports, documentaries, articles)
- B. **Proto-personas** (to represent our target audiences)
- C. **Interviews** (with social workers, asylum seekers or refugees)
- D. **Benchmark** (comparison of existing tools used by asylum seekers)

# 2. Definition

In this section, we could start to define asylum seekers by using the information we obtained in the previous phase. We wanted to reflect our understanding of who they are, and the difficulties, needs and expectations they could have.

We started to define concretely the functions and the opportunities of our future product.

In this section, we used the following methods :

- A. **An empathy map** (to reflect what do they do, feel, see, think)
- B. **A storyboard** (to express visually the journey of an asylum seeker from when he had to flee until when he obtains a decision for his status)

- C. **An experience map** (to detail the scope of our project and explain asylum procedures in France)
  - D. **Personas** (to express our insights and materialize these people into three characters)
- 

### 3. Ideation

In this section, we identified some opportunities for the project. We started to imagine our users in their context of using our product. We imagined how we could help them in their context by using the app. Subsequently, we defined the design requirements for our product. We determined the functions and characteristics our product should provide to reach the needs of our users. Our goals were to :

- Detail the context of our users
- Represent the reasons of using our product
- Develop and visualize the functions of the applications
- Express how the user could behave, feel or wonder.

To be able to :

- Identify our design requirements by explaining the functions of our product
- Define how we could propose a great user experience in the app
- Anticipate how our app should react in terms of interaction

We used following methods :

- A. **Scenarios** (we imagined our personas using our product in different situations)
  - B. **User journeys** (we represented visually the story of our personas accomplishing the tasks written in our scenarios)
  - C. **Design requirements of the product** (we listed the functions of our product to meet the needs of the users)
-

## 4. Prototyping & Evaluation

At this stage, we started to design the interaction between our users and the product. This section presents all the processes to build the final product. From the information architecture to the final interactive prototype. We separated this section into four steps :

### 4.1 Information Architecture

Now that we identified our functions, it was necessary to establish the available information in the product. For that reason we defined, listed our content and tested it with users, to be able to :

- Define how to organize the information (text, image, icons) in the product
- Detect the behaviors and expectations of our users regarding the information
- Provide a coherent understanding of the product with an efficient usability

We followed these methods :

- A. **Inventory** of the **content** and classification
- B. **Card sorting**
- C. Content tree (first version)
- D. **Tree testing**
- E. **Content tree** (final version)

### 4.2 Sketch the interactions

At this moment of the project, we identified our content, created categories and built the navigation into the app. We took our decisions on the basis of the results of a card sorting and a tree testing of our participants (asylum seekers). We had defined the principal tasks accomplished by our users in the future product. Consequently, we arrived at the moment of sketching the interactions. We wanted to :

- Have a vision of the path our user could follow when they will realize a task
- Detect when the users take a decision
- Sketch a first representation of our interface
- Guide the user by using visual representations (icons) as much as possible

To be able to :

- Determine if some tasks generate difficulties or pain points to our users
- Determine the organization of our content in the space of a screen for smartphone



- Reflect how the user could find the information with the navigation we built
- Provide a design as universal as possible (by avoiding text and language issues)

In this part are presented :

- Flow charts** (the paths of each task from its beginning to its end)
- Sketches** (drawings on paper of a primary version of the interface)
- Wireframes** (low fidelity prototype to modelize digitally our interface by using the software Figma)

### 4.3 Test the prototype (low fidelity) with our users

Sketching the interaction helped us to build a prototype (wireframes version). We designed the connections between the screens of our product and tested it with our target audience. By doing the evaluation with users, we wanted to :

- Measure the usability of our product through different tasks
- Assess the effectiveness and accessibility of our prototype and its functions
- Observe the understandings and reactions of our participants when they interacted with the prototype

To be able to :

- Determine if our design was adapted to the needs of our audience
- Check the comprehension of the information (text and images)
- Detect the level of the difficulty to execute a task
- Evaluate if our proposition was accessible, universal
- Collect insights to modify the prototype for its elaborated version

### 4.4 Final prototype and evaluation

The last part of the project is about taking the results of the tests with users in consideration, in order to build a coherent final prototype. It became also necessary to decide about the graphic design of the application. Finally, it was highly recommended to also apply an ultimate evaluation to present the interactive prototype in its better version.

Consequently, we focused on :

- How to express the values and objectives of the product by its graphical identity
- Detail the prototype (content, images, principal screens of the available functions)
- Verify if we met the needs of our users (in terms of efficiency and usability)

## Additional comments

All the stages of the project were organized in the following planning of work. We defined a number of working hours to dedicate to each part in time, from 02/17/2021 to 05/28/2021.

In hindsight, we can testify that the section of the investigation generated more time than we expected. The principal reason is the complexity of the topic. It was important to us to enter into details, to try to understand the context of the refugee crisis and the people concerned.

At the beginning of the project, we also dedicated a large part of research about solutions using blockchain technology in a humanitarian context. We found captivating information and ongoing projects based on that matter. However, in view of our time and resources, we decided to abandon this dimension. That's why we only mention this point in our final conclusion, as a future opportunity for the project. We left the references in the bibliography because we think these discoveries are relevant in terms of curiosity and knowledge.

In addition, we can add that we didn't identify the need of contacting associations from the beginning. It caused some uncertainties at several moments of the project. Finally we resolved this aspect by receiving the support of the social workers who agreed to help us. However, it's important to mention that this point should be integrated in the first place in the planning, if we had to build this project another time.

## 2.4 Planning of work

	Tasks	Hrs	Start	End
<b>1 - Introduction</b>				
1.1	Context	4	02/17/2021	03/03/2021
1.2	Problems	3	02/17/2021	03/03/2021
1.3	Opportunities	2	02/17/2021	03/03/2021
<b>2 - The project</b>				
2.1	Proposition	2	02/17/2021	03/03/2021
2.2	Goals	2	02/17/2021	03/03/2021
2.3	Methodology	3	02/17/2021	03/03/2021
2.4	Planning	2	02/17/2021	03/03/2021
<b>3 - Investigation</b>				
3.1	Desk Research	32	03/04/2021	03/10/2021
3.2	Proto personas	4	03/18/2021	03/24/2021
3.3	Interviews	24	03/29/2021	04/16/2021
3.4	Benchmark	8/	04/16/2021	04/17/2021
<b>4 - Definition</b>				
4.1	Empathy map	3	04/17/2021	04/18/2021
4.2	Scenario	6	04/18/2021	04/19/2021
4.3	Experience map	4	04/20/2021	04/21/2021
4.4	Personas	12	04/21/2021	04/22/2021
<b>5 - Ideation</b>				
5.1	Scenarios	2	04/22/2021	04/23/2021
5.2	User Journeys	16	04/23/2021	04/27/2021
5.3	Platform requirements	2	04/28/2021	04/28/2021
<b>6 - Prototyping &amp; Evaluation</b>				
6.1	Card Sorting	12	04/22/2021	04/25/2021
6.2	Content tree	8	04/26/2021	04/27/2021
6.3	Flowcharts	4	04/26/2021	04/27/2021
6.4	Sketching	12	04/27/2021	04/28/2021
6.5	Wireframes	40	04/28/2021	05/07/2021
6.6	Usability Test	32	05/08/2021	05/12/2021
6.7	Prototype (V1)	40	05/12/2021	05/16/2021
6.8	Heuristic evaluation	5	05/24/2021	05/24/2021
6.9	Prototype (V2)	8	05/17/2021	05/24/2021

## Productions

Productions	Hrs	Start	End
Memory	260	02/17/2021	05/28/2021
Presentation (video)	30	05/28/2021	06/02/2021
Prototype	40	04/29/2021	05/28/2021
Defense	1	06/09/2021	06/18/2021

# 3. Investigation

## Introduction

In this section, we present our understandings of the situation of asylum seekers and our insights. Firstly, we conducted a Desk research, to collect principally quantitative data (through demographic statistics, asylum applications rates) and qualitative information (asylum procedures, testimonies of forcibly displaced people, use of the technology).

Secondly, we interviewed social workers, migrants, asylum seekers and refugees, to receive their experiences. Their testimony gave us a better understanding of the needs of asylum seekers and we could start to think about what kind of functions our product should provide.

## 3.1 Desk Research

During the Desk research, we tried to determine the profile of the asylum seekers. We wanted to detail who they are, where they come from, and how they came to Europe. We based our investigations on reports, databases, testimonies and documentaries.

## Demographic information

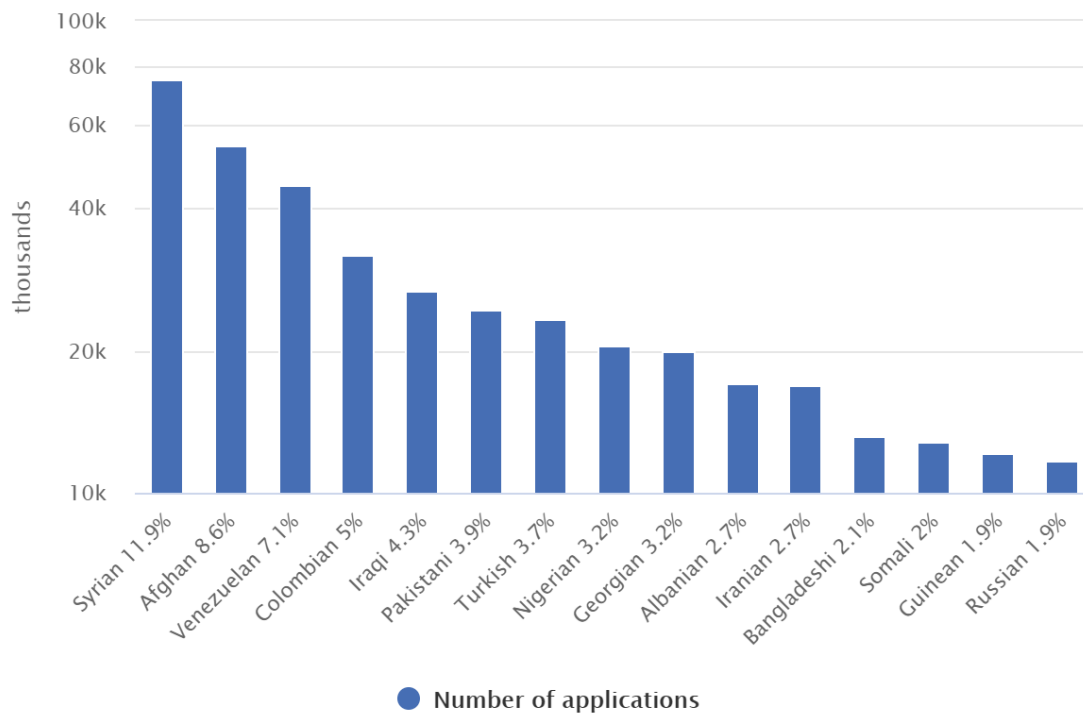
The European commission has a webpage called “Statistics on migration to Europe”<sup>6</sup> where citizens have visibility on data about asylum seekers. The data is coming from a database called Eurostat. We learned that in 2019 :

- Asylum seekers in Europe came from nearly 150 countries
- Europe received 699,000 applications, including 631,000 first time applications,
- 207,000/699,000 individuals were under 18 years old (including 7% of unaccompanied children)
- 300,000/699,000 individuals received a status (refugee, or subsidiary protection)
- The nationalities who principally granted protection were from: Syria, Afghanistan, Venezuela, the Democratic Republic of the Congo, Mali, Guinea, Ivory Coast, Somalia.

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<sup>6</sup> European Commission, “Statistics on migration to Europe”, <[Website](#)>

- People were settled mostly in : Germany (142,450), France (138,290), Spain (115,175), Greece (74,910), Italy (35,005).
- People arrive illegally by land or sea (141,700 illegal border crossings in 2019)

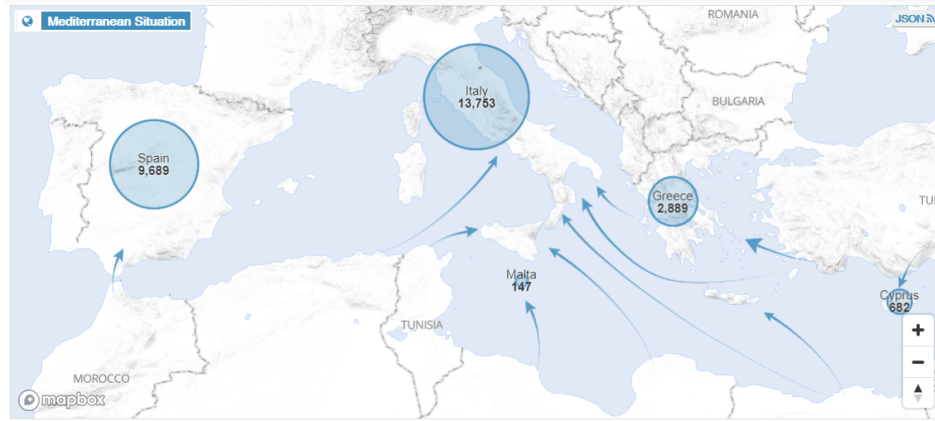


Highcharts.com

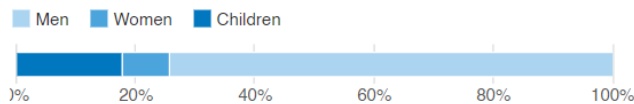
[Figure 5, European Commission, "Statistics on migration to Europe", Top 15 nationalities of first time asylum applicants (2019) ]

Another interesting source of information is the operational data portal<sup>7</sup> of the UNHCR, where we can obtain recent updated demographic data about the persons arriving in Europe. We can observe the routes taken to reach Europe. We learned that in 2020, 95.031 individuals arrived by land or sea. The month of May 2021 counts 6464 individuals. The biggest number during the last decades happened in october 2015 (222.800 persons were registered).

<sup>7</sup> UNHCR, Operational Data Portal, Mediteranean situation, <[website](#)>



**Demography of Mediterranean sea arrivals from January 2020** .CSV .JSON

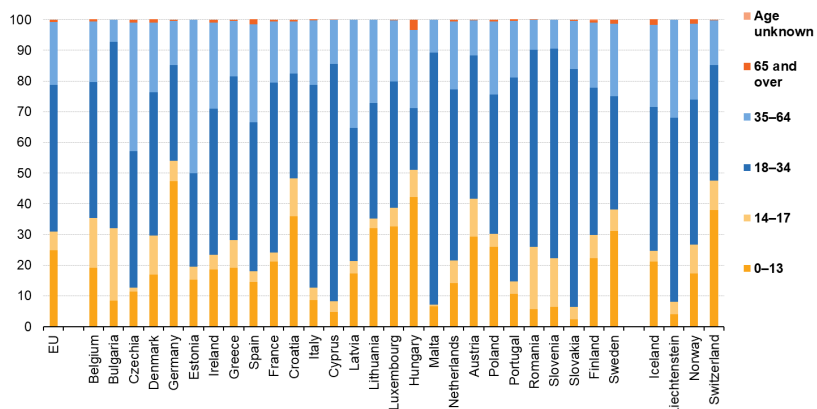


[Figures 6, 7. UNHCR, “Operational Data portal”, Mediterranean situation (Last updated 24 May 2021 )]

We can see that the majority of the individuals crossing the mediterranean sea to reach Europe is composed of men.

When someone applies for asylum in a european country, he has to provide his demographic information to the State. That’s why the age of this population is available through the database Eurostat. People arriving in Europe and applying for asylum are young, and the majority of them are adults (18-34 years old).

**Distribution of first-time asylum applicants (non-EU citizens) by age groups, 2020**  
(%)



Note: calculation is based on exact figures (not rounded).  
Source: Eurostat (online data code: migr\_asyappctza)

eurostat

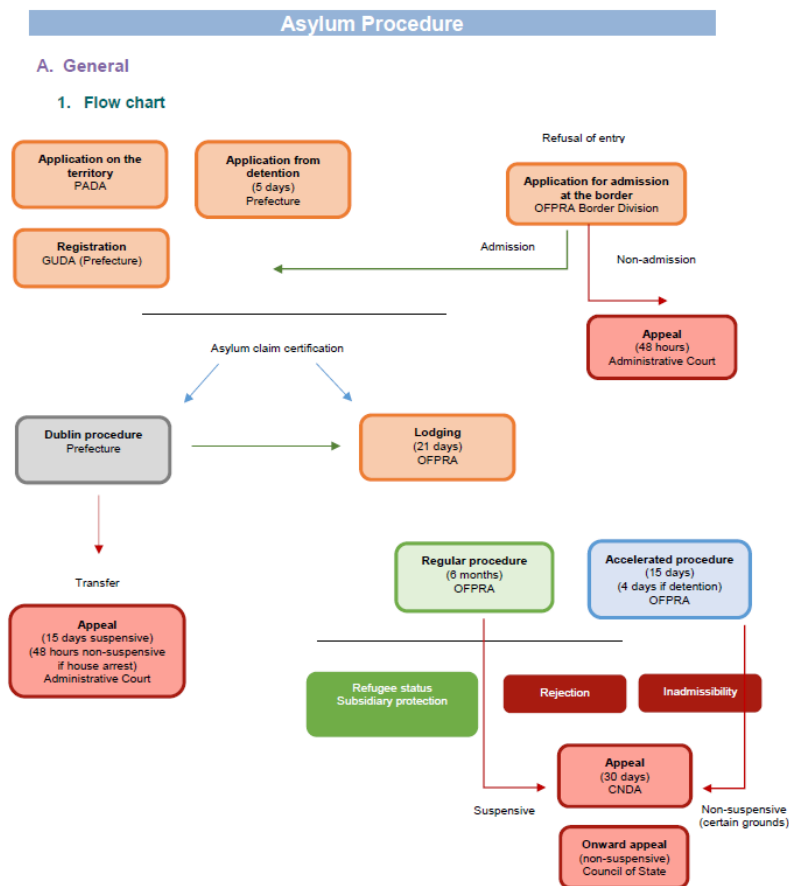
[Figure 8. Eurostat. Statistics “Explained. Distribution of first-time asylum applicants (non-EU citizens) by age groups, 2020. <[webpage](#)>]

Consequently, we can define our primary group of users (asylum seekers) as :

- Young men (18-34 years)
- Coming from Syria, Afghanistan, Venezuela, Democratic Republic of the Congo, Mali, Guinea, Ivory Coast, Somalia.
- Who arrived in Europe by sea or land

## Asylum process

The European Council on Refugees and exiles (ECRE)<sup>8</sup> provides information about the policy of each European country in terms of asylum management. We found in the report about France the following schema. It resumes the different steps that an asylum seeker has to follow during the procedure until a decision is made.



[Figure 9. ECRE, Asylum Information Database, "Country Report France", page 19, (2019) ]

<sup>8</sup> ECRE <[Website](#)>



In France, the OFPRA (French Office for the Protection of Refugees and Stateless Persons) is the institution that decides if an individual will grant asylum or not. This chart helped us to understand the steps of asylum seekers in their administration procedures.

## Stories

At this stage of the project, it became necessary to learn about the stories of the individuals looking for asylum in Europe. We found information in newspapers articles, documentaries, testimonies on the website of the UNHCR, and graphics novels.<sup>9</sup>

### **Journey - Crossing the mediterranean sea**

Two documentaries explain the route of asylum seekers when they are going through Libya until their rescue in the european coasts. These television reports are “Escape to Europe: The migrants' story”, shot for the BBC in 2015, and “Libya's refugee camps”, created for the german channel DW-TV in 2021. They informed us about the terrible circumstances to survive in Libya, and then to cross the sea. An article online, written in 2019, for the NGO Medecins sans frontieres, entitled “Trading in suffering: detention, exploitation and abuse in Libya” completes this matter. It explains wisely that Libya is geographically the heart to access Europe. Consequently, even if the situation there is highly insecure, most of the forcibly displaced people coming from Africa have no other closest route to reach Europe.

### **Once in Europe**

The documentary “Re-Calais”, directed by Yann Moix in (2018), for the german/french TV channel Arte, is about the situation of migrants in the city of Calais (North west of France). It explains and shows the journey of forcibly displaced people being there in 2018. We understood that the goal of these individuals was to reach the United Kingdom. They were living illegally in tents, in the forest. Associations provided them food and materials. Some scenes of police violence were recorded. We quickly understood by the testimonies of some individuals that they were living in extremely harsh conditions.

We found information about an accommodation center for refugees in Germany. This information provides us a better vision of the living conditions of asylum seekers (even when they are protected by the refugee status). “Asylum - The Life of Refugees in Germany” is a television report, done by Marc Erath, Rupert Wiederwald and Theresa Tropper, in 2014. Even if our project focuses on France and asylum seekers, we found it consistent to see the images of the center for refugees and to listen to the story of some persons living there. We understood that even if asylum seekers are granted refugee status, it doesn't entirely solve their issues. They still struggle for the accomplishment of their basic needs (find food, housing, clothes, work, transports, etc).

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<sup>9</sup> All the references are available in the bibliography.

## Testimonies

We found an infinite amount of information on the internet and we selected the most relevant stories for the project.

A short video called “I AM A REFUGEE: Global refugees share their stories” was released by the movement Global Citizen in 2016. It presents people from over 10 countries, talking about their lives and journey as asylum seekers. This production shows the global aspects of the crisis, people from all over the world testify. Each story is different, however, they all experienced the reality of war and the violence of being forced to flee, leaving their lives behind them.

Another useful material is the film “The refugee project” by Matthew K. Firpo, shot in Greece, in January 2016. The film presents scenes of the daily life of forcibly people at this moment in Greece on their arrivals, and alternates with testimonies.<sup>10</sup> The people interviewed are coming from Syria, Kurdistan, Lebanon, Congo, Palestine, Yemen, Iraq, Mali, Iran. One of the interesting aspects of this documentary is how they present the interview. They cut the presence of the interviewer and wrote the questions on the screen. As a spectator, we read the guide of the interview. The (non exhaustive) questions asked were :

- Why did you leave your home?
- Where are you hoping to go, and what do you hope to find?
- What was the hardest part of your journey?
- What did you take with you when you left?
- What are you the most angry about or most scared of on this journey?
- What do you feel it means to be a refugee?
- What was your occupation in your home country?
- What have you felt on this journey?

These audiovisual sequences gave us a better comprehension of what these individuals are going through. Also, we could empathize with their experiences and interpret the feelings they were expressing during the interview. The following elements are our insights after having watched all the testimonies.

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<sup>10</sup> The testimonies are available in their entirety at <[webpage](#)> of the refugee project.

- One day, these individuals have lost everything because of a war, they had to flee, they had no resources (money, luggages).
- Now, they are in Europe and have to build a new life.
- Their journey to reach Europe was dangerous, unsecure, most of the time terrible.
- They fled conflicts, wars, persecutions and sometimes they miss their home country, because in most of the cases, they still have family there.
- In many testimonies, people tell that they faced death in one way or the other.
- They have skills, knowledge, they had an occupation before, and they can't always prove their diplomas or abilities.
- They want to continue their studies or find a job.
- They are grateful to be helped by associations but it also includes being vulnerable trusting strangers, which is complicated.
- Most of the time they feel invisible, rejected, powerless. They also are frequently victims of racism.
- Sometimes they have health issues (mental, physical)
- Sometimes, they learned english on the road and through the internet
- They want to learn european languages
- They had a smartphone during their journey (they use it to locate them, to find information, to see the hour of the day, to take pictures of their situations, to find information, to translate, etc.).

UNHCR shares stories on its website<sup>11</sup> and we read several articles (their references are available in the bibliography). We noted that even if each case is unique, forcibly displaced people have similarities and the information we found in our readings confirmed our previous observations.

Our last discovery in terms of testimonies was the work of PositiveNegatives<sup>12</sup>. This company produces literary comics about contemporary humanitarian issues. We discovered the illustrations of Lindsay Pollock, in comics based on testimonies from Syrian refugees seeking asylum in Norway in July 2015.<sup>13</sup> The reading of these stories corroborated our findings.

## Technology & Migration

At this moment of our research, we had a better understanding of the profile and the context of our target audience. However, we had a lack of visibility regarding how we could reach them through a digital product. It became necessary to focus our research on this important aspect. We wanted to obtain some indications about the relationship of the asylum seekers with technology. We wanted to discover which tools they are using on their mobile and for what purpose. We decided to quote the following studies because they are written by experts and their words describe perfectly the situations.

Firstly, we discovered a study done by Stephen Gelb and Aarti Krishnan. They demonstrate that smartphones and the internet are necessary for exiled people, all along their journey.<sup>14</sup>

As the authors say : *“Digital apps and other mobile telephony technologies facilitate migration journeys” [...] “Individual migrants and refugees use technology in a number of ways to enable and support their migration process. The combination of mobile phones, the internet and social media” [...] “Refugees are often willing to spend as much as a third of their income on mobile telephony, or to walk miles to access free Wi-Fi”* (Stephen Gelb and Aarti Krishnan, 2018, “Technology, migration and the 2030 Agenda for Sustainable Development”, pages 4, 9)

Secondly, another study made by the Peace Research Institute of Oslo (PRIO), published in 2018 a study named “Smart Phones for Refugees: Tools for Survival, or Surveillance?” confirmed the same information.

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<sup>11</sup> UNHCR, “Stories” <[website](#)>

<sup>12</sup> PositiveNegatives, “Stories”, <[website](#)>

<sup>13</sup> We present in the appendix one of the stories and the links to read all the comics are available in the Bibliography.

<sup>14</sup> See Bibliography, Reports, Stephen Gelb and Aarti Krishnan, (September 2018), “Technology, migration and the 2030 Agenda for Sustainable Development”

It is written in the study : *“Then, as pictures of refugees using smartphones became more and more common, media commentators highlighted how these devices should be considered even ‘more important’ than water, food and shelter, due to their utility as tools to access information about where to find such resources when arriving in new places. Additionally, the fact that smartphones allow refugees to stay in touch – with each other and with family elsewhere – suggests that these phones have been important instruments for refugees’ well-being and resilience”* (The Peace Research Institute Oslo (PRIO), Jumbert, Maria Gabrielsen; Rocco Bellanova & Raphaël Gellert (2018) “Smart Phones for Refugees: Tools for Survival, or Surveillance?”, page 2)

Thirdly, we found another source of information, a study with an interesting approach “FROM A REFUGEE PERSPECTIVE, Discourse of Arabic speaking and Afghan refugees and migrants on social media from March to December 2016” by UNHCR. They provide an analysis of Syrians and Afghans migrants before their departures and present the information under their point of view. They explain their hopes, and their interactions with smugglers through social media. They also express effectively their disappointments, or difficulties during the process of integration in Europe.

They explicate : “On Facebook, there are hundreds of pages of smuggling networks and a wide range of affiliated services easily accessible and with full contact numbers. Legal and illegal offers are often mixed.” [...] “Around 50 Facebook accounts promise student visas for Europe and other developed countries.” [...] “The usual way to travel for Afghans is to book an all-inclusive trip from the country of origin to the promised country of destination and move in a group.” [...] “In July 2016, the cost of a typical smuggling trip by plane from Turkey to the UK was approximately EUR 11,000. A mere two months later that price jumped to EUR 18,000.” [...] “Smugglers build up an image of life in Europe that takes expectations to quixotic heights. They emphasize the ease of travel, the possibilities to work and study and their successful business.” [...] “Upon arrival, they are overwhelmed with the intricate system of laws, rules and procedures related to obtaining refugee status and the complex practicalities of everyday life in Europe”. [...] “While on the move, refugees and migrants use mobile phones (not necessarily smartphones) and buy SIM cards in each country. Those who have smartphones use all phone applications: Whatsapp, Viber, Imo, Messenger. Facebook is increasingly used by Afghans to stay in touch and inform each other.” [...] “Their image of Europe has been formed by films, TV and the discourse within their communities.” (UNHCR, (2016) “FROM A REFUGEE PERSPECTIVE, Discourse of Arabic speaking and Afghan refugees and migrants on social media from March to December 2016”, pages 16, 19, 39, 43, 45).

Therefore, we can resume that forcibly displaced people :

- Have a phone or a smartphone, use internet and social medias
- They use these tools before to leave, during their journey and once in Europe
- They communicate with their families, friends, communities, and smugglers
- These tools are essentials in all their tasks and processes of migration

## Conclusion

The Desk Research provided us with an important part of answers about our primary group of users (asylum seekers). We could learn about their origins, gender and age, journey, stories, and need to have a smartphone. We also confirmed that NGOs, associations, are the stakeholders involved in rescuing them when they flee and guide them during their inclusion in the new country (through accomodation and administrative support).

### 3.2 Target group (proto personas)

Therefore, taking account of the information we found, we built the proto personas of our group of users. These productions were created to guide us to the next step of the investigation : the interviews.


The proto persona method is a first general representation of our target audience.

We defined **two groups** :


- Primary target : **Asylum seekers** (the product will be designed for them)
- Secondary target : **Social workers** (in associations giving support to asylum seekers)

We based our reflections regarding the sections (demographics, behaviors, needs & goals) on the knowledge we acquired previously but also on communications we had with associations and in our contact list.

**Primary users : Asylum seekers**

<p><b>«JAMAL»</b></p> 	<p><b>BEHAVIORS</b></p> <ul style="list-style-type: none"> <li>&gt; Uses Whatsapp to communicate with his family and friends.</li> <li>&gt; Uses Google translate a lot for arabic to english or to french.</li> <li>&gt; Frequently feels very stressed and impatient regarding his status and his future.</li> </ul>
<p><b>DEMOGRAPHICS</b></p> <ul style="list-style-type: none"> <li>&gt; Sudanese</li> <li>&gt; 23 years old</li> <li>&gt; Asylum seeker</li> <li>&gt; Lives in France, in a reception center. since october 2020.</li> <li>&gt; Speaks arabic and learnt english on his route to Europe.</li> </ul>	<p><b>NEEDS &amp; GOALS</b></p> <ul style="list-style-type: none"> <li>&gt; Obtain the refugee status and protection.</li> <li>&gt; Being supported with his administrative tasks.</li> <li>&gt; Interpreting during his administrative meetings.</li> <li>&gt; Information about the rules and processes for asylum in France.</li> </ul>

**Secondary users : Association's Staff**

<p><b>«MARTIN»</b></p> 	<p><b>BEHAVIORS</b></p> <ul style="list-style-type: none"> <li>&gt; Is very engaged in humanitarian aids, since he is a teenager.</li> <li>&gt; Has a lot of empathy and like to learn about different cultures.</li> <li>&gt; Is used to people in vulnerable situations and likes to help every time he can.</li> </ul>
<p><b>DEMOGRAPHICS</b></p> <ul style="list-style-type: none"> <li>&gt; French, 29 years old, lives in Paris.</li> <li>&gt; Works for the association France Terre d'Asile where he supports exiled people in their asylum procedures.</li> <li>&gt; He volunteers every friday night in a reception center to distribute food, clothes and supplies.</li> </ul>	<p><b>NEEDS &amp; GOALS</b></p> <ul style="list-style-type: none"> <li>&gt; Help people in distress as much as he can.</li> <li>&gt; Provide concrete solutions.</li> <li>&gt; Feel useful.</li> <li>&gt; Have an impact in society.</li> <li>&gt; Inform citizens about the refugee's crisis.</li> </ul>

We selected participants as close as possible of these profiles to process the interviews.

## 3.3 Interviews

We contacted local associations and individuals close to asylum seekers. Social workers and volunteers of associations (Camo, France Terre d'Asile, and Watizat) and asylum seekers answered positively and accepted to participate. We present below our approach and the insights we obtained. This research with users was essentially exploratory. We wanted to get to question our participants, in order to discover their contexts and specific needs, to compare this information with our previous observations.

### Method

By doing interviews, we obtained qualitative information, which required a structure. We decided to conduct semi-structured interviews. We wrote the following guide.

#### Script

##### Profiles of asylum seekers

- Where are they from?
- How old are they?
- What is their gender?
- Why did they move?
- Which languages do they speak?
- Where are they living?
- What do they expect?

##### Contexts, main issues

- What are their daily difficulties?
- What are their goals?
- How do they feel?

##### Asylum demands procedures

- What are the steps of an asylum request?
- What and where are the institutions evaluating the cases?
- How long does it take to obtain an answer?

##### Relationship with technologies

- Do asylum seekers have a smartphone or other device?
- Which platform do they use?
- What is their purpose using platforms?
- Are they comfortable with technological tools?



## Execution

Afterwards we planned the execution of the sessions.

- When :** 07/04/2021 to 16/04/2021
- Where :** North and west of France
- How :** Remotely, By videoconference or phone calls
- Who :** Workers in associations, asylum seekers, refugees, migrants in an irregular situation.
- How long :** 30-60 min
- Conditions :** Sound records with participants agreement
- Audios :** [Link](#)

## Participants

<b>Name, Age, Nationality :</b>	<b>Luc, 68 years old, French.</b>
<b>Location :</b>	Ouistreham (Normandy)
<b>Situation :</b>	Retired. He created in 2017 the association CAMO, in Ouistreham, where he lives. He helps migrants in their asylum processes in France.
<b>Interview :</b>	Videoconference, in French. 07/04/2021 (2h30 of interview)
<b>Story :</b>	Luc founded CAMO in 2017 because there was a huge amount of exiled people arriving in Ouistreham when the illegal camps in Calais, North of France, (called "the jungle") were dismantled. Once their arrival in France, many individuals were staying in Calais waiting to cross the Atlantic to go to the UK. He explained that as the french government decided to closely monitor this area after 2017, people moved to other ports in the west of France, still with the idea to reach the UK. It includes Ouistreham where ferries are leaving for the UK. As many people were in distress, also squatting illegally in empty houses, he decided to meet some of them. He launched voluntary actions with local actors and citizens to provide them food, clothes, shelter. Then, to help the ones who wanted to stay in France, he started to handle the juridical, administrative, legal unit of his association. Luc has a strong knowledge now in building asylum demands and he provides us with a large overview of the situation of the forcibly displaced people he meets and accompanies day by day.
<b>Major difficulties :</b>	<ul style="list-style-type: none"><li>● Communication (language)</li><li>● Inform about rights, protection</li><li>● Explain procedures</li><li>● Storage of asylum seekers documents</li></ul>

<b>Name, Age, Nationality :</b>	<b>Laura, 28 years old, French</b>
<b>Location :</b>	Paris
<b>Situation :</b>	Work for the association France Terre d'Asile, volunteer for the association ARDHIS.
<b>Interview :</b>	Videoconference, in French. 09/04/2021 (45min of interview)
<b>Story :</b>	Laura studied political sciences and aid to refugees is important to her since she is a teenager. She spends her spare time volunteering in the association ARDHIS which fight for the rights of residence of exiled people that are part of LGBTI community. She works since 2018, in the association France Terre d'Asile in Paris, where she accompanies people in their asylum administrative procedures.
<b>Major difficulties :</b>	<ul style="list-style-type: none"> <li>● Language (translation and interpreting)</li> <li>● Establish trustworthy relationship with asylum seekers</li> <li>● Provide solutions waiting the decision for the asylum request</li> </ul>

<b>Name, Age, Nationality :</b>	<b>Aurelie, 33 years old, French</b>
<b>Location</b>	Rennes
<b>Situation :</b>	Lawyer specialized in asylum rights
<b>Interview :</b>	Phone Call in French. 14/04/2021 (40min of interview)
<b>Story :</b>	Aurelie specialized herself in the refugee law system these last years, and handles principally cases of asylum rejections. She explained that after the final decision of the French Office for the Protection of Refugees and Stateless Persons, if the demand is declined, the person has the right to appeal one time to a court, that's where she intervenes.
<b>Major difficulties :</b>	<ul style="list-style-type: none"> <li>● Get all the administratives pieces</li> <li>● Work in partnership with associations and court</li> <li>● Delays and patiences</li> <li>● Communication (languages)</li> <li>● Ethical conflicts with interpreters sometimes</li> </ul>

<b>Name, Age, Nationality :</b>	<b>Sarmand, 29 years old, Kurdish</b>
<b>Location :</b>	Rennes
<b>Situation :</b>	Has a residence permit since 2020 and works in a thrift shop.
<b>Interview :</b>	Phone Call in English, 15/04/2021 (20min of interview)
<b>Story :</b>	Sarmand is a Kurd and left Iraq because of economical reasons. He explained violence and corruption were frequent in his home country and he couldn't see any possibility for a good future there. His uncle has been living in the UK for several years and he decided

	to travel with the goal to reach his uncle. He took the road with smugglers, passing from Turkia, Greece, Austria, Germany and France. He met his french wife there, in Calais, in 2017, so he changed his plans. They decided together to launch a procedure for asylum but the demand was rejected in 2019, so they decided to get married, it was the only way to stay together.
<b>Major difficulties :</b>	<ul style="list-style-type: none"> <li>● Racism and lack of empathy from others</li> <li>● Communication (learn a new language)</li> <li>● Administrative waiting time</li> </ul>

<b>Name, Age, Nationality :</b>	<b>Valentine, 30 years old, French</b>
<b>Location :</b>	Rennes
<b>Situation :</b>	Ex volunteer for the association Médecin du monde in Calais, 2017. Wife of Sarmand (they met there).
<b>Interview :</b>	Video conference then Phone Call in French. 15/04/2021 (45min of interview)
<b>Story :</b>	Valentine was doing civic service for a few months in the North of France. She distributed food, clothes, and materials to migrants. At this moment, she met principally Kurdish, Afghan and Irakian people. She met her husband Sarmand there. She helped him to settle step by step in France, to meet associations and to realize his administrative tasks.
<b>Major difficulties :</b>	<ul style="list-style-type: none"> <li>● Language, communication</li> <li>● Help someone who has traumas, and a story he wants to forget</li> <li>● Explain how to adapt to a new culture</li> <li>● Do the administrative tasks of someone else</li> </ul>

<b>Name, Age, Nationality :</b>	<b>Amadou, 25 years old, Cameroonian</b>
<b>Location :</b>	Rennes
<b>Situation :</b>	Refugee, works as a plumber since 2020
<b>Interview :</b>	Phone Call in French, 16/04/2021 (35min of interview)
<b>Story :</b>	Amadou explained he had to flee his country because of war and insecurity. He met smugglers on his way to Libya and crossed the mediterranea. There he was captured and tortured. He thought he would die, but he finally escaped with some other captives. He managed to reach the beach and board on a ship with hundred other persons. Their "raft" was found by a french boat which ushered them to marseille. He was resettled to Brittany where he found support with different associations and launched his asylum request. It was accepted in 2020. He would like to obtain a french social security number and find a job as a plumber.
<b>Major difficulties :</b>	<ul style="list-style-type: none"> <li>● Understand the french system and the people</li> <li>● Being accepted and well treated, considerate by people</li> <li>● Waiting state's decisions</li> </ul>

	<ul style="list-style-type: none"> <li>• Have hopes for a better future</li> </ul>
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## Report of the interviews and Results

<b>Origins</b>	Soudan, Eritrea, Ethiopia, Cameroon, Chad, Nigeria, Congo, Guinea, Mali, Syria, Afghanistan, Irak, Kurdistan, Pakistan
<b>Age, gender</b>	Young men 19-25 years, because going through Libya and crossing the mediteranea sea is such a critical journey to reach Europe, mainly young men do it.
<b>Languages</b>	Soudan (Sudanese Arabic), Eritrea (Tigrinya, Sudanese Arabic , Ethiopia (Oromo, Arabic, English), Cameroon (French, English), Chad (French, modern standard Arabic), Nigeria (English), Congo(French), Guinea (French), Mali (Bambara, French), Syria (modern Arabic), Afghanistan (Dari, Pashto), Irak (Mesopotamian Arabic), Kurdistan (Kurdish), Pakistan (Urdu, English). If they didn't speak english, most of the time they learned english on their route to Europe. Also, it was said that their knowledge is principally oral, that people have difficulties to read and write sentences (in general), even in their own mother tongue.
<b>Living place</b>	Reception centers, squatting empty houses, hospitality in individual's houses.
<b>Reasons to migrate</b>	Wars, conflicts, persecution, economic issues, climate changes.
<b>Expectations in France</b>	<ul style="list-style-type: none"> <li>• Obtain refugee status or subsidiary protection, to get a valid residence permit and start to build their future.</li> <li>• When they have a permit, bring their family members in France</li> <li>• When they have a job, send money to their relatives</li> <li>• Go back to their home country if the situation there has improved</li> </ul>

<b>Principal difficulties</b>	<ul style="list-style-type: none"> <li>• To know where to go and who can help them</li> <li>• It is impossible to obtain the asylum protection alone, without support (through associations)</li> <li>• To communicate with associations and administrations (because of different languages)</li> <li>• Understand the complexity of procedures for asylum</li> <li>• Understand the cultural differences</li> <li>• Wait an answer, a decision from the state (very long)</li> <li>• To understand documents they receive, keep them, digitize them</li> </ul>
<b>Goals</b>	Fill their essential needs day by day (shelter, food, clothes, material) and launch, follow, their cases regarding asylum.
<b>Feelings</b>	They frequently feel outcasts, powerless, indigent. They can feel stressed, scared, depressed. They feel and are vulnerable.

<b>Steps for asylum</b>	<ol style="list-style-type: none"> <li>1. <b>SPADA</b> (first structure of accommodating for asylum-seekers) There, people can receive guidance and assistance.</li> <li>2. <b>GUIDA</b> (processing of applications for asylum) This office engages appointments in the prefecture.</li> <li>3. <b>Prefecture</b> Several meetings and registrations, interviews are done to provide documents to realize the asylum request file.</li> <li>4. <b>OFPRO</b> (The French Office for the Protection of Refugees and Stateless Persons). Where to send the asylum demand file. This institution processes the file. After, they do an interview, and then, there is the final decision.</li> </ol>
<b>Process times</b>	Between 1 years to 3 years (all steps included)
<b>What can they do during this time?</b>	They can't work, they can't move or travel, so they wait.
<b>If the request is rejected, what do they do?</b>	They may appeal to the tribunal one time. Most of the time, appeals are declined. So, they have the obligation to leave the territory. It means, or they stay illegally, or they move to another country, or they are deported to the home country from where they flew.

<b>Devices used</b>	They all have a smartphone, and rarely any other device.
<b>Tools</b>	They use Google Translate, Whatsapp, Facebook messenger, photo Gallery and phone calls.
<b>Purpose of use</b>	Communicate in the same languages, understand information (translator) Connect with their families, friends, communities, workers in association.
<b>Level of familiarity</b>	Low or moderate for other uses than the ones mentioned.

## Conclusion

The interviews confirmed the information we had regarding the profiles of our target audience and about their stories, needs, difficulties. We could also reinforce our knowledge regarding the administrative steps in France to request asylum, and the support provided by the associations. We observed how it is necessary for asylum seekers to have access to a smartphone. They use mostly Whatsapp, Facebook Messenger, Google translate, Google map, in their everyday lives, to communicate with family, friends, and associations.

Social workers explained to us that they don't have a dedicated professional tool to communicate with them or to support them in their administrative tasks. They do all their exchange of information principally by Whatsapp. They explained that it is convenient because the individual can send photos of its documents and vocal messages, instead of writing (because sometimes some people are illiterate, or do not know the latin alphabet).

However, they highlighted that their communications for their administrative procedures are mixed with their private messages, which sometimes create discomfort on both sides.

They also informed us of projects in connection with our approach. They told us for example, that Watizat<sup>15</sup> is an information guide for exiled people (in paper). Soliguide<sup>16</sup> is an online platform to cartography the places of aid in France. Reconnect<sup>17</sup> is a digital safe space to store IDs of vulnerable people by an association network.

When we explored these solutions, we noticed that the accessibility and usability of these projects don't really match with the needs of our users. Firstly, we analyzed that asylum seekers don't always have access to the internet. Secondly, we already knew that they mainly use their smartphone, and not a computer. The social workers confirmed that these tools are not used by the people they were created for. We understood that between our two groups of users (associations and asylum seekers), nowadays, the use of multiple tools is necessary.

**That's why we started to consider our project as a pack of functions. The reason for our reflection is that asylum seekers have to open different apps to face their daily problems (languages, location, information, communication). As we learned, they already have many issues in their past, present and future. Our idea was to think about a solution to reduce their efforts. Our intention was to think about how we could design a tool to simplify the access to associations.**

**We imagined that our product could centralize some functions of the existing tool we identified. The distinction of our product would be that it is entirely designed for asylum seekers.**

We realized that if our users use Whatsapp, Facebook Messenger, Google translate, Google map, it means they have already acquired a good understanding of them. Consequently, our product should try to provide the same codes, rules, behaviors.

That means that our product should focus on languages, location, guidance, exchange of communication, between asylum seekers and associations.

Consequently, following we started to think about a tool with these functions :

- **Translator**
- **Messaging**
- **Document storage**
- **Location of places**

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<sup>15</sup> <https://watizat.org/>

<sup>16</sup> <https://soliguide.fr/>

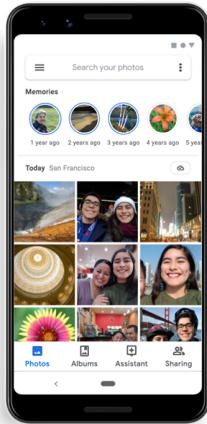

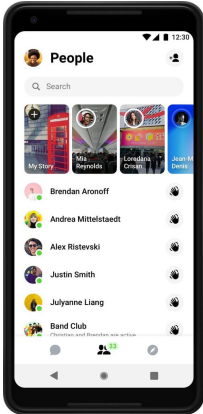


<sup>17</sup> <https://www.reconnect.fr/reconnect-le-coffre-fort-numerique>

In addition, we learned that some attributes should be taken into account in the rest of the steps of the project, to make it relevant. Our application for smartphone should try to include :

- Inclusive design
- Translation, languages aspects
- Simple to use, intuitive, easy to learn
- Offline mode available as much as possible

### 3.4 Benchmark

Finally, we wanted to verify if our analysis were relevant. That's why we conducted a short benchmark to compare the features of the tools we wanted to centralize in our product.

Criteria	Google Photo Gallery	Whatsapp	Messenger	Google Map	Google Translate
					
Offline mode	X	X	-	X	X
+40 languages available	X	X	X	X	X
Inclusive Design	X	X	X	X	X
Store image	X	X	X	-	X
Edit image	X	-	-	-	-
Live Location	-	X	X	X	-
Share Document	X	X	X	-	X
Use camera	X	X	X	-	X
Vocal command	X	X	X	X	X

# 4. Definition

## Introduction

The investigation section helped us to have an overview of the difficulties and needs of the asylum seekers. To put ourselves in their shoes, we designed firstly an empathy map based on the elements collected. Then, we created a storyboard and an experience map to represent the full context of our users and empathize even more with them. Next, it was the moment to draw our personas and imagine the scenarios of these characters using the product. After that, we created user journeys to reflect the interactions of our personas with the app. Finally, the results of this work defined the design requirements of our product.

### 4.1 Empathy map

We choose to start by doing an empathy map to structure the knowledge we acquire about asylum seekers until this step of the project. It was a simple way to visualize their goals, expectations and feelings.

#### WHAT DO THEY DO ?

They try to find help and assistance, from their communities and from associations. They look for housing, food, clothes, phone credit, money and administrative support (when they want to stay in the country.)

#### WHAT DO THEY FEEL?

They feel rejected, vulnerable, left behind, powerless.

They can feel scared, alone. They can also suffer from racism and also interethnic conflicts. They can feel totally disconnected from where they are, they have to face several problems and complex situations



#### WHAT DO THEY SEE?

They perceive cultural differences, rules, procedures, in comparison with what they know. They have to continuously adapt to new environment. They receive a lot of information all along their asylum procedures and have to learn how the system works. They also face language problems. They can't always express themselves or understand others.

#### WHAT DO THEY THINK?

They think that when they will obtain the refugee status they will be able to work and build their future.

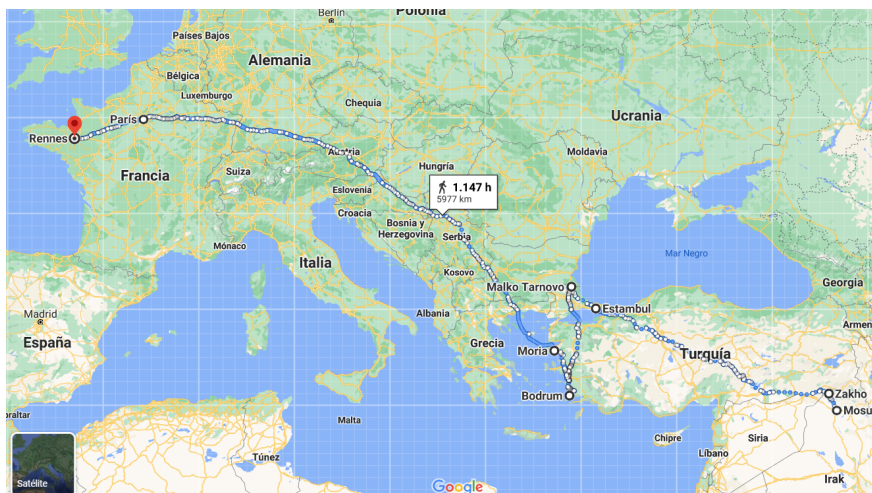


## 4.2 Storyboard

With the empathy map, we tried to represent why our targets do their actions, what are their motivations or reasons to make decisions. By doing a storyboard, we wanted to continue to devise about the situation of our future users. We choose the method of storyboarding because it allows us to visually represent the steps of the journey of an asylum seeker to reach Europe. We could ideate about the goals, the intentions, the pain points of these individuals.

We used the testimony from Rewan<sup>18</sup>, 20 years old from Kurdistan, that we discovered in the documentary “The Refugee project”. We based our story on him because at some moments of the interview (in the documentary) he talks about how he learned about Europe, about english, on the internet. We also understood that at some moments of his journey he used his smartphone. In addition, his story matches with the information we found during our investigations, with the participant Sarmand who is also Kurd. We had interviewed Sarmand, and his wife, and we already had a better understanding of the kurdish situation and the different circumstances of the journey to reach Europe.

As we had also acquired knowledge of the comics retracing the story of the Syrian refugees fleeing the war, we thought it could be interesting to show the story of someone who migrates for a different reason than a war. Rewan explains that he had no future in Kurdistan, he couldn't be who he wanted to be, an artist. He couldn't practice his art, he felt oppressed, that's why he left his country. When we met Sarmand, we understood that the same reasons pushed him to leave his country (North of Iraq). We thought it was useful for the project with this storyboard to express these stories by drawing. We could empathize with the character, express his objectives, struggles, emotions and actions to reach Europe.



[Figure 10. Itinerary of our Storyboard, from Mosul to Rennes, done with Google Map]

<sup>18</sup> “The refugee project”, a film by Kaz Firpo. (2016) Interviews. <[Testimony Rewan](#)>

# DEPARTURE

(MOSUL, NORTHERN IRAQ)

## Reasons to leave



Rewan is Kurd. He has been hoping to leave Mosul for a long time. He is an artist, and he received threats when he shared his art on social media. For him, Europe means freedom and a better future.

## How to leave



He looked for a smuggler on the internet. He wanted to go to Europe. He knew about the danger of the journey but he thought that it was worth it. He paid the equivalent of 11.000 euros.

# JOURNEY

(ZAKHO, NORTHERN IRAQ)

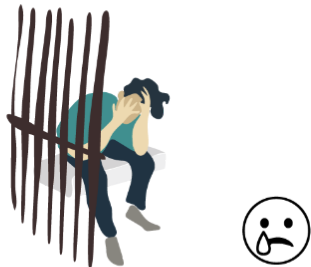
## Circumstances



They left Iraq from Zahko with 10 others people in a van, they went to Istanbul. They were arrested by the armed forces.

(ISTANBUL, TURKEY)

## Detention



Rewan was detained for three days and then released. The smuggler had disappeared (with his money).

(MALKO TARNOVO, BULGARIA)

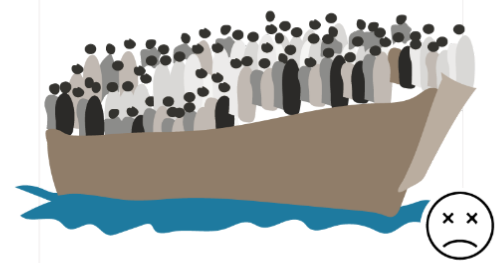
## Cross by lands, mountains



He met a family going to Bulgaria through the mountain from Turquia, he joined them. They walk for two days continuously, without eating or drinking. Rewan thought he would die

(BODRUM, TURKEY)

## Return & Cross by sea



When they arrived in Bulgaria, they were sent back to Turkey, so he found a way to reach Bodrum, to leave Turkey by sea. There were 150 people in the boat with him.

(MORIA, GREECE)

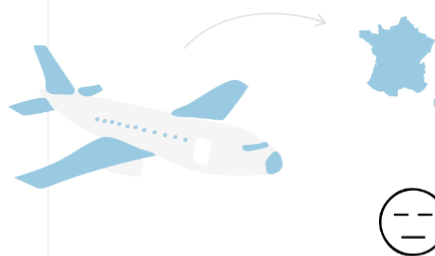
## Camp, registration



7 hours later, they were rescued by a boat from UNHCR. He was placed in a primary accommodation center and registered his identity, answered to questions.

(PARIS, FRANCE)

## Resettlement



He waited 5 months in the primary accommodation center and lived in a tente with other asylum seekers, he received basic aids. Then, he was resettled to France by plane.

# ARRIVAL

(RENNES, FRANCE)

## Reception and support center

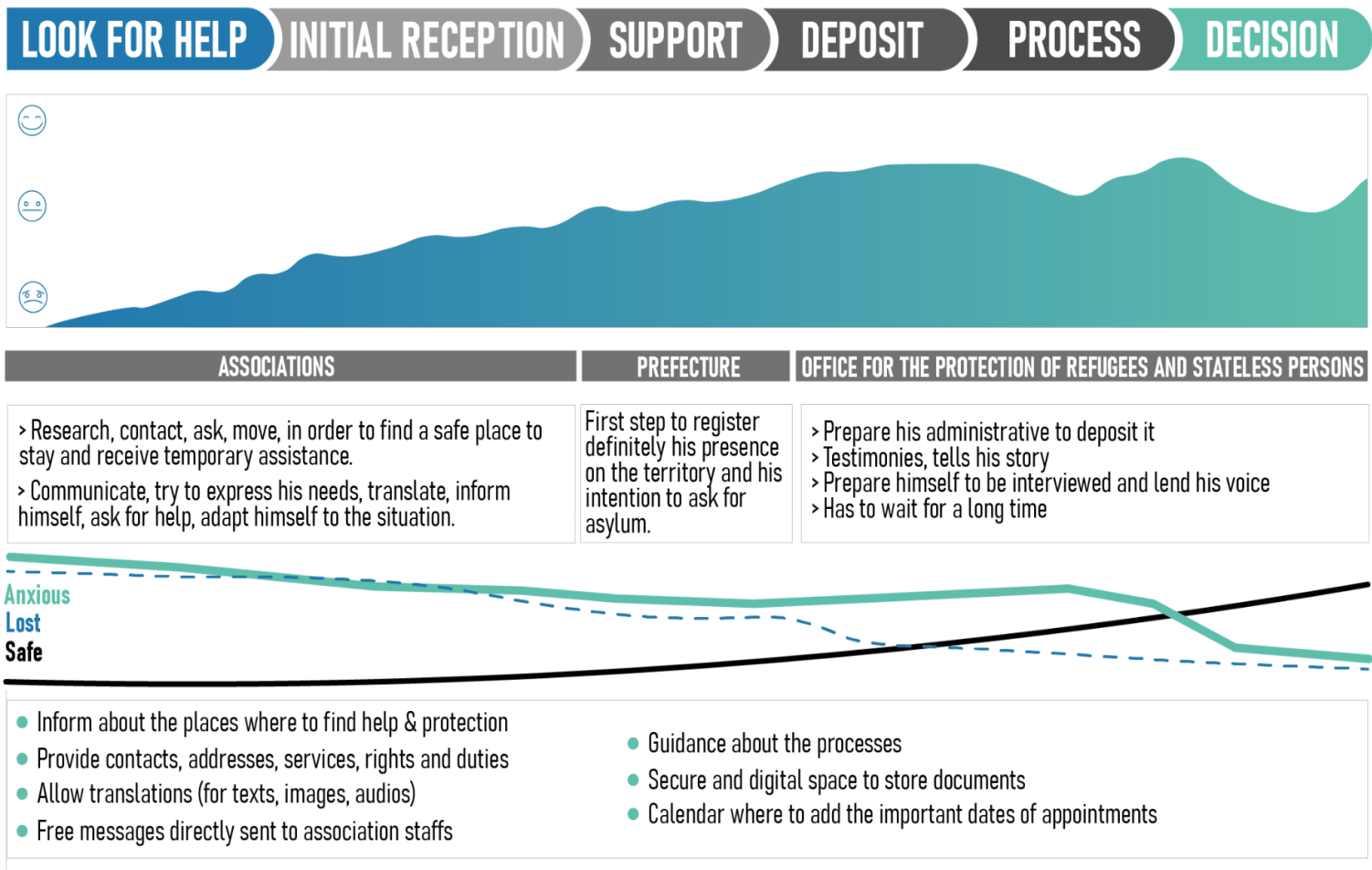


He was brought to an accommodation center for asylum seekers in the North west of France. There, he has a small individual room, receives food, medical care and administrative support.

## 4.3 Experience map

For a better understanding of the context of asylum seekers once they are in France, we wanted to represent their journey through the different steps of the asylum process.

# ASYLUM PROCESS JOURNEY



We can see that the more the person is helped and supported, the more he can understand what is happening and feel better. However, his entire future is decided by the state. That's why our project focuses on simplifying as much as possible the steps between the arrival and the stay/departure between association's staff and asylum seekers. We can notice that the features previously mentioned match the opportunities detected in this map.

## 4.4 Personas

We defined our personas with the knowledge we acquired during our interviews and research. We wanted to express their stories, to represent what they had really been through, and analyze their needs, expectations. This method provides us the ability to empathize with asylum seekers and define the paths we have to follow in order to provide an adapted service.



« When you flee, you walk a lot. Your footsteps are the road and nothing else matters except to move forward »

**AGE** 20  
**STATUS** Asylum-seeker  
**NATIONALITY** Cameroonian  
**LOCATION** Rennes

**HUMBLE** **LOYAL** **HARD WORKER**  
**FRANK** **SPONTANEOUS**

### LANGUAGES



English ++  
 French ++

# JAMAL MUNA

## ABOUT

Jamal is 20 years old, and he is from Kumba. At the age of 11, he realized he was gay. In his country, homosexuality is severely punished. He left because of the civil war and because he was a victim of homophobia. He had taken the road to Nigeria, where he was kidnapped at the border by the jihadist terrorist movement Boko Haram. They tortured him. After three weeks, he escaped for the desert. After four days, the Algerian armed forces took him to Oran. He was taken in by the Red Cross where he worked on a construction site to earn money. He met a ferryman by the sea, to whom he gave 2,000 euros to arrive in Spain. Then, with the help of a friend, he went to Paris, then to Rennes. He spent two weeks on the streets, looking at a map of the city for associations. He finally met the association «ARA», which works for LGBT people around values, encounters, cultural and artistic activities.

## HE WANTS

- To stay in France and work
- To obtain a status as soon as possible to be able to work
- To send money to his family
- To support associations for LGBT people and refugees

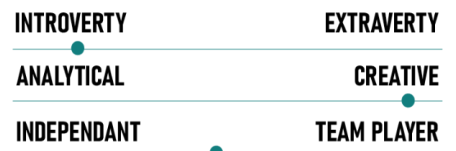
## PAIN POINTS

- He is traumatized by what he have seen and experienced
- He is worried about having enough money to send to his family
- He is very stressed about been rejected and deported to Cameroon

## HE NEEDS

- Help for shelter, food, clothes and materials
- Assistance to access administrative services and launch the asylum demand
- To take french classes and practice the language with people
- To receive psychological support

## PERSONALITY



## EASE WITH HIS SMARTPHONE



# FAROUK ABDALI

## ABOUT



Farouk fled war in Afghanistan in early 2018. He crossed alone 10 countries overland, slept under bridges, walked 10 days through a forest, crossed Iran in the trunk of a car, braved the sea in a dinghy at night and endured months in detention. He wound up in Italy in October 2018, where he finally received protection. He was housed in an accommodation centre for children where he was informed about asylum procedures, and received support from social workers. After, he agreed to be transferred to a reception facility in France for unaccompanied children while waiting for the asylum procedure to be completed. Now, he's living in Cherbourg, in a collective home for young man, and is waiting for his refugee status. He's training everyday to learn french.

« My life was in danger... My mother told me: 'Go, save your life' »

**AGE** 18  
**STATUS** Asylum seeker  
**NATIONALITY** Afghan  
**LOCATION** Cherbourg

**BRAVE** **EMPATHIC** **RESOURCEFUL**

**CURIOUS** **FAST LEARNER**

## LANGUAGES

Pashtu +++  
Dari +++  
English ++  
Arabic +  
French +



## HE WANTS

- To become a student, rent an independant studio and send money to his mother.
- To travel to see his family and also visit Europe.
- The naturalization in one European Country to have more opportunities in the future and build his life (start hobbies, buy a car, a house, get married, etc...)

## PAIN POINTS

- He misses his family and feels alone
- He has a lot to handle and sometimes he's overwhelmed, sad and angry
- He has to trust social and governmental workers to be helped and sometimes it's hard for him
- He's not always able to understand or express his thoughts, needs, feelings in French

## HE NEEDS

- Help for translations
- Guidance regarding his papers and documents
- To find an association to get a transport card
- To receive information about his situation, rights, possibilities
- Security and trust in his interactions with humans or with technologies

## PERSONALITY

**INTROVERTY** ● **EXTRAVERTY**

**ANALYTICAL** ● **CREATIVE**

**INDEPENDANT** ● **TEAM PLAYER**

## EASE WITH HIS SMARTPHONE

**LOW** ● **HIGH**

We choose characters from different countries (and continents) to show the plural profiles of our primary group of users. We wanted to reflect the difficulties we identified when they arrived in Europe, in terms of communication, languages. We also wanted to represent how much they had to adapt to a new environment and learn new information, which requires adjectives as brave, resourceful, faster learner, persevering regarding their personalities.

# ZAKARIA ELBAGIR

## ABOUT



« Now, I feel safe and like if I have been reborn. »

**AGE** 25  
**STATUS** Asylum Seeker  
**NATIONALITY** Sudanese  
**LOCATION** Quistreham

**CALM** **FRIENDLY** **TENACIOUS**  
**CAREFUL** **FAITHFUL**

**LANGUAGES**  
Arabic +++  
English +  
French +

In 2017, Zakaria had to flee Sudan when the civil war reached his village. He left all he owned and joined other people on the walk to Libya. They walked from village to village for 5 weeks, and he met a smuggler. This man asked him to pay \$300 to get to a sea passage to Italy once in Libya. In Tripoli, the libian forced army beat him. He could escape, but he had nothing, no money or luggage. He found a way to get on a boat and flee Libya by the mediterannen sea, with 40 other migrants. The journey was terrible, but an Italian ship found them and they were resettled in Lampedusa. He was locked in a reception center for several months. Finally, he went out and found a way to go to France, he wanted to reach the UK. The illegal camps in Calais were dismantled by the french authorities. So, he joined a group of soudanese from his ethnicity, in Quistreham in 2019. He could find a place in a reception center provided by the prefecture. There, he could meet association's staff and decided to finally launch an asylum demand to stay in France. He may obtain a residence permit and refugee protection in some months.

## HE WANTS

- To obtain the status of refugee and new ID papers
- To forget all the terrifying moments he has experienced
- To have the right to work
- To learn french and communicate his thoughts, ideas to people easily
- To be treated like any other citizen

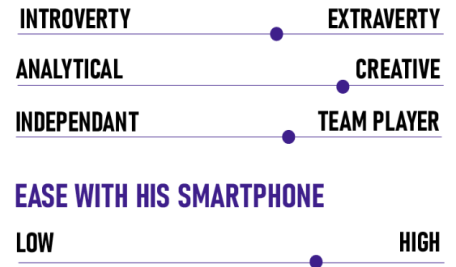
## PAIN POINTS

- He is stressed about the future
- He doesn't know what to do if his asylum demand is rejected
- He has to explain his story many times to different people and the language is a barrier for him
- He can feel submerged and frustrated seeing how the system is slow and complex, and how it is different of what he knew until now

## HE NEEDS

- To use an app to translate all his communications with association's staff because he speaks mainly arabic and has soon the final interview before the decision for his asylum.
- To be organized in order to provide anytime his legal documents
- To launch, follow, understands all procedures for protection and legal status

## PERSONALITY



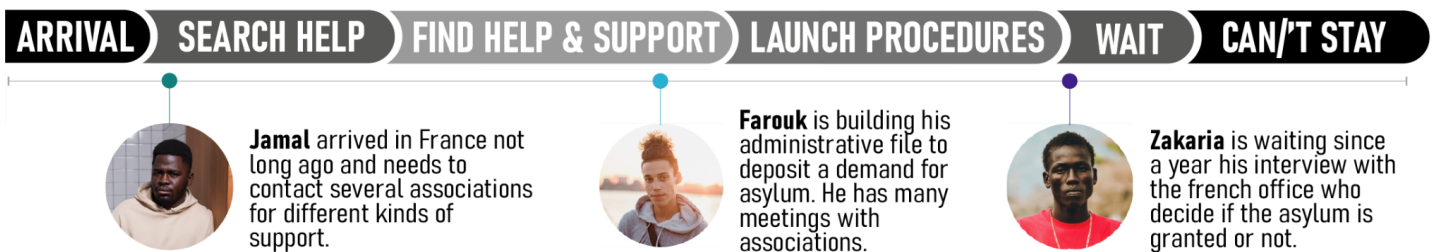
## Conclusion

We can conclude that our future users have a high ability to adapt them quickly into any kind of context. They are survivors. Their current life is complicated, and even if they have a solution allowing them to stay on a territory (refugee status), they have to face many barriers to reach this goal. The language, the administrative processes, the complexity of an unknown system and culture, create many difficulties in their daily lives. Associations are giving support as much as they can. We proved that digital tools are essential in their journey. The following section presents how we imagined our future users using the product.

# 5. Ideation

## Introduction

To ideate about the functions provided by our product in a real context, we imagined the scenarios from different perspectives and moments when the use of this app could happen. That means we selected different moments of the asylum process. The full procedure from the arrival to the decision is estimated from 6 months to 3 years (according to the interviews we made). Consequently, we placed our personas at different stages of the asylum process.



## 5.1 Scenarios

We imagined **three typical situations** our personas could have to face using the app on their smartphones.

### Looking for support (medical, administrative).

***Jamal** needs to see a doctor because he has a wound on his leg. Also, he'd like to meet a psychologist. He doesn't know where to go or who he could contact. Also, he doesn't completely understand the information he can find on the internet. Everything seems very complicated. He knows that he has to launch an asylum application, that the delays are important, so he is looking for the structure who can help him to build a demand and explain to him how the procedures work. He opens the application and goes to the location tab. There, he can see different icons. One of them expresses medical services, he clicks on it. He can see his location and the centers close to him. If he clicks on one, he can see the address, the contact details and also write to them or ask for an appointment. He makes an appointment. He does the same for an administrative meeting. He can see the dates were added to the calendar in the app because notifications just popped up. He feels relieved and just has to wait for the meetings.*

## Prepare documents for an administrative file

**Farouk** is followed by Sandra, who helps him to build his file for his asylum request. He received a message from her, but he doesn't understand the text. He uses the translator directly and now, he can understand that she needs him to send her some documents. She said that waiting for their next meeting, it could be great to send the documents digitized through the app messaging service. Directly he takes a photo of the documents and sends them. He also decides to send her a vocal message to thank her because he doesn't have time to write a message and talking is easier for him than writing. He records his message talking in arabic because he knows she'll be able to translate the message with the app. She replied some hours later by emojis to say she received the documents and said thank you.

## Scan, translate and ask information

**Zarakia** will soon have his interview with the French Office for the Protection of Refugees and Stateless Persons. Lucie, (member of the association who supported him these last months) explained to him how much it is important to tell his story and express his reasons to stay in France, during this interview. Unfortunately. She gave him so much information printed on paper that he doesn't understand all the procedures and what's gonna happen. He received many sheets with information but all is in french, so he can't really understand the content. He decides to use the app to scan the text and translate it to arabic. Once he understands the full procedures, he has a doubt regarding the interview and decides to contact Lucie to ask for more information.

## 5.2 User Journey

In the next step, we designed the user journey of each scenario, in order to be able to detect the pain points of our users. We wanted to identify the difficulties they could face with the product. Drawing the interactions of our personas with the product helped us to define and decide the requirements of the product step by step.





# JAMAL MUNA

Looking for support, by locating associations

20 years old 07/04/21 Rennes, France

## STEPS LOCATION SELECTION DEMAND INSCRIPTION CONFIRMATION

ACTIONS OPENS > SEEKS OBSERVES > CHOOSES REGISTERS > SENDS RECEIVES > VERIFIES WAITS > GOES

GOALS Find the appropriate service on the map Select a place and visualize the direction Ask for an appointment in a schedule Being registered Go to his appointment and receives help and assistance

INTERACTIONS section with five illustrations of a hand using a smartphone and corresponding text descriptions of the user's actions and observations at each step.

PAIN POINTS Understand the map and the different categories to search Find the right information Understand the service of asking online an appointment To ensure he was well registered

EMOTIONS section showing a progression of facial expressions from Stressed to Curious, Surprised, Focused, Relieved, and Patient.

OPPORTUNITIES The product should focus on providing visually the different types of services and where they are around the user's location. The user has to see a confirmation, an indicator that he will be received soon at the office of the association. It is also important to give the possibility to understand it is possible to make an appointment online and to make it visible and simple. A calendar is very useful to check and verify the next important appointments.



# FAROUK ABDALI

Prepare documents to build his administrative file



18 years old



14/06/21



Cherbourg, France

## STEPS: NEW MESSAGE TRANSLATION CAPTURE ANSWER CONFIRMATION

### ACTIONS: OPENS > OBSERVES TRANSLATES > READS TAKES PHOTOS > SENDS RECORDS > SENDS RECEIVES > SEES

- GOALS:**
- Discover the message
  - Understand the purpose of the message
  - Complete what is expected from him
  - Send the right documents
  - Express himself easily and quickly
  - Ensure receipt confirmation

**INTERACTIONS:**

Receives a notification saying that he has a new message. Opens the message and see it's in french.	He translates directly the text from arabic to french and can understand the demand (send documents).	Takes a photo of his documents and send them directly through the messaging. He notices that the pictures are automatically saved in his gallery.	He informs that he sent the documents and records his voice, then sends the audio.	He receives a message from the employee of the association who follows his case, who says all documents were well received.

- PAIN POINTS:**
- Language
  - To find the translation directly on the messaging screen
  - Take the good angle and quality to photograph the document
  - To be sure he sent the relevant documents

**EMOTIONS:**

Reactive    Unsure    Analytical    Concentrated    Engaged    Patient    Relieved

- OPPORTUNITIES:**
- The product should know since the beginning (at the moment of the registration) the mother tongue of the user and propose directly from the messaging dashboard an option to translate.
  - The steps should be simple, quick, efficient.
  - The app should guide the user visually to positionate the camera in the right direction and stabilize his hand to take the photo.
  - The user has to receive feedback saying he sent the document, and that someone will take charge of his demand asap to confirm the "eligibility" of the photos he sent.



# ZAKARIA ELBAGIR

Scan, translate documents and ask for information

25 years old 19/07/21 Quistreham, France

## STEPS IDENTIFICATION SCAN TRANSLATION INFORMATION CONTACT

ACTIONS OPENS > SITUATES CAPTURES > OBSERVES DETECTS > SENDS READS > UNDERSTANDS WAITS > RECEIVES

GOALS
• Understand the stack of paper he received
• Translate the content in french to arabic
• Text the association's member for more information
• Use his camera to detect the words
• Discover the information

INTERACTIONS section with 5 columns showing illustrations of scanning, app use, and translation steps with corresponding text descriptions.

PAIN POINTS
• Too many paper documents, so too much information he doesn't have access because of the language.
• Understand how the service works, the actions he has to do.
• To provide the right translation.

EMOTIONS section with a sequence of icons and labels: Doubtful, Surprised, Intrigued, Motivated, Concentrated, Curious.

OPPORTUNITIES
• The product should offer the possibility to scan documents on paper but also capture digital documents, to be able to download digitized documents and translate them, to use less paperwork, and avoid too much quantity of documents.
• Offer the possibility to do it again, to repeat the action or to change an information in case the user is not satisfied.
• Guide the user as much as possible, explain visually the steps to conduct the translation.

## Conclusion

By creating scenarios and user journeys, we could build the possibility we want to offer to our users. We could analyze how important it is to provide clear, simple and organized information, feedback, and guidance. We also understood that our characters go through many different emotions and we should try with our product to communicate simply and efficiently the information.

## 5.3 App Design Requirements

As we have determined previously, our future app should regroup these services : map & location, translation, messaging, document storage. The following information expresses our decisions regarding our future product. It explains the objectives of each service and its justification.

	Requirements
<b>Functional</b>	<i>(What the product should do and provide to meet the needs of the users)</i>
	Should detect the location of the user when he looks for an association in order to provide him the closest place to go.
	The map should allow a list of services, to give him the opportunity to select the support in accordance with his needs.
	Should give direct access to contact associations in order to make an appointment.
	Should propose an oral, written, visual, communication anytime it's possible, to offer opportunities to express himself, overcoming the language barriers.
	Should allow translations at different places in the app, for a better understanding of the content, documents, and communications.
	Should give the possibility to send the pictures of documents, to provide simple and quick communication with associations

<b>Non-Functional</b>	<i>(Other dimensions which are not directly related to the features but very important)</i>
<b>Emotional</b>	Should be Intuitive, easy to learn, inclusive (use icons, symbolic, images representations), to avoid text and be understood by a majority of people, even if they don't know the latin alphabet.
<b>Operational</b>	Offline mode & optimized content (images, text, icons) to make the application usable even without connection.
<b>Security</b>	RDGP compliance and secured network, because the data of this population is sensitive and shouldn't be accessible to any exterior source.
<b>Information</b>	The main type of data will be photos, audios, texts, and will be kept for a long time period by associations.
<b>Environmental</b>	Has to be available on Android and IOS.

## Conclusion

In this section, we learned that it is an advantage to provide very common features already existing in famous apps (like Whatsapp or Google Map) to get inspired by them. The benchmark helps us in that sense. Also, it means the offline mode can be available for many activities in the app (captures of documents, gps, record of messages) and the user can actualize his information anytime he connects to wifi.

The next challenge is about designing the experience in the app, in order to make it as simple and universal as possible. Indeed, we are talking about users who are coming from different continents, speaking several languages, who use different alphabets.

Consequently, our prototype should try to adapt completely to this criteria. Also, as we provide “a pack” of features, we should try to avoid too many ways and too many screens to complete one action. The different stages to reach our goals are developed in the last chapter: prototyping and evaluation.

# 6. Prototyping and Evaluation

## Introduction

In this section, we present our steps to design the prototype. We joined Prototyping & Evaluation in the same final chapter, because tests with users followed chronologically our working steps. Indeed, we tested our information architecture (with Card sorting and Tree testing methods) and our prototype (usability test with users for the wireframes version). Finally, we followed the 10 Usability Heuristics principles of Jakob Nielsen to evaluate our final prototype under these conditions.

## 6.1 Card sorting

Firstly, we started by building the information architecture. It allowed us to name, group and structure our content.

### Inventory of content and labelling

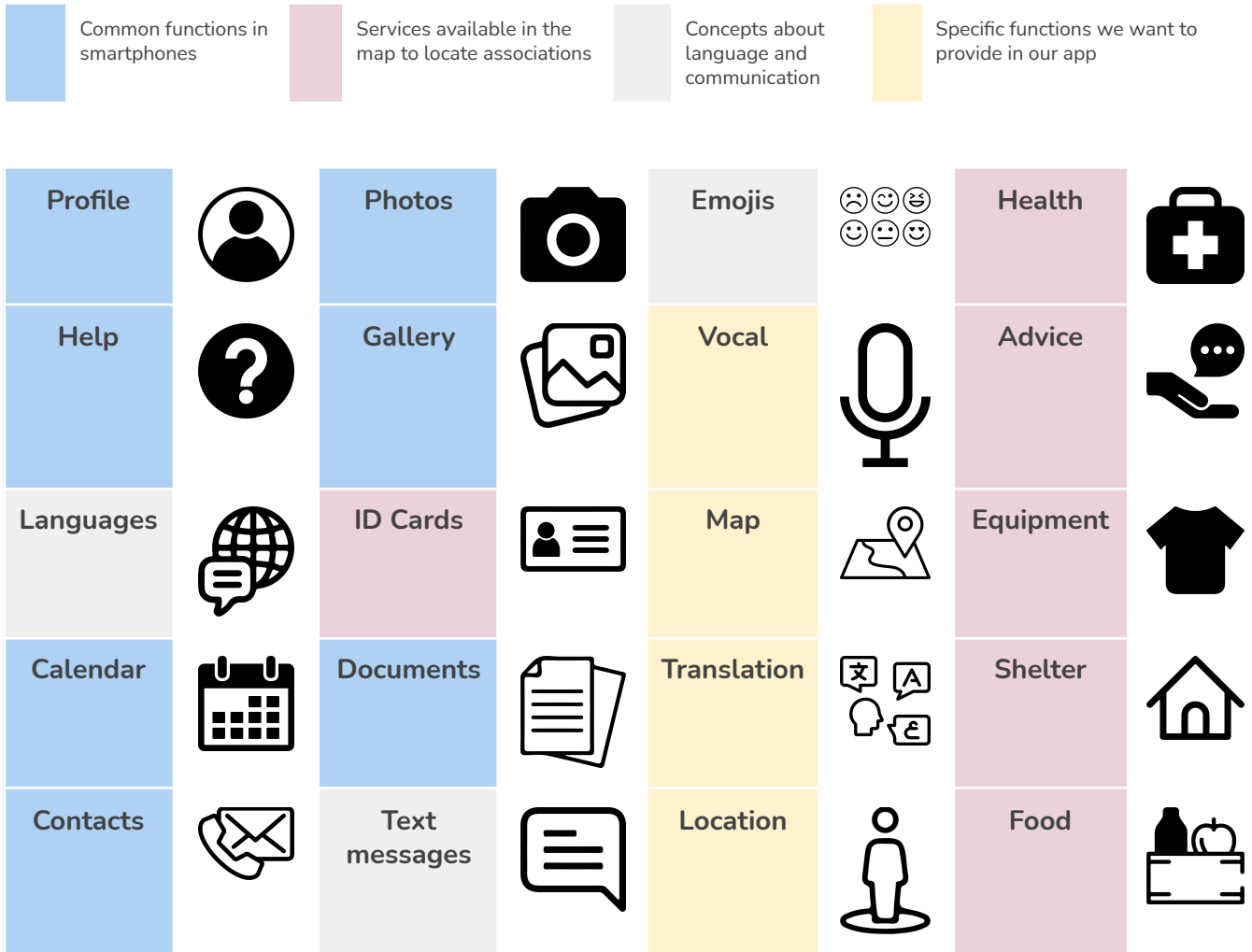
As we defined previously, our product will provide mainly these functionalities :

- Location & Itinerary
- Translation
- Messaging
- Documents storage

Consequently, we looked for words to associate to each function and then looked for icons to represent these words. Our objective was to make a first card sorting to understand the mental models of our potential users.

As we also wanted to create an inclusive design, we decided to do a visual card sorting.

We wanted to understand how our future users associate mentally the images of the functions we want to provide. That's why, we created a set of 20 labels with images, representing at the same time concepts, ideas, and common visual information.

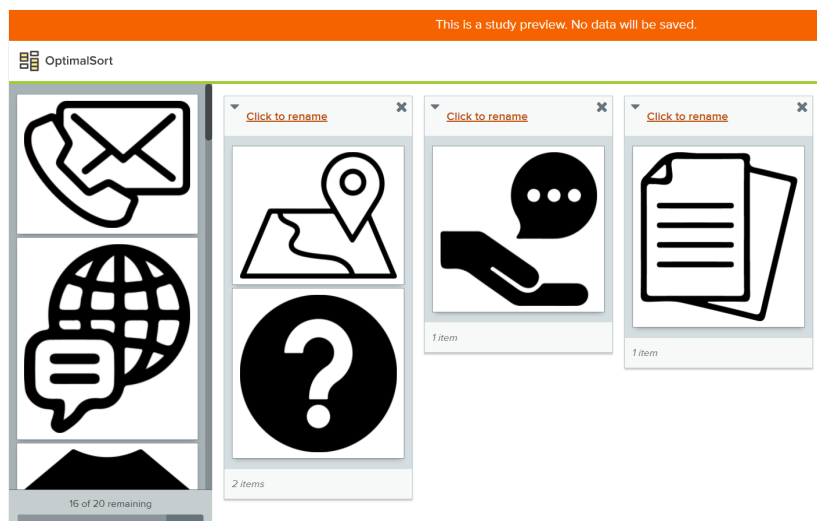


During our interviews, we met Laura who is a social worker in the association France Terre d’asile. She is also a volunteer in the Associations ARDHIS (asylum rights for LGBT community), on her weekends. She agreed to help us to evaluate our information architecture with asylum seekers she follows with ARDHIS.

We built the tests with the platform optimal Sorting and we sent her the links by email. She lent her smartphone to the participant to make them execute the exercises. Our instructions were to drop the images in categories and name the categories. Laura was here as a support in case of difficulties.

With the **first Card sorting (open)**, our intention was to define our categories of content based on the association of ideas of our potential future users.

Test :	Open Card Sorting
Number of participants :	10
Profile	Young men, <20 years old, asylum seekers or refugees Followed by the association ARDHIS
Location :	France, Paris
Tool :	Optimal Workshop
Date :	25/04/2021
Link of raw data :	<a href="#">Drive</a>



[Figure 11. Capture of the first Card sorting in Optimal Workshop]

## Results: <sup>19</sup>

- The icons were clearly identified and generate appellations (except a little bit for “help”, “calendar”, and “contact” which were called “Others”)
- Participants grouped clearly together the visual elements :
  - “Photo”, “Gallery”
  - “Text messages”, “emojis”
  - “Shelter”, “Health”, “Food”, “Equipment”

<sup>19</sup> The full results & captures are in the Appendix



- They mixed translation icons with communication icons, for these topics are related.
- The results are calculated by the program and 4 groups of contents were defined (the first line represents how they named the categories, in the columns are the items the put into these category) :

Language (100%) Message (88%) Contact (60%)	Help (86%) Aid (83%) Places (67%)	People (80%) Account (60%) Info perso (57%)	Content (100%) Image (75%) Info perso (43%)
Advice Contacts Emojis Languages Text messages Translation Vocal	Equipment Food Health Help Map Shelter	Calendar ID cards Location Profile	Documents Gallery Photos

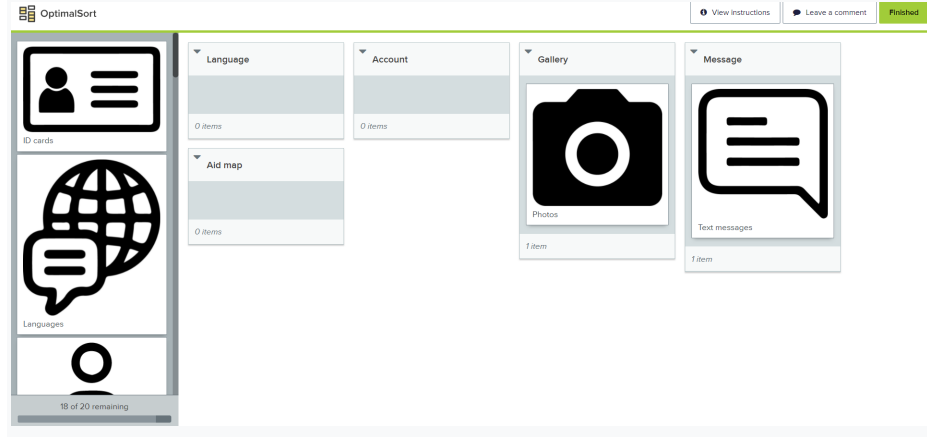
## Grouping

We decided to launch a second card sorting, this time closed, based on the previous information. We kept the same labels and the same icons but this time, we didn't hide the text of each label and we created 5 categories :

Language	Aid map	Account	Message	Gallery
----------	---------	---------	---------	---------

The test was conducted with different users at the same place, two hours after the first one, when the results were analyzed and adapted.

Test :	Closed Card Sorting
Number of participants :	8
Profile	Young men, <20 years old, asylum seekers or refugees
Location :	France, Paris
Tool :	Optimal Workshop
Date :	25/04/2021
Link of raw data :	<a href="#">Drive</a>



[Figure 12. Capture of the first Card sorting in Optimal Workshop]









By doing this second Card Sorting, we wanted to discover how our potential users were organizing the information into existing categories.

Results: <sup>20</sup>

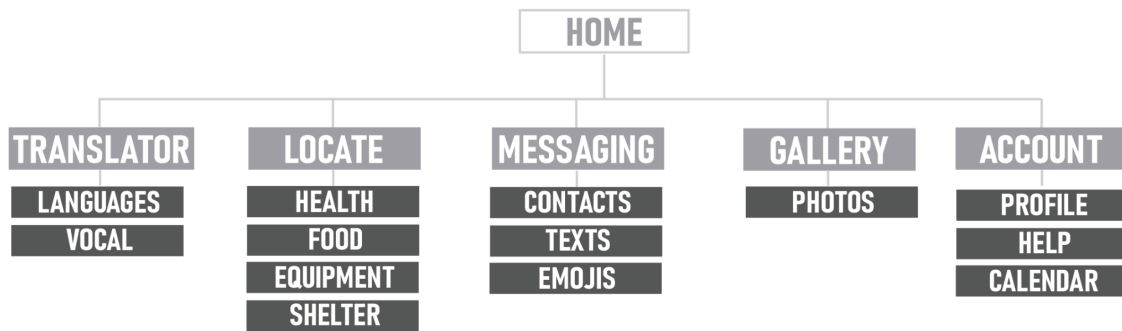
Validated >6 participants	Has to be Modified <6 participants
---------------------------	------------------------------------

		Language	Aid map	Account	Message	Gallery
Profile				8		
Help				6		
Languages		8				
Calendar				8		
Contacts					8	
Photos						8
Gallery						8
ID cards				8		
<b>Documents</b>		2			1	5
Text messages					8	
Emojis					8	
<b>Vocal</b>		5			3	

<sup>20</sup> See the captures of the test in the Appendix

Map			8			
Translation		7				
Location			6			
Health			8			
Advice			3	5		
Equipment			8			
Shelter			8			
Food			8			

These insights gave us material to build the first draft of a content tree :



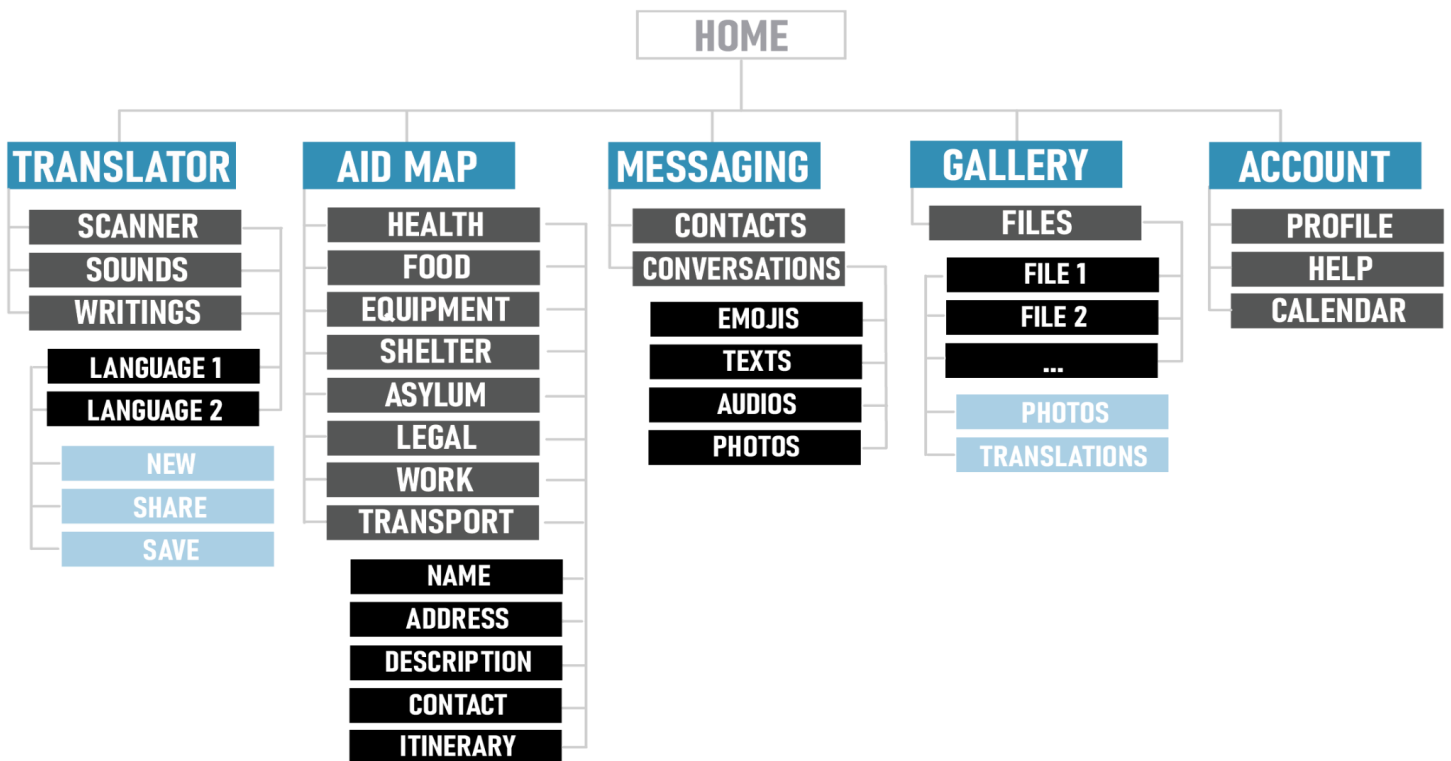
## Conclusion

- Participants were faster during the first test made up only with icons. It means, visuals are simpler and quicker to get into action.
- The second card sorting (closed) shows that our categories are quite efficient
- We can also consider that the text guides some placings (like “Equipment” represented by a Tshit, or “location” represented by a silhouette are easiest to place with text).
- Apparently, “Documents”, “Vocal”, “Advice” are not clear concepts for our participants under this organization and with these icons. We have to provide a solution to this misunderstanding.

- Globally, we can confirm that the concepts we presented are well understood and recognizable easily. It confirms that our app should provide the same approach.

## 6.2 Content Tree

We developed the content into the established categories by our users. We designed the first version of the structure the navigation our app will offer.



To validate this organization, he executed a tree testing.

Test :	Treejack
Number of participants :	6
Profile :	Members of associations working with asylum seekers and asylum seekers themselves
Location :	France
Tool :	Optimal Workshop
Dates :	26/04/2021
Link of raw data :	<a href="#">Drive</a>

We asked the participants to realize three tasks navigating in the architecture we designed. The tasks were :

---

#### Task 1

##### Question :

Imagine that you want to see a doctor soon. The app could help you. In the content, where would you navigate to find medical services and ask for an appointment?

##### Answer :

Aid map > Associations > Health > Ask for an appointment

---

#### Task 2

##### Question :

Imagine that you have paper documents. You don't understand because they are in french. Where would you go to scan the document, translate it to arabic, and save it?

##### Answer :

Translator > Scanner > Arabic > Save

---

#### Task 3

##### Question :

Imagine that you received a message from an association about your asylum demand. Where would you go to reply (with a vocal message)?

##### Answer :

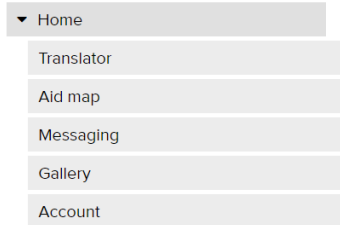
Messaging > Conversations > Record a vocal message

This is a study preview. No data will be saved.

**Task 1 of 3**

[Skip this task](#)

Imagine that you want to see a doctor soon. The app could help you. In the content, where would you navigate to find medical services and ask for an appointment?



[Figure 13. Capture of the Tre testing in Optimal Workshop]

**Results :**

	<b>Task 1 (map)</b>	<b>Task 2 (translator)</b>	<b>Task 3 (messaging)</b>
<b>Success</b>	50%	17%	67%
<b>% of users who found the direction for the first time</b>	Aid map (67%)	Translator (67%)	Messaging (67%)
<b>% of users who found the direction during the task</b>	Aid map (83%)	Translator (100%)	Messaging (67%)

	<b>Failure paths (indirect)</b>
<b>Task 1</b>	Aid map > Your position > Change my location < Aid map > Associations > Work < Associations > Health > Itinerary Messaging < Home > Aid map < Home > Translator > Home > Messaging > Contacts > Add < Contacts > Add
<b>Task 2</b>	Translator > Scanner > French < Scanner > English > Save Messaging < Home > Translator > Writings > Arabic > Save
<b>Task 3</b>	No indirect failure

	<b>Failure paths (direct)</b>
<b>Task 1</b>	Messaging > Contacts > Add
<b>Task 2</b>	Translator > Scanner > Arabic > New Translator > Scanner > French > New Translator > Scanner > Arabic > New
<b>Task 3</b>	Translator > Writings > English > New Gallery > Create a file

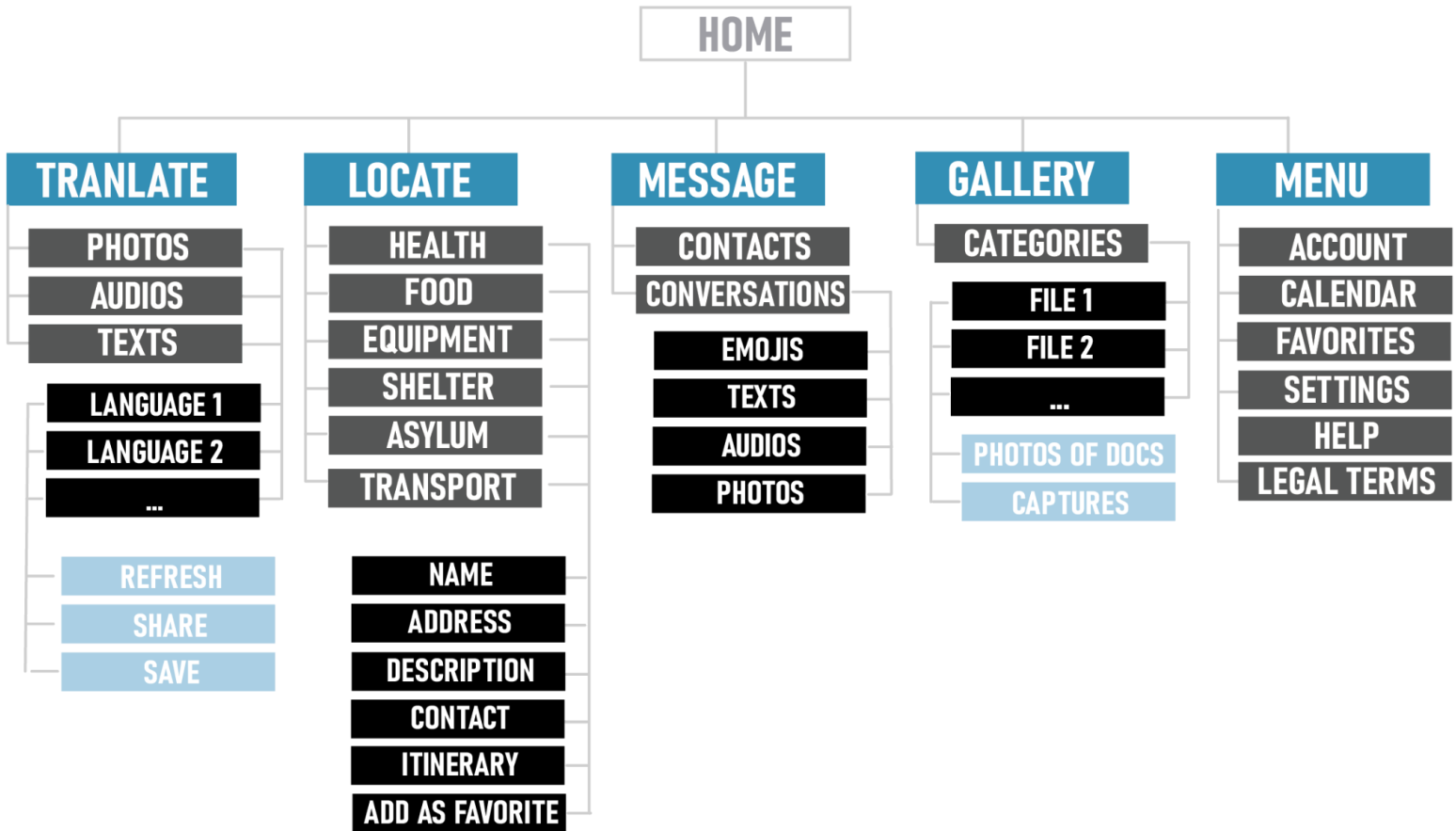
## Conclusion

Most of the time, our users found the correct direction to execute the tasks. It took more or less time to do it, and they navigated in different ways into the right categories. The second task was a little more complicated because it requires being attentive to the specific information (scan, translate to arabic, save it). This is one of the reasons the success is inferior, users didn't pay very much attention to these details, because they went in the right direction, just didn't select the right items. The two most important failures happened with the same participants and we think that this person didn't really understand the sentences in english.

Finally, to improve our product in terms of comprehension we recommend to :

- Maybe to name the category by a verb (translate, locate, capture...)
- Change the term of the support of translation (scanner, sounds, writings) for the nature of the content (photos, audios, texts)
- Change "new" by "refresh" because the idea is to propose to move to another document and participants understood "new" as "save".
- Maybe try to refine the categories of help in the aid map, like to not confuse "asylum" and "legal" for instance.
- Add an option to save a place, an association as a "favorite", because if the person will go there many times, the app should be linked to this information.
- The gallery will contain the captures of the translations and photos of the documents the user realized.
- Replace account by the menu, where the account, the help, calendar, the legal conditions, etc, settings, will be available.
- We decided to change the term document, and provide this functionality through the gallery.

## Content tree (final version)

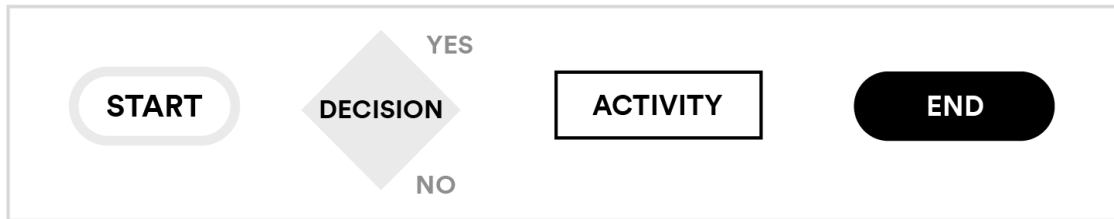


## 6.3 Flowcharts

To have a clear vision of what our users could expect or decide when they navigate in the product, we materialized the tasks in flowcharts. We used the scenarios, user journeys and results of the Card Sorting and tree testing to draw the different steps of the interactions and the moments of decisions.

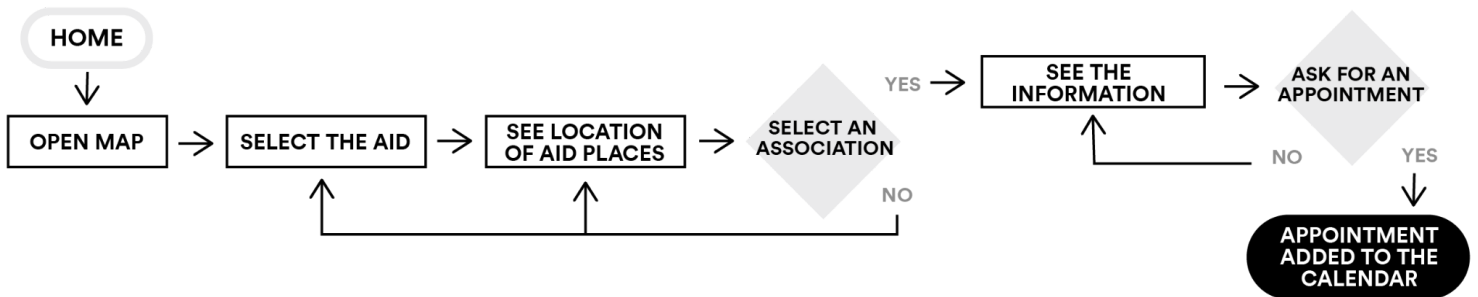


## Legend

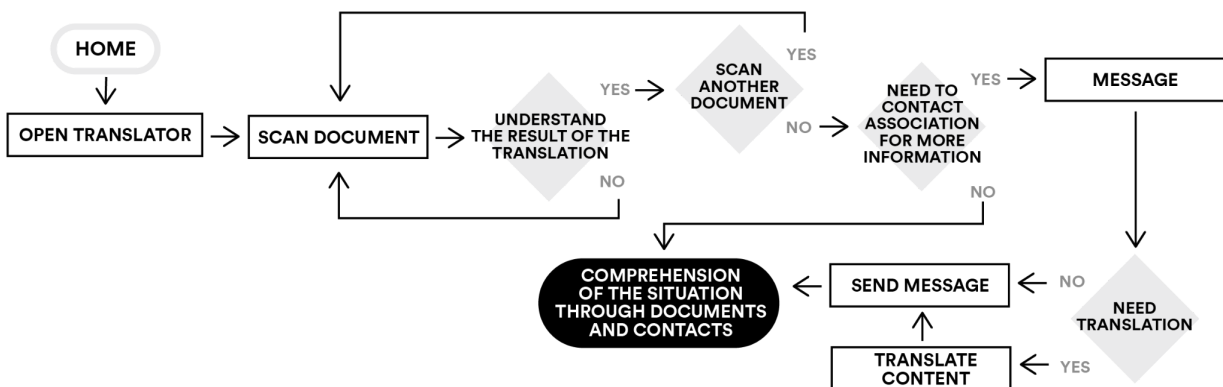


## Tasks

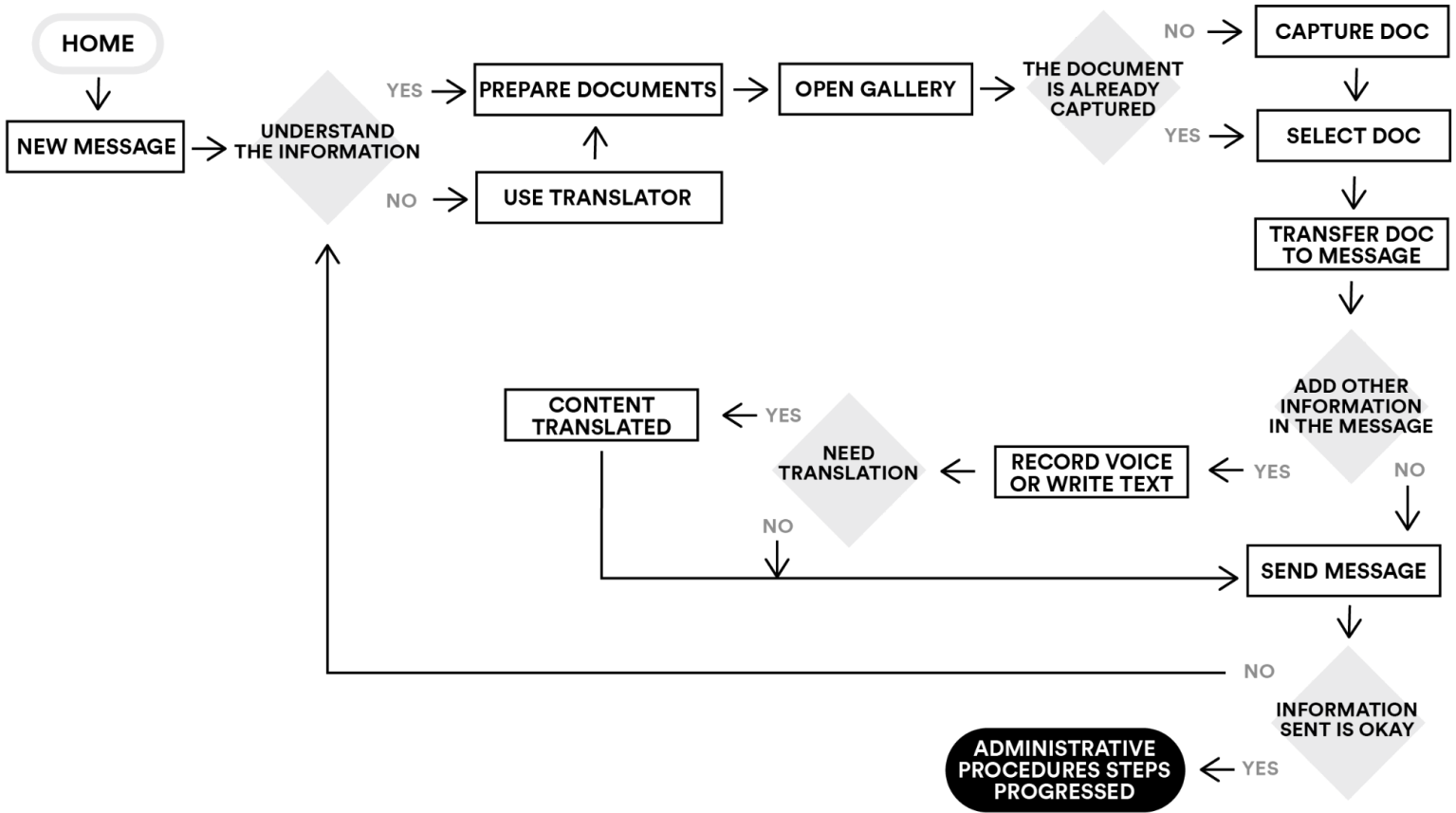
### Locate associations on the aid map and ask for an appointment



### Scan and translate documents to understand procedures and ask for clarification



## Receive a message and answer by sending documents and information



## Conclusion

We conclude that it seemed possible to provide short paths in the navigation, to accomplish the needs of our users.

We should try to reflect this simplicity all along the next phases of the project, specially at the moment of building our interactive prototypes.

The next stage of the project is about drawing these elements in different levels of fidelity.

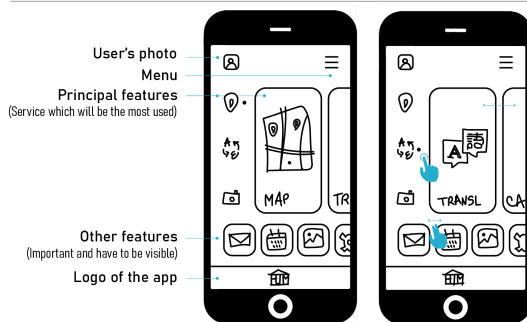
## 6.4 Sketching

This part is the first representation of our product on the screen of a smartphone. We used the method of sketching and tried to draw on paper our previous decisions and insights.

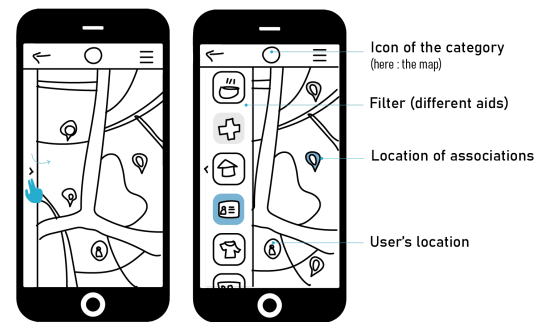
We drew the principal screens of our app.<sup>21</sup> We wanted it to be inclusive, simple, easy to understand and to learn. Consequently, our design should try to reflect these principles with :

- Visual elements (icons & images) more than texts
- Minimalist design
- Grouping the content as much as possible
- Optimization of the space into each screen
- Few ways and interactions to execute a task
- A system which behave elementarily and wisely

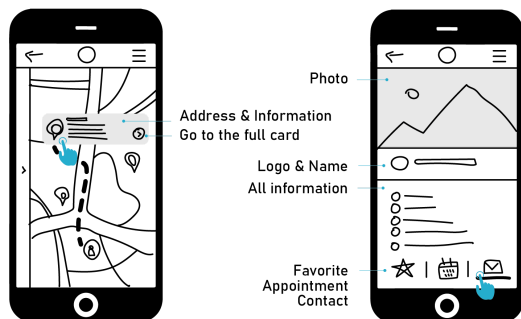
### HOME



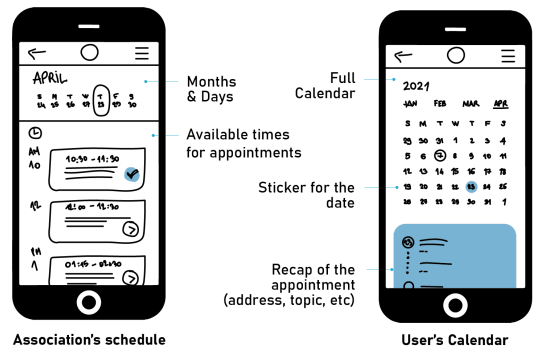
### MAP



### LOCATE AN ASSOCIATION



### MAKE AN APPOINTMENT

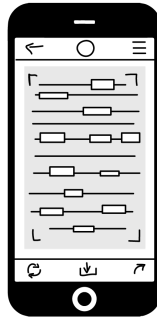


<sup>21</sup> The sketches in larger views are available in the appendix.

## TRANSLATOR

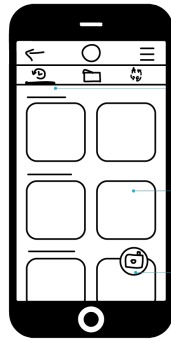


Principal screen for : captures, audios, texts



Scan documents with the camera

## GALLERY

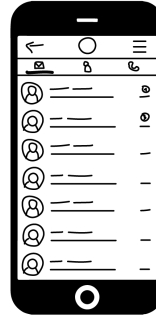


Content organisation  
Recent files  
Folders  
Translation saves

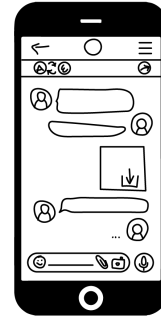
Document photos  
& Name

Take a photo

## USER'S MESSAGING



All conversations with association's staffs



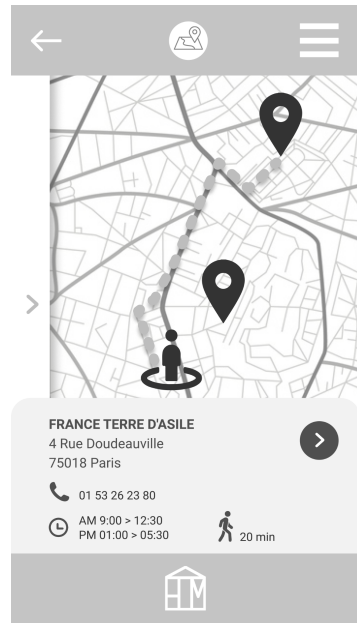
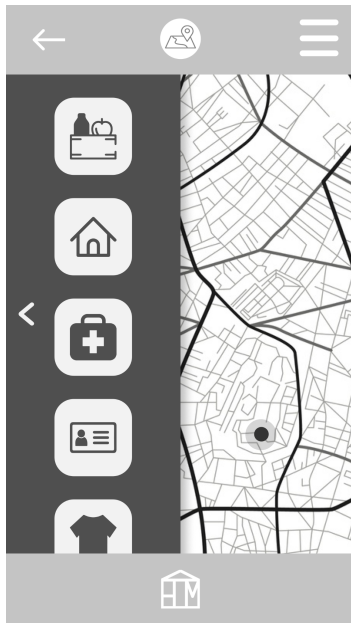
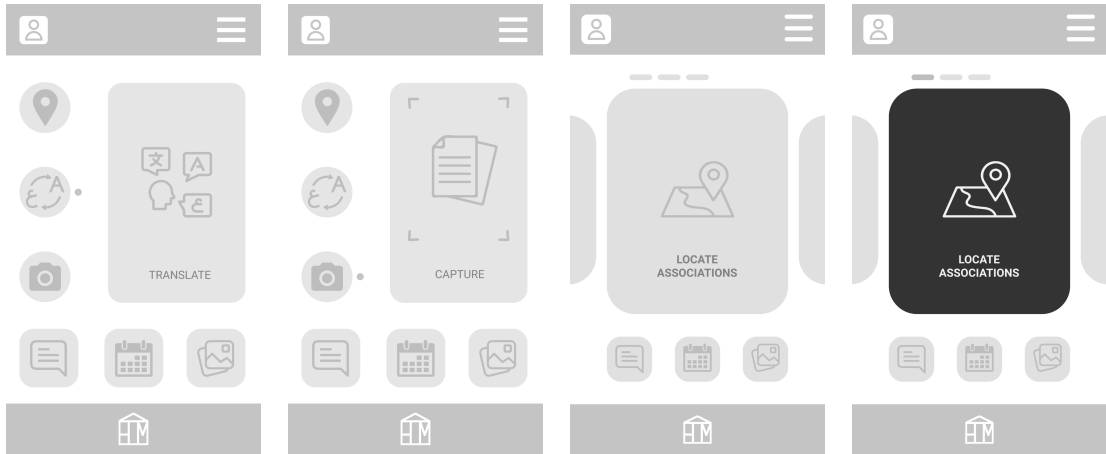
Each conversation

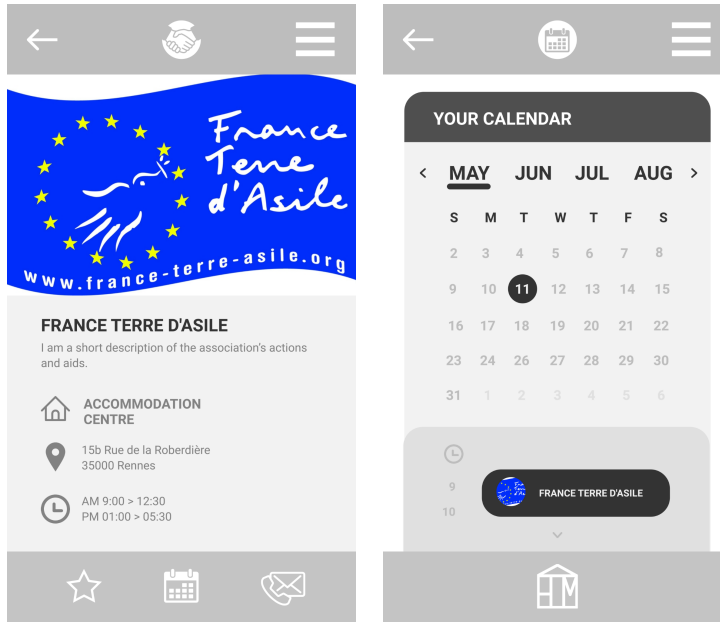
## 6.5 Wireframes

The link of the first wireframes is : [link](#)

We represented by sketching how we could organise our content in the screens, how we could connect each function from the homepage. It was also a great opportunity to think and decide about how the user could access the services. This section presents how we evolved to wireframes. We considered very important the visual elements, more than the text. We wanted to reflect the principles of simplicity, efficiency and guidance, all along the navigation into the prototype.

By doing the wireframes, we could also build the interactions we detailed in the flowcharts. We started by doing a first version of the homepage, following the organization we did in the sketches. However, we wanted to give it an aspect more fluid and coherent so we changed it to a design more aligned and rectangular. We wanted to keep the intention of showing all our different services (functions) on the homepage, as a “dashboard”. We used the program Figma where we realized the wireframes of the prototype. The following screens are our first version of the prototype (low fidelity).





We wanted to test our prototype. However, we were not satisfied with our first version. Also, we had to translate it to french, because it was the condition of the social worker who agreed to help us to organize usability test sessions with asylum seekers living in the accommodation center (CADA of Dax).

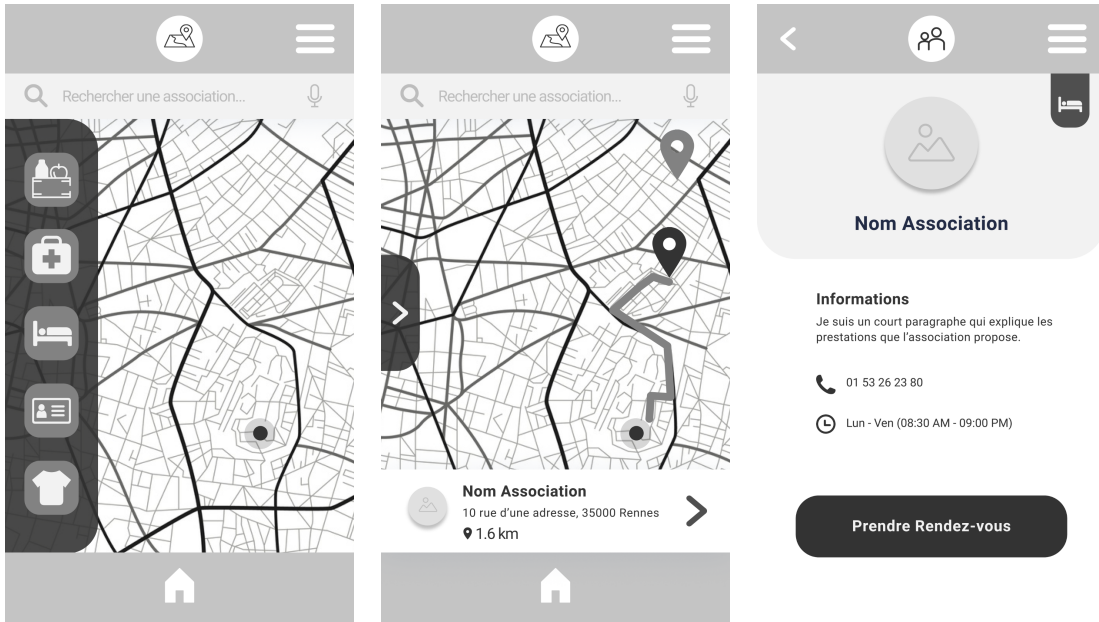
Next version of the prototype : [link](#)

## Second version

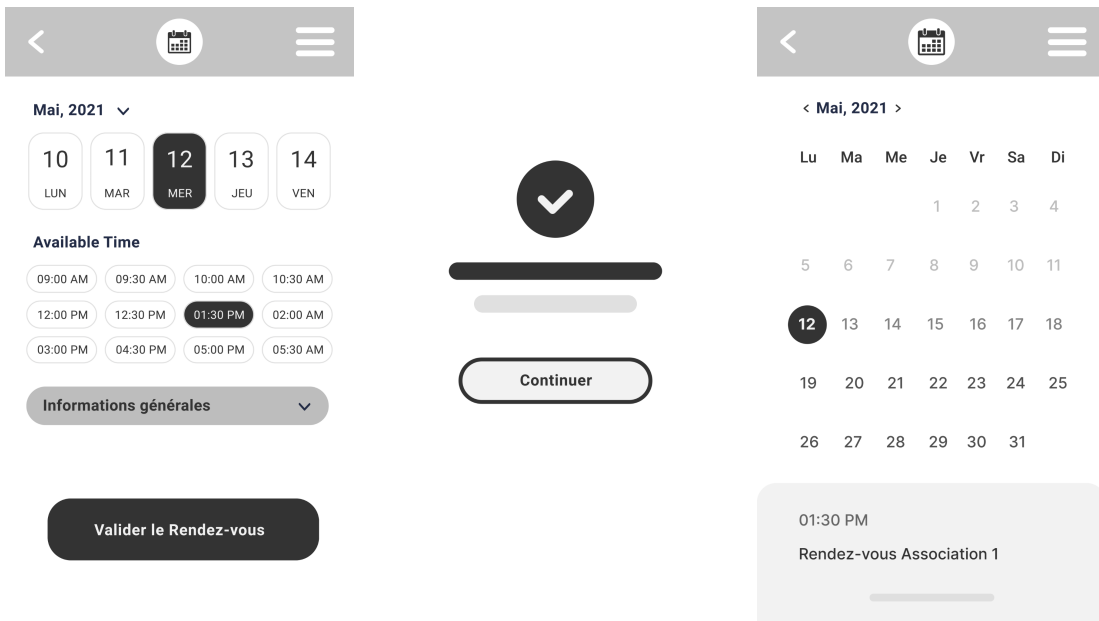
In that respect, we modified the prototype trying to make it more “friendly” and detailed. We used round shapes and contrasts, shades of greys to guide our participants.

We tried to represent all the possible actions a user could do in the different functions of our product.

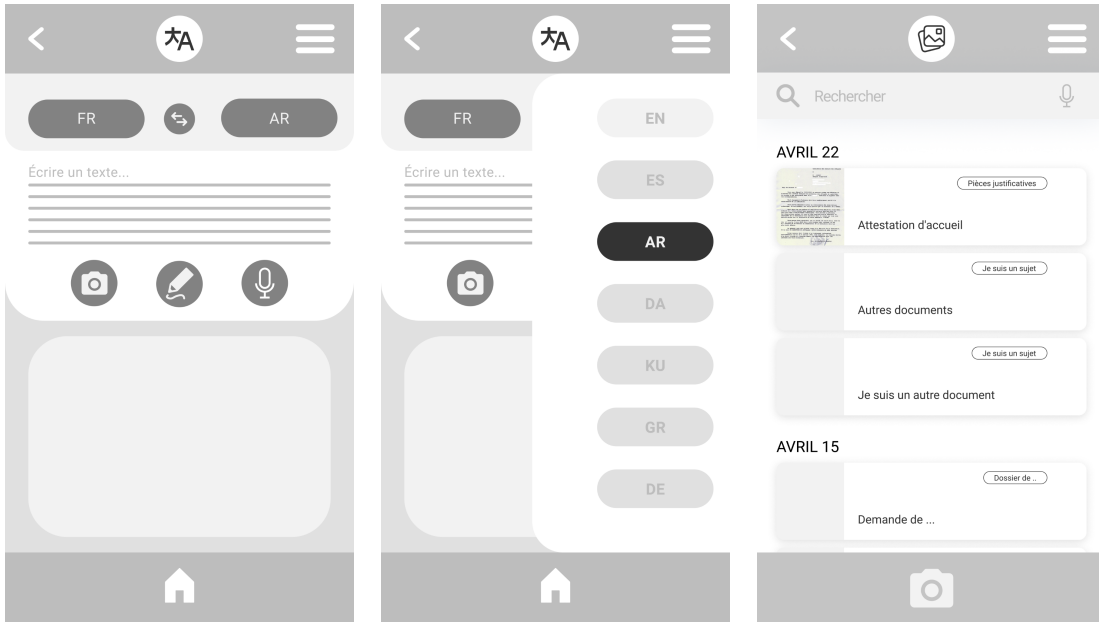
We tested this interactive prototype : [link](#)



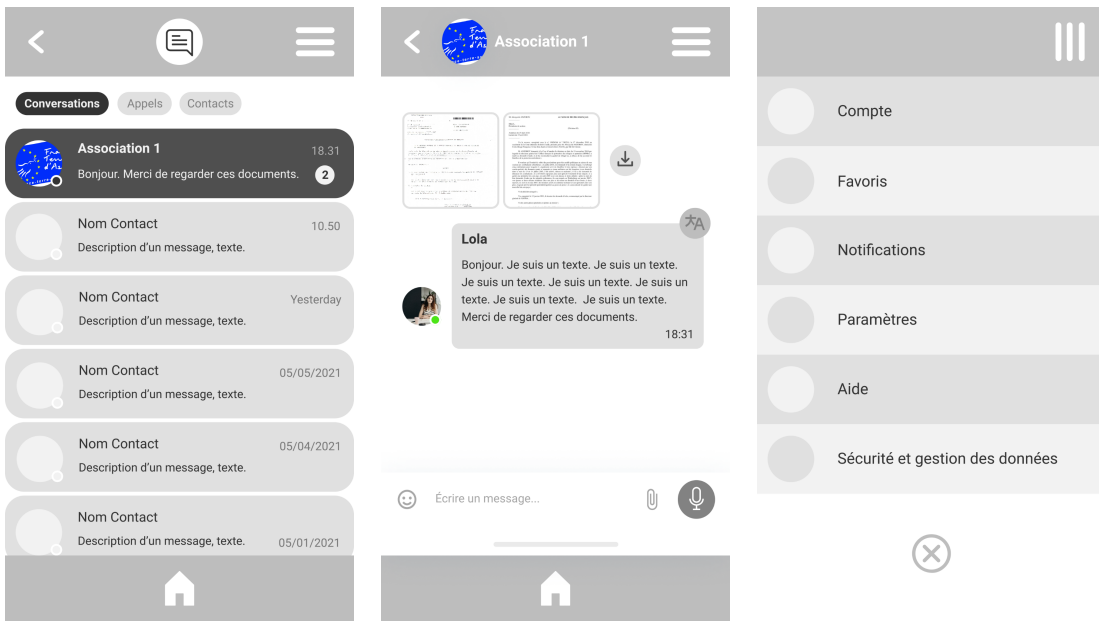
We designed the map, the filters, the association's card (with contact and information).



We created the screen making an appointment with the association after the navigation in the map. We wanted to represent the appointment added automatically in the calendar.



We designed the functions : translator, gallery, messaging, and the menu.



We tried to follow the same rules on each screen which were : inform the user (through icons, colors and changes after actions), guidance and simplicity.



## 6.6 Usability test with users

At this moment of the project, we tested the low fidelity version of the interactive prototype with 5 participants, who are asylum seekers. The social workers of two associations (Koalia and CADA of Dax city) helped us to make these tests possible. Each session happened remotely, from the 7 to the 14 of May 2021. Doing this activity was significant because for the first time, we put our product in a real context.

### Set Up (What)



5 Participants :  
Asylum-Seekers



Videoconferences (Gmeet)  
20-30min / session



7 > 14  
May 2021

All the sessions were recorded (shared screen and voice). It allows us to analyze in highlight the reactions of our participants during their interactions with the product. We spoke mainly french, sometimes english during the tests. We also faced some situations where the participant couldn't understand our instructions (because we had no language in commun). We took these circumstances as an experience to observe how much the person can understand our design despite the different barriers (language, basic version, surprising context). [The videos of the sessions are available : here.](#)

### Method (How)



Contact by email  
+ All information  
+ Links  
+ Documents



1 > Screening / Questions  
2 > Tasks execution  
3 > Evaluate the difficulty  
4 > Give feedbacks



Someone to accompany  
the participant and help  
just in case

When we had planned the day and the hour when each test will take place, we sent an email to each participant. We provided in this email all the information about the test (goals of the activity, execution, links to connect, non disclosure agreements).

## Goals (Why)

We determined our objectives and how we will analyze the results before starting the tests. We wanted to find out if our product (even in its low version) conveyed the principles we had designed previously.



### Check

- > Universal design application
- > Understanding of functions
- > Understanding the purpose of the tool
- > Viability of interactions
- > Understanding of visual and textual content



### Identify

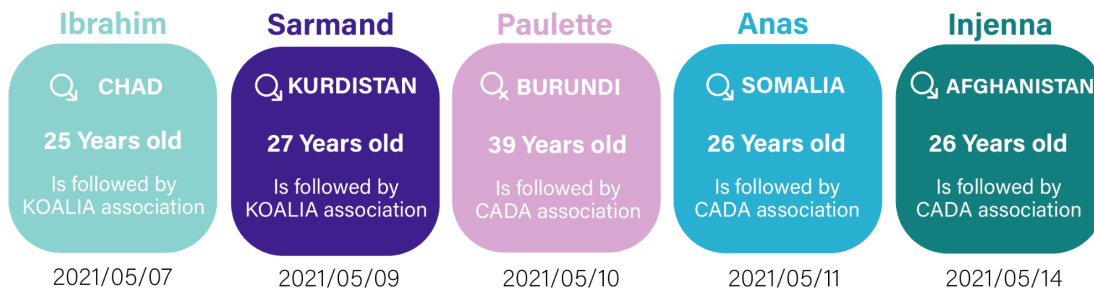
- > User's behaviors on the app
- > Misunderstandings, problems, difficulties
- > Where they click
- > Expectations, motivations



### Evaluate

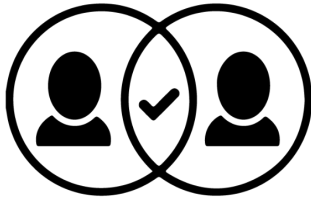
- > The difficulty in performing the tasks
- > The difficulty in understanding the content
- > The difficulty in understanding the interactions
- > The satisfaction level of the experience doing the test

## Participants (Who)



Our participants matched totally with the profiles of our personas. It was deeply interesting to meet them and they were really glad to be a part of this project. They understood that there weren't good or bad answers during the tests, and liked the fact that they shared their opinion. Generally, they were enthusiastic about the activity and totally committed, even if they are not used to this kind of exercise or approach.

## Similarities



- > Restricted language level with french/english
- > Use Google Map, Google Translate, Whatsapp a lot in their daily life and asylum procedures
- > Have launched an asylum demand and are waiting the decision
- > Agree on the interest of developing a tool to support people seeking asylum

The first five minutes of each session were dedicated to question the participant about his demographic information and his smartphone's habits. It was also the moment to make them feel comfortable as much as possible with it and to recap how the session will evolve.

## Report

We asked the participants to realize several tasks on the interactive prototype. We separated our observations into two criterias :

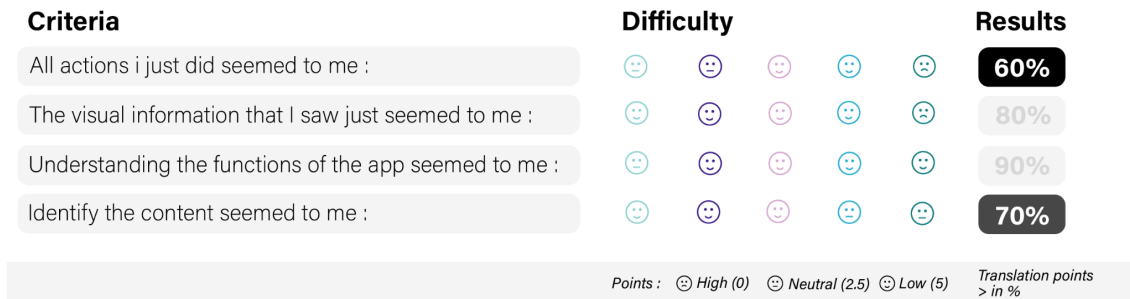
- The ability to execute the task
- The understanding of the task itself

To measure our results, we rank out of 50, each task separated in both criterias. We translated in percentage the results of each metrics and additionnate them to obtain the success of the task.

We determined that each number < 80% of success should be reviewed in the further elaboration of the app. As we can see, the greatest difficulties happened with the map functionality and the possibility of making an appointment with an association. We detected that the understanding and the execution of this task were both complicated for our users. Secontly, the design of the homepage could be reworked graphically with the possibility of translating a message directly.

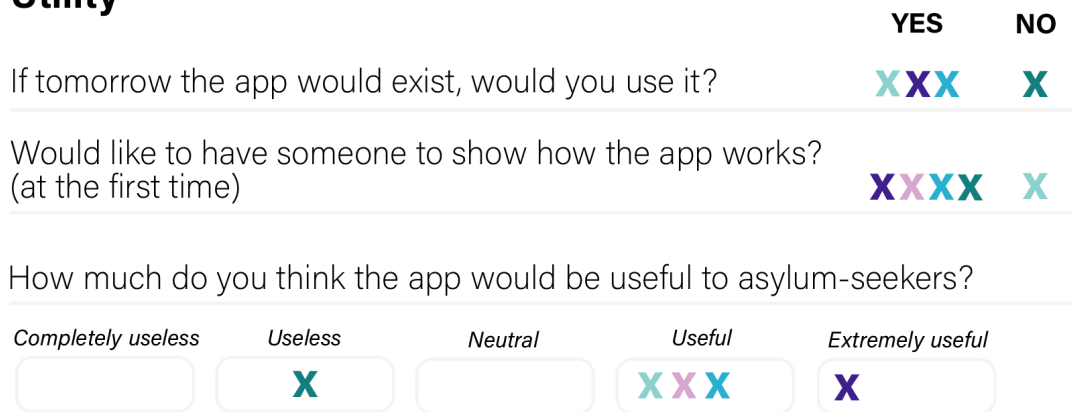
Tasks	Participants	Results		
1/ Enter the app / Browse the homepage	40 45 45 45 40 35 40 40 30 25	78%	76%	77%
2/ Use the map and select an association	35 45 40 35 35 30 30 35 25 15	66%	64%	65%
3/ Make an appointment with an association	40 45 45 50 50 50 25 30 35 20	78%	78%	78%
4/ Use the translator and change a language	45 45 45 50 45 45 45 30	90%	85%	87.5%
5/ Open a new message and translate it	45 50 45 35 40 25 50 35	90%	72.5%	81.2%
	1 2	TOTAL 1	TOTAL 2	SUCCESS
1 = Execution of the task (0% min > 50% max)    2 = Understanding of the task (0% min > 50% max)		Result/Number of participants = Total		Total 1 + Total 2

At the end of each session, we asked our participants to evaluate the difficulty of the activity. We can say that we should improve the transition between each task and the way we present the information. On the other hand, we confirmed that our visual information through icons was really helpful and generated the most understandable information.



Almost all participants found the concept of the project useful, clear and consistent, regarding their needs and practices.

## Utility



## Feedbacks of the participants

We received interesting opinions from some of the participants :

- They would like to have someone to show them how to use the app for the first time, guidance and support is really important to them
- The language is crucial to reach their understanding of the product
- Visual information is always better than text
- The map should be more detailed and explain clearly that it provides the location of associations, not stores places.

- The screen to make an appointment with an association should start by asking the need and then provide the day and hour.
- Vocal commands have to be developed as much as possible, because sometimes asylum seekers don't have learned to write or read at school.

## Improvements

Following the discoveries during these tests, we decided to build the next step respecting these results :

- The user should select his language at the beginning of the app
- We also should start the app with screens explaining the concept, the goal
- The product should provide guidance all along the app, at least when the user use it for the first time
- Vocal command should be central
- The homepage should provide directly all functionalities
- The map function should be reviewed, as well as the way to make an appointment



**Navigation**



**Guidance**



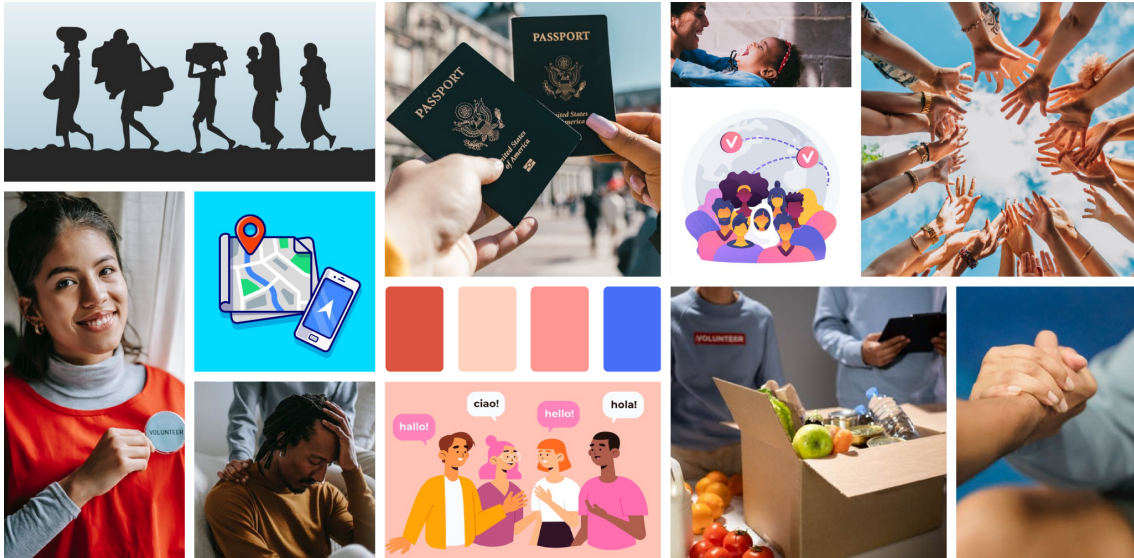
**Language**

To resume, our high fidelity prototype should reflect improvements in :

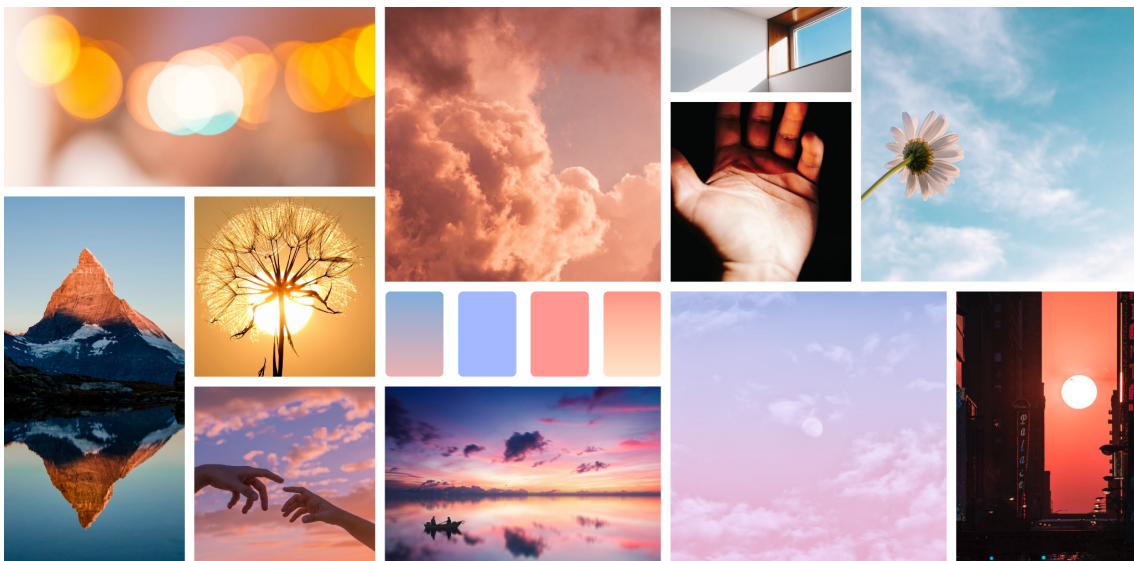
- Its structure of navigation : by facilitating the transitions from one screen to another
- Its ability to inform and guide the user all along his experience on the app
- Its way to communicate information to the user in its own mother tongue and orally as much as possible

## 6.7 Graphic design

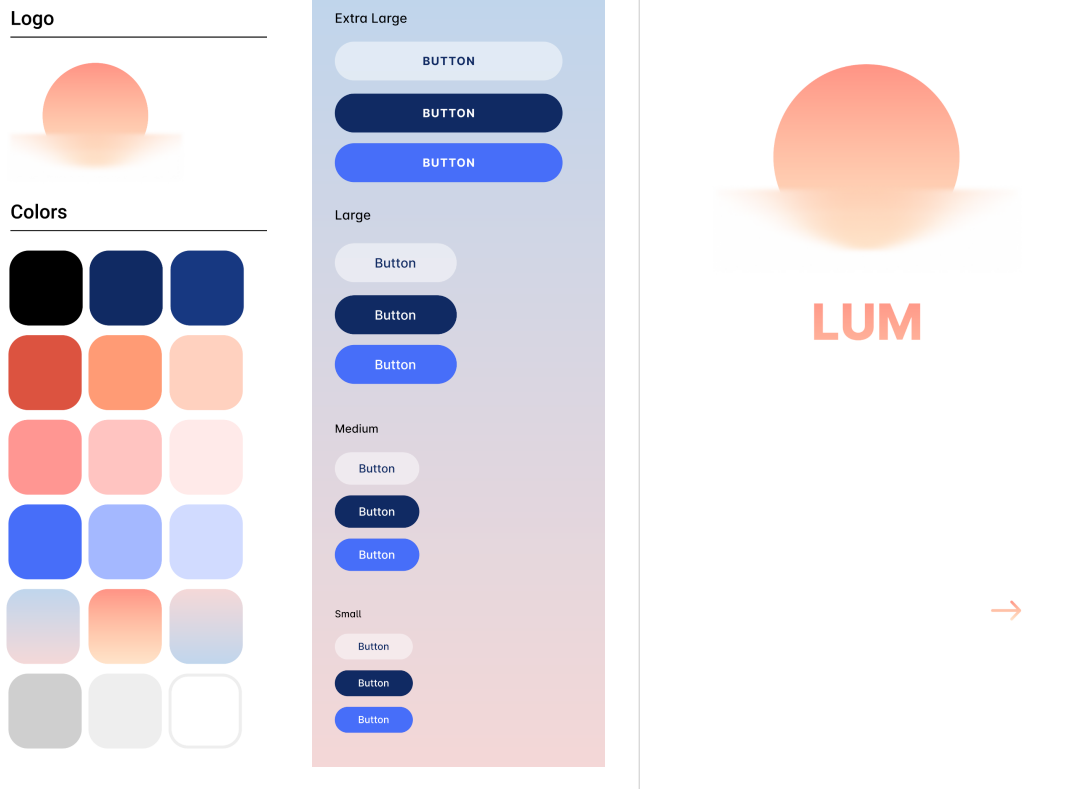
We decided to design Moodboards to find inspirations regarding the graphical aspect of our design. We selected at the beginning different images corresponding to the context and topic of our project. We didn't think it was entirely relevant or emitting a strong visual identity so we decided to question this aspect of the project.



What did we want to transmit to our users ?



We built this second Moodboard to reflect the intentions we wanted to provide with our product. We wished to reflect safety, a serene place, guidance, light, luminosity, hope, simplicity. That's how we arrived at these colors and effects, which are referring to sunrise, natural and universal feelings in front of nature.

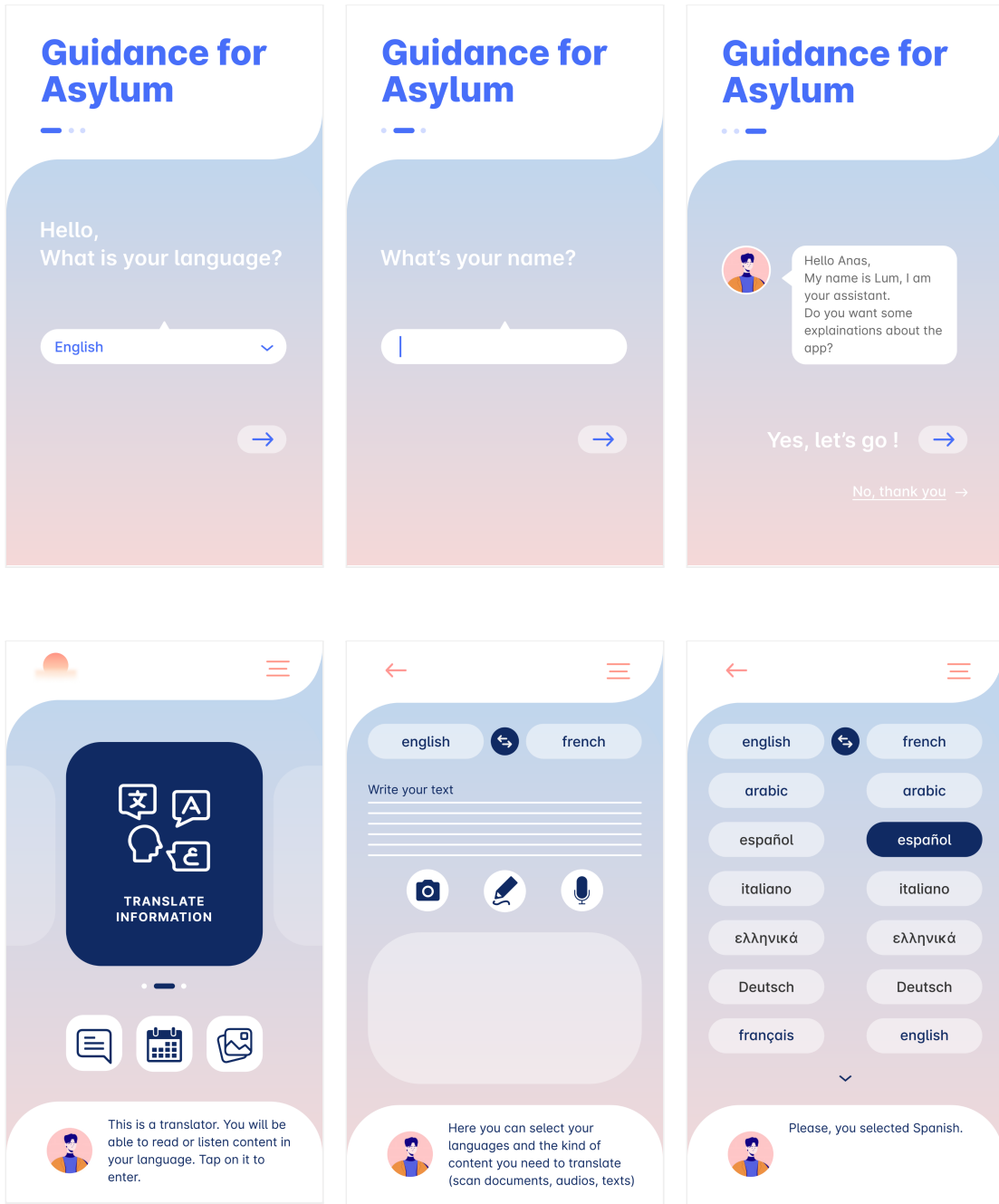


We logically tried to represent these decisions through our logo and graphic decisions in the final prototype. [The final prototype is available : here.](#)

## 6.8 Prototype high fidelity

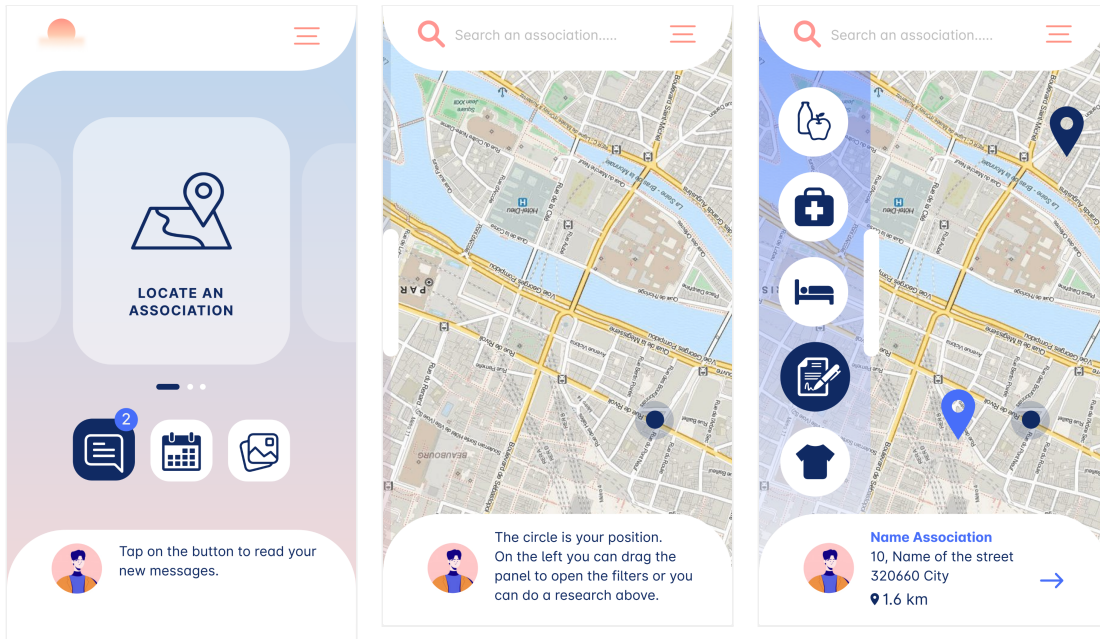
It was important to respect our graphical decisions but also to develop the high fidelity version on the results of our tests with users. For that reason, we decided to integrate from the arrival in the app, in the first place, the selection of the language. This possibility allows the user to understand all the content written in the app. We also introduced the question “what’s your name?” to make the user feel comfortable, create a sort of proximity, through the personalisation.

As we noticed the importance of the guidance to our users in the real context of the session, we decided to focus on the creation of an assistant named “Lum”. This assistant would appear from the beginning of the app and guide the user through all the navigation. He also would say orally the text written (in case the user is not comfortable with reading).

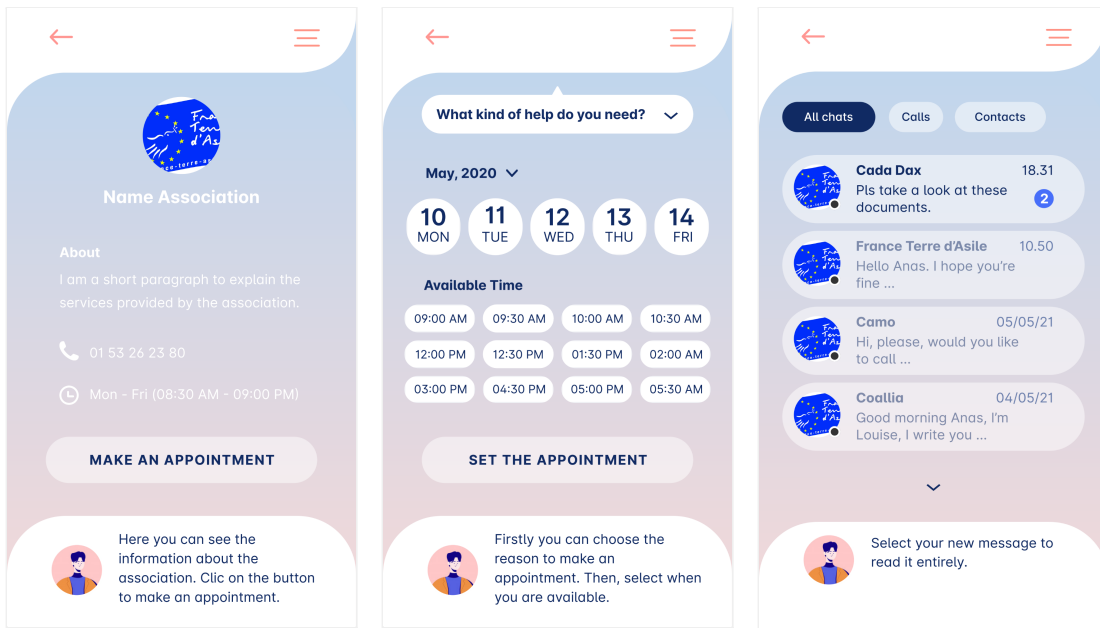


We followed the same principles as in our wireframes, regarding the behaviors of the app in terms of changes of colors when the user does an action. We insisted on curves and transparency to reinforce the values and sensations we wanted to reflect.





We followed what our participants said during the tests regarding the map and its details.



We also changed the order of the question at the moment to make an appointment with an association. Finally, we executed a heuristic evaluation to test our prototype ourselves and discover how we could improve it.

## 6.9 Heuristic evaluation

+	The criteria is respected, there is no necessity to review the design
-	The item should be revised and the interface modified
--	The principle has to be reviewed entirely in all the user interface design to provide a general better usability
!	Idea for a prospective development of the project

<b>#1: Visibility of system status</b> <i>The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time.</i>	
+	Globally the app informs the user when an action is completed, notably by the change of colors of the buttons and CTA. Also, when the “assistant Lum” is active, the user is informed and guided in the interface.
-	However, we should review the actions of going back or accessing the menu easily and whenever the user wants.
<b>#2: Match between system and the real world</b> <i>The design should speak the users' language. Use words, phrases, and concepts familiar to the user, rather than internal jargon. Follow real-world conventions, making information appear in a natural and logical order.</i>	
+	As our icons and information architecture were built on the mental models of a sample of our users, we think that our interface respects this criteria. Also, we decided to integrate the choice of the language at the beginning to reinforce this aspect.
!	As a line of development we should focus on this aspect to choose the words of the “assistant Lum”.
<b>#3: User control and freedom</b> <i>Users often perform actions by mistake. They need a clearly marked "emergency exit" to leave the unwanted action without having to go through an extended process.</i>	
-	As the access to the menu is available in all screens of the app, we should integrate the logo in the menu, which would send directly the user to the homepage. We should also develop our actions to go back to the precedent screen.
<b>#4: Consistency and standards</b> <i>Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions.</i>	
+	Our interface uses simple interactions and has the same behaviors in all its tasks (panel to drag, changes of colors during a selection, arrows, sizes of the visual elements, colors and graphic themes, typography, etc).
<b>#5: Error prevention</b> <i>Good error messages are important, but the best designs carefully prevent problems from occurring in the first place. Either eliminate error-prone conditions, or check for them and present users with a confirmation option before they commit to the action.</i>	

!	At the moment of making an appointment, or directly in the calendar, the possibility to change or cancel the appointment, this criteria should be considered and developed.
<b>#6: Recognition rather than recall</b> <i>Minimize the user's memory load by making elements, actions, and options visible. The user should not have to remember information from one part of the interface to another. Information required to use the design (e.g. field labels or menu items) should be visible or easily retrievable when needed.</i>	
+	The elements stay visible even when the user has done an action on the screen. The information disappears only when the task is completed. Also, the user can come back easily in a panel because all functions are accessible from the homepage. The user doesn't have to remember a lot of information.
<b>#7: Flexibility and efficiency of use</b> <i>Shortcuts — hidden from novice users — may speed up the interaction for the expert user such that the design can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.</i>	
+	We provided “assistant Lum” exactly for that purpose. Also the option of the language and the name, don't appear when the user reconnects other times. We also imagined a list of favorites for the associations or the locations, so we could imagine some quick suggestions for the users who are “experts” in the app, who have already used it many times..
<b>#8: Aesthetic and minimalist design</b> <i>Interfaces should not contain information which is irrelevant or rarely needed. Every extra unit of information in an interface competes with the relevant units of information and diminishes their relative visibility.</i>	
+	We had the intention to stay as minimalist as possible to provide exclusively the necessary elements. We think that our interface respects this criteria.
<b>#9: Help users recognize, diagnose, and recover from errors</b> <i>Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution.</i>	
-	As in the previous points (1,3) already identified, our product is not developed enough to cause potential errors. However, we should focus on this criteria at the moment of reviewing the final interactive prototype.
<b>#10: Help and documentation</b> <i>It's best if the system doesn't need any additional explanation. However, it may be necessary to provide documentation to help users understand how to complete their tasks.</i>	
+	The user interface design provides guidance with “assistant Lum” and the possibility to contact the team or to ask for questions, find information, is available from the menu.

To conclude, with more time, our final interactive prototype should provide more feedback to the users and provide information if the user goes in the wrong direction. The back and forth in the same screen should be reviewed.

# Conclusion

This project was a learning process in a multitude of areas. We grew at the same time of our developments and discoveries, in all chapters. We can testify that the force of the project is its target audience. From a human perspective, it was highly instructive and meaningful to meet asylum seekers and social workers. Without them, this project would not have been possible. They allowed us time, and we could benefit from their experiences and feedback, all along the project, despite their other priorities.

Asylum seekers are not used to be interviewed or to participate in this kind of project. We noticed how much they were attentive and committed in the exercises we proposed. It was a challenge to be in this real context. We had to question them, guide them, and find solutions to communicate well, in a reduced time, sometimes without having a language in common. This project is an opportunity to learn about others, to find ways to build together, regardless of the differences of culture, language, situations, stories. We could develop a reflection on the concept of universal design about how to design a product to reach so many different people.

We consider this project as a pilot. We hope that it could have a life after the master. We could imagine participating in social challenges or developing partnerships with associations to develop our tool.

As we mentioned at the beginning of the document, this project started with several discoveries concerning the involvement of blockchain technology in humanitarian projects. Our motivation to investigate on that topic came out by reading an article about the creation of a system in a refugee camp (in Kenya), using blockchain and biometric recognition to provide solutions to the refugees living there. People pay for shopping in the supermarket, only by scanning their iris. They don't use money, but their body. At the beginning, we thought that Blockchain and forcibly displaced people seem to be two dichotomous topics. We wanted to understand how and why these kinds of projects could exist. We thought it could be inspiring under the scope of this project. By several researches, we discovered that propositions focused on using Blockchain technologies to improve exiled people's lives/conditions are currently developed all around the world by several organizations. Institutions (like the United Nations, UNHCR, European Union) are adopting strategies to change their migration management forward-looking on Blockchain networks. Only institutions can make a real difference in order to solve several aspects of the refugee crisis.

However, as a research axis or development possibilities, we could imagine that our project could integrate other functionalities or technological innovations.

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## Asylum

The granting by a State of protection on its territory to individuals from another State who are fleeing persecution or serious danger. Asylum encompasses a variety of elements, including non-refoulement, permission to remain on the territory of the asylum country and humane standards of treatment.

## Asylum-Seeker

An individual who is seeking international protection. In countries with individualized procedures, an asylum-seeker is someone whose claim has not yet been finally decided on by the country in which the claim is submitted. Not every asylum-seeker will ultimately be recognized as a refugee, but every refugee was initially an asylum-seeker.

## Blockchain

A consensus digital ledger comprised of unchangeable, digitally recorded data in packages called blocks. Each block is 'chained' to the next block using a cryptographic signature. This allows blockchains to act like a ledger, which can be shared with and accessed by anyone with the appropriate permissions.

## Cryptocurrency

Digital currency that is based on mathematics and uses encryption techniques to regulate the creation of units of currency as well as verifying the transfer of funds. Cryptocurrencies operate independently of a central bank.

## Currency

In most specific terms, money in any form, when used in circulation as a medium of exchange is known as currency. Every country has its own currency, like the US dollar is the currency of the USA.

## Digital Identity

Digital identity is basically an online identity or identity on a network adopted by an organization, individual, or electronic device.

## Immutability

Immutability is the property of data for showcasing additional resistance to modifications. It is a key aspect of blockchain networks and ensures that data written on a blockchain ledger cannot be modified.

### **KYC (Know Your Customer)**

KYC is a procedure in which a business verifies the genuineness of the customers by verifying their background and identity.

### **Refugee**

A refugee is any person who, "...owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his [or her] nationality and is unable or, owing to such fear, is unwilling to avail him [or her]self of the protection of that country; or who, not having a nationality and being outside the country of his [or her] former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it."Article 1A(2) of the 1951 Convention or "who is outside his/her country of origin or habitual residence and is unable to return there because of serious and indiscriminate threats to life, physical integrity or freedom resulting from generalized violence or events seriously disturbing public order." (OAU Convention and Cartagena Declaration)

### **Refugee Status Determination (RSD)**

Legal and administrative procedures undertaken by States and/or UNHCR to determine whether an individual should be recognized as a refugee in accordance with national and international law.

### **Refugee-like situation**

The category of people in a refugee-like situation is descriptive in nature and includes groups of people who are outside their country of origin and who face protection risks similar to those of refugees, but for whom refugee status has, for practical or other reasons, not been ascertained.

### **Registration**

Registration can be carried out in different manners, depending on the operational circumstances and data requirements. Level-1 Registration, often referred to as "household registration", gathers only elementary information from persons of concern for the purpose of establishing a basic distribution system or to provide demographic estimates. In Level-2 Registration, limited personal data is collected from each individual, for basic planning, monitoring and protection activities. Level-3 Registration represents the most comprehensive recording of detailed personal data of persons of concern, which is required for individual case management and delivery of durable solutions.

### **RGPD**

General Data Protection Regulation

### **Scalability**

Scalability refers to the ability of a blockchain project to handle the network traffic, capacity of application, and future growth.

**Stateless Person**

Person who is not considered as a national by any State under the operation of its law, including a person whose nationality is not established.