

Ecole Des Hautes Etudes Commerciales



**This dissertation is submitted in partial fulfillment
of the requirements for the Master's degree in Commercial
Sciences**

Specialty: international affairs

Theme:

**The role of empathy-based marketing in
improving user experience of an application mobile.**

Elaborated by:
Sarra LOUZZANI

Supervised by:
Professor Rachid Alliouche

**8th promotion
June-2021**

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My dad for his love, protection, presence and support.

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Dedication

I would love to dedicate this work to mom and dad.

To my lovely sister Assia.

My brothers

My grandmother

And my dearest friends : Donia , Hajer , Hania ,Haffssa , Mimi , Amina , Sabrina and Nawel

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List of abbreviations

BMC	Business Model Canvas
CCM	Client-Centric Marketing
CES	Customer Engagement Strategy
CSP	Categorie Socio Professional
CJM	Customer Journey Map
DCExT	Digital Customer Experience Transformation
DSS	Digital Solutions Strategy
EM	Empathy Map
Roi	Return On Investment
UI	User Interface
Ux	User Experience

Abstract

the emergence of new technologies have made the world of business fall into a competition of rapidity, process accelerating and fast deliveries , through automation and the use of machines where burst the fear of being less human and forgetting that our client is a human first.

Therefore ; marketing today is moving toward more client centricity , and is aiming to be more human centric, where comes the talk about empathy-based marketing , a type of marketing that focuses more on client psychology, and seeks a deep understanding of him.

To achieve that deep understanding of the client we need to understand first his era and how is it effecting him.

In our research we will explain the characteristics of digital transformation era and its impact on client behavior, lifestyle and expectation. As well as its impact on business process and modeling . then we will deeply define and talk about empathy-based marketing definition and highlight its importance in the current era.

Key words: empathy-based marketing , innovation , design thinking , application mobile

Résumé

L'émergence des nouvelles technologies a poussé le monde du business de se focaliser sur l'accélération des processus, l'accélération de la livraison et de tout ce qui peut être accéléré.

En revanche c'est de cette situation qu'émane la peur de tomber dans le piège de l'automatisation, et enfin d'oublier qu'on a affaire avec des êtres humains, et qu'ils ont besoin ; au-delà de la rapidité, une empathie et une meilleure compréhension de leurs besoins, leurs personnes et leurs attitudes.

Dans notre recherche ; nous allons parler du marketing basé sur l'empathie qui est un type de marketing qui aide à humaniser la manière de faire le marketing pour atteindre une meilleure compréhension du client, ensuite nous allons parler de l'ère du numérique, quelles sont ses caractéristiques et comment elle impacte le client.

Les mots clés : marketing basé sur l'empathie, la digitalisation, le design thinking, l'innovation, application mobile.

ملخص

عصر الرقمنة جعل العالم يلتف وراء تحقيق السرعة في كل المجالات عبر برمجة الخطوات ' وذلك بالاعتماد على مختلف التكنولوجيات المتاحة والذي قد يعرض التسويق للابتعاد عن العملاء' فعبر البرمجة قد يفقد المسوقون قدرتهم على التعاطف مع الزبون .

هنا يأتي ذكر نوع من أنواع التسويق, ألا و هو التسويق المبني على التعاطف والذي ينص على الاستثمار في معرفة العميل, معرفة دقيقة. بالكشف عن تفاصيل محيطه , على سلوكياته بالبحث عن فهم أفكاره فهما عميقا و تحليل رداً فعله ومشاعره . تحقيق الفهم العميق للعميل يمنحنا القدرة على فهم حاجياته كذلك و منه تلبية محتجا يته المصرح بها و الغير مصرح بها من طرفه.

من خلال دراستنا سنحاول فهم أكثر على عصر الرقمنة و أثرها على العملاء و على التسويق و كذلك سنحاول تسليط الضوء أكثر على التسويق المبني على التعاطف وكذا على وسائله و علاقته بالإبداع وتقنية التصميم التخطيطي .

الكلمات الدالة: التسويق المبني على التعاطف , التخطيط التصميمي , الإبداع, الرقمنة, التطبيقات الهاتفية

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General introduction:

Human beings, are a combination of consciousness and sub consciousness a mixture of irrationality and rationality , we can say that human beings are like icebergs we see only the top and what lies under the sea is their undeclared facts, thoughts, feelings , emotions needs and desires. That the person himself might be unaware.

A person is determined by what he sees, hears, thinks and feels and finally by what he says and does; he is the meet of outer world and inner world which both affect each other's and shape the up part of the iceberg. Therefore ignoring these areas about a person makes it hard for us to relate to his thinking process thus his decisions. Wherefore we say that human being is irrational. Because every human experiences the convergence of his own both worlds that would keep him from completely relating to the interaction of two another worlds.

Here where comes the talk about the psychology science and so marketing; these both sciences have been improving to describe, explain, predict, and change or control individuals behaviors; except that for marketing the ultime goal beyond the understanding is creating value by presenting products and services. A convergence between these two sciences gave birth to a new marketing called empathy-based marketing to relate to the previous explained irrationality marketing has been using psychological techniques and methods, more precisely empathy tools to step in to our clients shoes and experience life from their perspective to relate to their irrationality.

The emergence of new technologies caused the world a shift into a new era; where its clients are different from the clients of the previous one; nowadays they have different lifestyle, different needs, and higher expectations. And if we talk more precisely about mobile technology, mobile users are completely different from the none mobile users; therefore to propose products to these mobile users like applications mobile, we need to understand them and empathies with them apart as mobile users in addition to understanding them in the context of our product.

it is in this context that our research theme is inscribed, we aim to empathies with Algerian citizen in the context of claiming first then with them as mobile users to be able at the end to improve the user experience of an application mobile designed to ‘ Algerian consumer rights protection association’ called APOCE. Thus we will be proving that despite the emergence

of new technologies, marketing needs always to be humanized through psychological techniques and tools for a better efficiency.

Main question, secondary questions and research hypotheses:

What is the role of empathy-based marketing in understanding client's need? And how would it contribute at improving a user experience?

Secondary questions:

1. Does empathy-based marketing help to understand client's needs?
2. How would empathy-based marketing contribute at improving a user experience?
3. Does empathy-based marketing help to find solutions and solve problems?

Research hypotheses:

1. Empathy based marketing offers great tools to understand client's needs
2. We can improve client's experience with empathy, by understanding the depth of client's problems.
3. Yes empathy-based marketing can be used in a problem solving process

The importance of the research:

Our research will contribute at improving the user experience of Apoce application mobile; that would facilitate claim procedure for Algerian citizens, and that would contribute to their social welfare, in another hand this research will help find a link between psychology, marketing, and technology.

The reasons for choosing the topic:

- As a passionate about psychology and marketing, we felt curious about discovering the bridge between these two sciences and so technology.
- our personal experience as a business owner with the use of empathy-based marketing made us want to conduct deep research about this field and discover better its details and also prove its efficiency in understanding customers and so achieving business's goals.
- Modern Marketing is moving toward more client centricity.
- Improving our ability in understanding customers.
- Find good suggestions for a better client's experience.

Goals of this research:

- Understanding empathy based marketing approach, its main characteristics, and the role of empathy in innovation and its principal tools;
- Learn how to use empathetic marketing tools; and be able to realize a deep empathy with the client.
- Understand how to use empathy in business in this digital era.

Research methodology:

Bibliographic research: based on different resources

Qualitative research: we have conducted a qualitative research.

Structure of the thesis:

1. First chapter: in this chapter we will talk about empathy based marketing, what is it ? what are its main characteristics ? its relation with innovation and tools.
2. Second chapter: we will talk about digital transformation era its main characteristics and more precisely about applications mobile and how to use empathy to improve an application mobile's user experience.
3. Third chapter: we will present the host-company Brenco engineering and consulting and present the empathy-based marketing research for an application mobile " Apoce " and then suggest propositions to improve its user experience.

Chapter I: Empathy based marketing

Introduction

Clients are human beings and they often go irrational when it comes to decision making. Therefore marketing has been improving and progressing to relate to that irrationality starting with a gut feeling marketing decision based, moving to data and knowledge based marketing arriving to marketing based on empathy. Empathy started being used to humanize marketing, to relate and deal better with clients.

In this chapter we will talk about empathy based marketing; definition, modalities and tools and in the second section we will see it's relation with innovation and how would we use empathy to develop innovative and useful solutions with a method called Design thinking; we will be defining its concept , steps and goals.

Section 01: empathy based marketing definition and tools.

Marketers started to understand that sometimes to make better decisions, they need to step out of their role as marketers and start being their own clients and try to experience life from their client's perspectives. To deeply understand their feelings thoughts environments and sayings in hope to make the most suitable decisions for them. And that's the concept of empathetic marketing.

1.1. What is Empathy

Empathy is the human ability to relate to someone other's thoughts, feelings and attitude. It's the capacity to see the situation from another perspective other than ours .in another words it is about experiencing someone's inner world.

Here are different definitions:

1. "Sharing another's feelings by placing oneself psychologically in that person's circumstance¹."
2. "The act of perceiving, understanding, experiencing, and responding to the emotional state and ideas of another person²."
3. **Edward TITCHENER³** coined the word "empathy" (feeling-in), as a translation of the German *Einfühlung* : "A process of humanizing objects, of reading or feeling ourselves into them."
4. "A distinction between oneself and others and awareness that one is vicariously feeling with someone but that this is not one's own emotion⁴."

We can distinguish three types of empathy: Cognitive, Emotional and Compassionate:

- 1) **Cognitive empathy:** the first level of empathy and it's based on the ability to identify and to know other person thoughts and feelings it's about knowledge and awareness.

"having more complete and accurate knowledge about the contents of another person's mind, including how the person feels"⁵

¹ LAZARUS, (R. S): «*Emotion and adaptation*», in Oxford University Press, New York, 1991, p.287.

² BARKER, (R. L): *The social work dictionary*, Washington, DC: NASW Press, 5th ed, 2003, p.141.

³ **Edward Bradford Titchener** (11 January 1867 – 3 August 1927) was an English psychologist.

⁴ WISPÉ, (L): «*The distinction between sympathy and empathy: To call forth a concept, a word is needed*», in Journal of Personality and Social Psychology, N°50, 1986, p.318.

- 2) **Emotional empathy**: the second level of empathy, “when you feel physically along with the other person, as though their emotions were contagious⁶.” Defined by (**Daniel Goleman**)
- 3) **Compassionate empathy** : the third level of empathy , and it’s about taking action as a result of empathy process , understanding and feeling others

1.2. Empathy leadership and management:

Nowadays Empathy is the most needed soft skill; it contributes at humanizing business, enhancing work efficiency, and it can also bring a competitive advantage in business. The ability to see the world from the perspective of others is one of the most crucial tools in business.

Leadership is a process of social influence, which maximizes the efforts of others, towards the achievement of a goal⁷

1. **Warren Bennis**: “Leadership is the capacity to translate vision into reality.”
2. **Peter Drucker**: “The only definition of a leader is someone who has followers.
3. **Bill Gates**: “As we look ahead into the next century, leaders will be those who empower others.”

Essentially leadership based on empathy is a data gathering tool that enables leaders to understand the work place environment and therefore make better predictions, think of a better tactics, and communicate clearly.

Using empathy, leaders can achieve their goal of influencing those who are under them and direct their efforts toward the fixed goals. Empathetic leaders understand the depth of root cause behind poor performance and so gain a greater awareness of the needs of their employees, and help the struggling ones to enhance their productivity by encouraging an open communication and listening to their feedbacks to create a good circumstances and the right environment for them.

⁵<https://lesley.edu/article/the-psychology-of-emotional-and-cognitive-empathy> (consulted 27/06/2021 at 3AM)

⁶<https://blog.heartmanity.com/the-three-kinds-of-empathy-emotional-cognitive-compassionate>(consulted 27/06/2021 at 1AM)

⁷ <https://todd1.weebly.com/defining-leadership--management> (consulted 20/06/2021 at 2PM)

“We’ve seen three “ages” of management since the industrial revolution, with each putting the emphasis on a different theme: execution, expertise, and empathy⁷”.

A study conducted by the Center of Creative Leadership (CCL) to address successful job performance of a leader has shown that Managers who show more empathy toward direct reports are viewed as better performers in their job by their bosses.

Psychologist Jaakko Sahimaa states that⁸ “ soft skills are very important in business to achieve goals, we need soft skills. Employees are human beings and a leader needs to be prepared to lead and encounter people in an empathetic manner. Empathy is a significant skill for work life”

1.3. Empathy and marketing

1.3.1. What is empathy based marketing?

Empathy is the capacity to share and recognize the emotions felt by another being. In the context of conversion marketing, empathy allows you to understand your target audience, create relevant offers and engage with them in an authentic way⁹.

Empathy, that is , the capacity of understanding another person’s perspective and feelings, it has conventionally been a pillar of marketing as the discipline from its very inception has emphasized the importance of understanding and putting oneself in the shoes of customers , yet , with an increasing focus on rationality , objectivity, and science marketing has arguably become more empathy-driven¹⁰.

Empathy is superpower. It’s a superpower for sellers and marketers to connect, to understand another person’s feeling and experience¹¹.

Empathy-based marketing boils down to seeing the world from the perspective of your users and customizing your marketing to fit their experience. The result is that it builds

⁷ <https://hbr.org/2014/07/managements-three-eras-a-brief-history> (consulted 15/06/2021 at 1 AM).

⁸ Microsoft pulse: *empathy in business*, June 2020, p.09.

⁹ <https://unbounce.com/conversion-glossary/definition/empathy/> (consulted 12/06 /2021at 9AM).

¹⁰ CARSTEN, (L.P): *empathy based marketing*, in *Psychology & Marketing*, N°38, January 2021. (Abstract).

¹¹ <https://marketinginsidergroup.com/strategy/empathetic-marketing-connect-customers/> (consulted 27/06/2021) at 3 PM.

better relationships with your customers because it is a customer-centered outlook instead of a solution-centered¹².

Empathy-based marketing is about doing marketing by putting yourself in the shoes of your customer to know how and what value to create to satisfy which needs and desires; and by understanding the depth of every need and relating to every client's feelings, to design the exact product that matches their exact declared and undeclared needs, therefore empathetic marketing is about diving deep into your client's life experience and figuring out their problems in order to find the right solutions for them. It provides a framework for exploring the subconscious emotions and innate core needs that drive people's motivations and behavior.

1.3.2. Modalities and tools of empathy-based-marketing:

1.3.2.1.Modalities of empathy-based-marketing:

A. Empathetic conversation

Empathetic marketing is based on evidence and data; the best way to reach empathy is through one-to-one conversation with clients .emphatic conversations need to be conducted by all stakeholders engaging with customers. These conversations need to be more iterative, flexible, and scalable to understand client's perspectives and behaviors. The difficulty is that clients want to be satisfied by things they think the business already knows about them without having to be told, as well as by those things of which the customers themselves might be unaware. Customers do not always tell what they want and more often they do not always know what they want; we mention three types of needs

- a. Stated needs** are the needs customers can explicit, which are easily captured with tools with which customers can engage, such as interviews, focus groups and surveys
- b. Implied needs:** these needs are somehow difficult to capture because customers and clients consider them too obvious to be mentioned and they assume that such information is clear for everyone.
- c. Silent needs:** these needs are considered as the most difficult to capture and that's what makes them the most valuable and useful, discovering these needs requires deep analyses and psychological understanding tactics and techniques because the customer is not aware of their existence which he ultimately cannot articulate them.

¹² <https://clevertap.com/blog/empathy-marketing/> (consulted 12/06/2021 9:21 AM).

B. Empathic listening

Effective listening is crucial to marketing. Unless we understand the opinions, values and beliefs of clients, we will attempt to manage them, to direct them to explicit their needs. So the more we listen to our customer, the better we can frame not only what we say, but how we say it and how to conduct our empathic research.

Active listening consists of two components; the first one is the genuine seek of understanding the client in front of us, and second is often referred to as "reflective listening" it is about mirroring that understanding back to the interviewed person to reassure him that the conversation is being well assumed.

Figure I-01: Four Key¹³ Active Listening Skills

- | |
|---|
| <ol style="list-style-type: none"> 1. Suspending judgment of the speaker 2. Focusing on emotion as well as content 3. Following, not leading the conversation 4. Reflecting accurately what you |
|---|

Source: developed by us based on: CLAWSON, (J.G): «*Active Listening*», in University of Virginia, Darden School of Business, October 2008.

1.3.3.2. Tools of empathy-based- marketing:

1.3.3.2.1. Empathy map:

An empathy map is a data-gathering tool, it was first made by Dave gray in his book "business game". It can be defined as a visual illustration used to gain useful insight into a user's context. The use of an empathy map allows having a look into user's mind and revealing their thoughts their desires, needs, motivations, and essentially helps marketers be their customers.

¹³ CLAWSON, (J.G): «*Active Listening*», in University of Virginia, Darden School of Business, October 2008.

The structure of an empathy map helps to develop a better understanding of the customers, it goes beyond demographic characteristics. It is typically based on capturing the consumer's environment, behavior, aspirations, and concerns.

1. The elements of an empathy map:

The empathy map is divided into four quadrants.

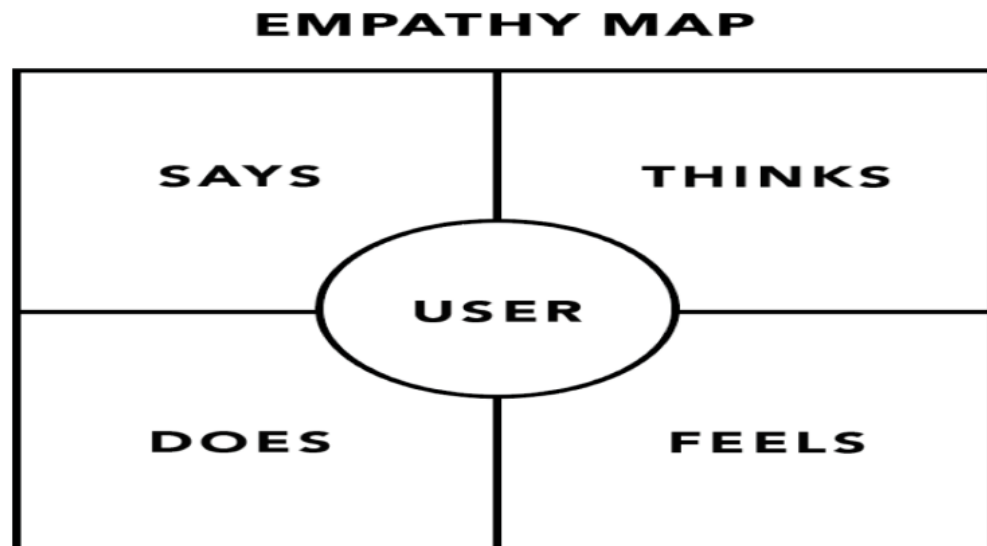
- a. **Sees:** This quadrant helps to learn about the environment of our client, how his life looks like; what are the things that surround him that might probably influence him in some way; it is a sort of description of our client's worlds including the things they see, the people they interact with.
- b. **Hears:** this second quadrant is highly related to the first one, the environment that the clients interact in. determines what he hears; we need to figure out what are the messages that our clients are receiving and how are they influencing them.
- c. **Thinks and feel:** the messages we hear and the environment we interact with shape the way we think and feel; this quadrant is crucial to understanding clients, it helps figure out the things that our clients are thinking about on a regular basis the emotions they are experiencing in the context of our research; What are their fears, aspirations, motivations, and occupations.
- d. **Say and do:** What people think and feel influences their behavior. this quadrant captures the actions that client takes and the words they say.
- d. **Pains:** As a conclusion of this process of understanding the client's environment both what he sees and hears; we aim to determine the client's pain in the research context, what keeps him from taking the desired actions?
- e. **Gains:** This quadrant concerns the solutions that would transform our client's pain points.

f. The evolution of empathy map:

In the first version of the EM, Matthews, proposed four different areas that should be covered when making an Empathy Map of a person.

Figure I-02: Empathy map¹⁴ of a person

¹⁴ <https://www.nngroup.com/articles/empathy-mapping/> (consulted 13/06/2021 at 01:12 PM)



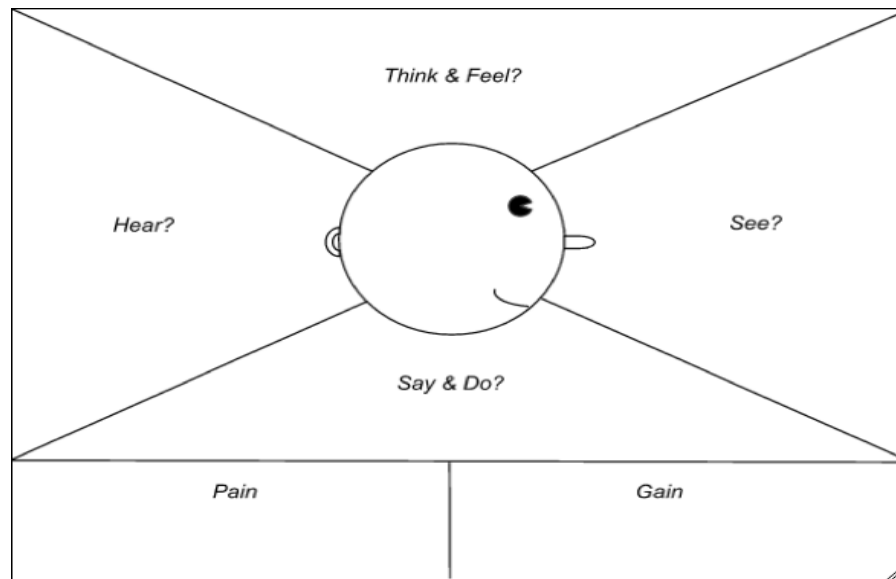
Source: <https://www.nngroup.com/articles/empathy-mapping/>

After, Bland improved the EM by including Pain and Gain areas. As a result, the EM consists of six areas:

- ♦ See – what the user sees in his/her environment;
- ♦ Say and Do – what the user says and how s/he behaves in public;
- ♦ Think and Feel– what happens in the user’s mind;
- ♦ Hear –how the environment influences the user;
- ♦ Pain– the frustrations, pitfalls and risks that the user experiences,
- ♦ Gain –what the user really wants and what can be done to achieve his/her goals.

Figure I-03: empathy map¹⁵

¹⁵https://www.researchgate.net/publication/276207468_Designing_Personas_with_Empathy_Map/download/ (consulted 13/06/2021 at 11:43 PM).



Source:<https://www.researchgate.net/publication/276207468> Designing Personas with Empathy Map/download

g. Steps to build empathy map:

1. Steps to build empathy map:

- a) **target selection:** The first step to create an empathy map is to determine our segment and target, who are our potential consumers, which audience responds the most to our goals, and who are the persons that are concerned by our product or service;
- b) **Data research and gathering:** Second; collecting data is essential because empathy-based marketing is highly based on data and information gathering, and empathy is a tool for deep data collecting. This can be realized through qualitative data gathering tools; like qualitative surveys and personal interviews and focus groups;
- c) **Team assembling:** Creating an Empathy map is a collective process that requires grouping individuals who are involved in the product creation or problem-solving. ideas need to be shared in a brainstorming session about the context and the analysis of the gathered data.
- d) **Ask questions:** As discussed earlier; asking questions to fill the different empathy map components:
 1. **See:** What does a consumer see? Who are his surroundings? Where does he live? And how does this influence him?
 2. **Hear:** What does a consumer hear? Consider what a consumer is hearing from real-life surroundings and the media?

3. **Thinking and feeling:** What are our client's thoughts and feelings? What are his beliefs, and overall emotional state toward our business or product?
 4. **Say and do:** What does a consumer say and do? What does he share? In the context of our business and products.
 5. **Pains:** What are the customer's pains? Obstacles and frustrating points?
 6. **Gains:** What are the solutions to develop to diminish our customer's pains?
- e) **Summarize the session and results:** At the end empathy map should be made clear for everyone who needs to refer to it, then share it .

1.3.3.2.2. Buyer Persona:

A buyer persona¹⁶ is a representation of your target customer. It's a picture you paint based on research and interviews with actual customers. It goes beyond basic demographics to include the intangible elements that make a person tick.

Buyer Persona provides marketers with a deep understanding of buyers' needs and behaviors which facilitates target customer visualization .this tool development is intended to glean insight from situations and scenarios, it provides customers understanding by uncovering their behaviors and the reason that lies behind. basically, the aim of buyer personas is to gain an understanding of the brief of behaviors behind why people attempt to take a kind of action.

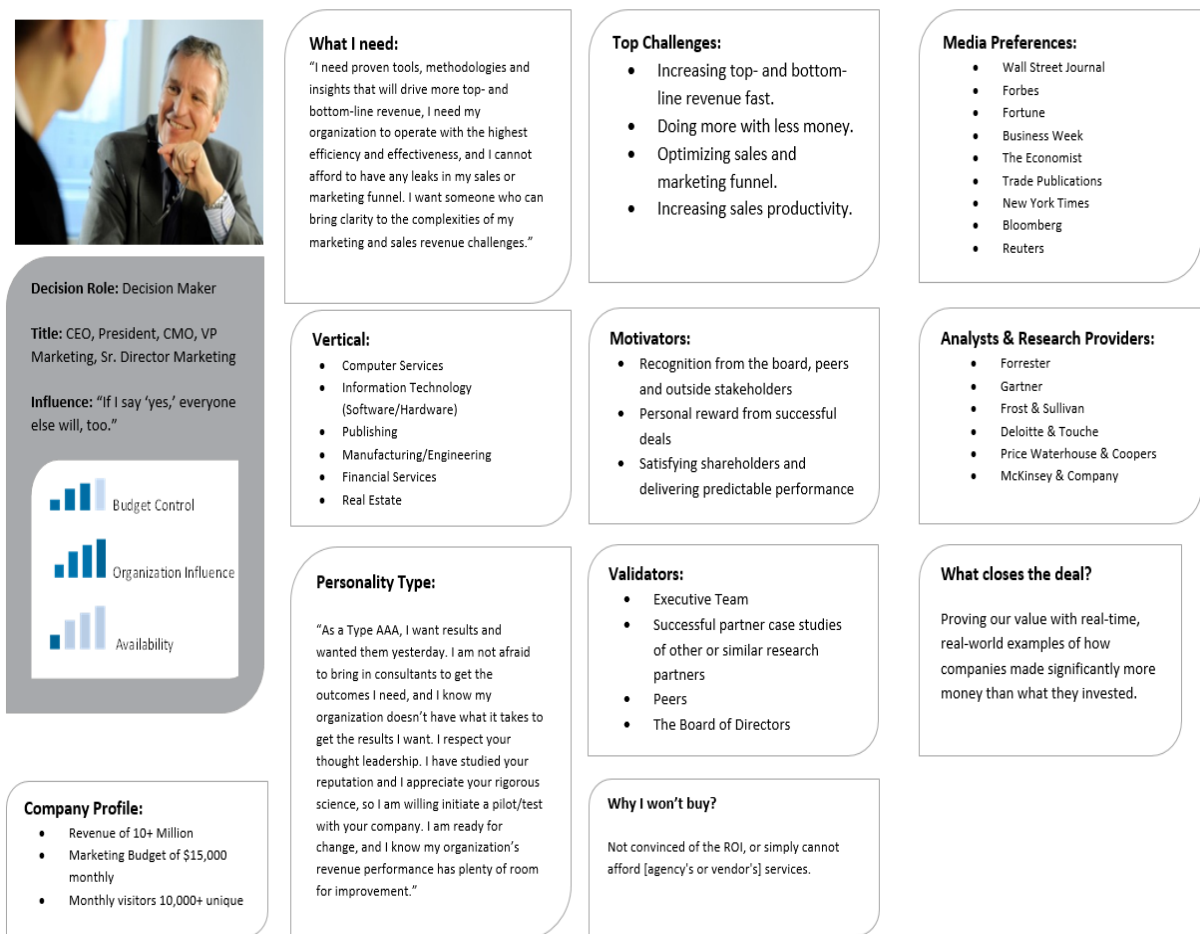
The process of creating a persona is based on research that mainly helps figure out what attracts new leads and drives them to make a purchase. A process of creating a persona is based on a research that mainly helps figure out what attracts new leads and drives them to make a purchase.

According to Tony Zambito, "Buyer personas are research-based archetypal (modeled) representations of who buyers are, what they are trying to accomplish, what goals drive their behavior, how they think, how they buy, and why they make buying decisions¹⁷"

¹⁶ The Ultimate Guide to Inbound Marketing Personas, p.04.

¹⁷ <http://tonyzambito.com/about/what-is-a-buyer-persona/> (consulted 10/05/2021 at 2AM)

Figure I-04: Persona Example



Source : <http://b2bleadblog.com/images/2014/12/persona-example.png> (consulted 10/06/2021)

1) Difference between demographics and persona:

While demographics include the basic information about a person, personas dig deeper and provide insight into the personality of a buyer. Demographics are important but still don't refine sales and marketing processes. Personas focus on what makes prospects who they are and what drives them to interact with the business.¹⁸

¹⁸ Power point presentation shared on website slide share <https://www.slideshare.net/EmmaBellantonioGonca/inbound-marketingpersonasebooksmartbug-84063744> written by Emma Bellantonio Goncalves (consulted 29/06/2021 at 4PM)

2) Steps to create a buyer persona:

Although the persona creation process should be tailored for each situation, there are three primary approaches, based on the type of research and analysis performed:

- Qualitative persona ;
- Qualitative persona with quantitative validation ;
- Quantitative personas.

Table I-01: steps of creating a persona¹⁹

Types of personas Steps of Creating a persona	qualitative persona	qualitative and quantitative persona	Quantitative persona
Research	<p>Qualitative research :</p> <p>It reveals insights into user goals, behaviors, and attitudes; it can be done through several methods personal interviews, focus groups , usability tests, or by observing the client in their environment</p>	<p>Qualitative research:</p> <p>Same as the qualitative persona</p>	<p>Qualitative research:</p> <p>Same as the qualitative persona</p>
Segmenta	<p>Segmentation based on the qualitative research:</p> <p>Segmentation is the act of creating groups based on some similarities</p> <p>Qualitative segmentation is less about science and</p>	<p>In this type of persona, segmentation goes through two steps</p> <p>1st : segmentation based on the qualitative research: the same as the qualitative persona</p>	<p>For this type of persona, segmentation goes through 3 steps :</p> <p>1st: Form hypotheses about segmentation options:</p> <p>Based on qualitative</p>

¹⁹ MULDER, (S): *Approaches to Creating Personas, The User Is Always Right: a Practical Guide to Creating and Using Personas for the Web*, ppp.4-6-8.

<p>tion</p>	<p>more about a deep detailed analysis of customers' goals, attitudes, and behaviors.</p>	<p>2nd: Test the segmentation through quantitative research:</p> <p>w For this type of persona segmentation based on qualitative research is not enough</p> <p>w This step helps to confirm the results of qualitative research By testing segmentation model using a larger sample size to be more certain that it reflects reality.</p> <p>w The test can be conducted through surveys then analyzed with statistical analysis techniques which need to prove whether our segments are different on the needed data points or not.</p>	<p>research we come up with several ways to segment our audience.</p> <p>2nd: Gather data on segmentation options through quantitative research.</p> <p>For every segmentation hypothesis, some questions can be asked to gather more data about each way of segmenting this step is not to prove any segment but it's about gathering more data to prepare for a more efficient segmentation.</p> <p>3rd: Segment users based on statistical cluster analysis.</p> <p>Rather than lying only on qualitative research or testing the qualitative research with quantitative research.</p> <p>w The qualitative persona uses statistical algorithms to find suitable segmentation. This requires feeding it with the several collected data. These algorithms try many</p>
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			<p>different ways of segmenting users, and through an iterative process, it finds a segmentation model that mathematically describes commonalities and differences.</p> <p>When the cluster analysis spits out the segments, you take the data and make it real through the same process as before: by adding names, photos, and stories to turn these spreadsheets into real people.</p> <p>As businesses rely on personas more and more for overall strategic decisions and marketing planning, quantitative personas will grow in popularity due to the scientific rigor they bring. The increased objectivity that the quantitative approach brings to the process of creating personas aligns much more closely with the data-</p>
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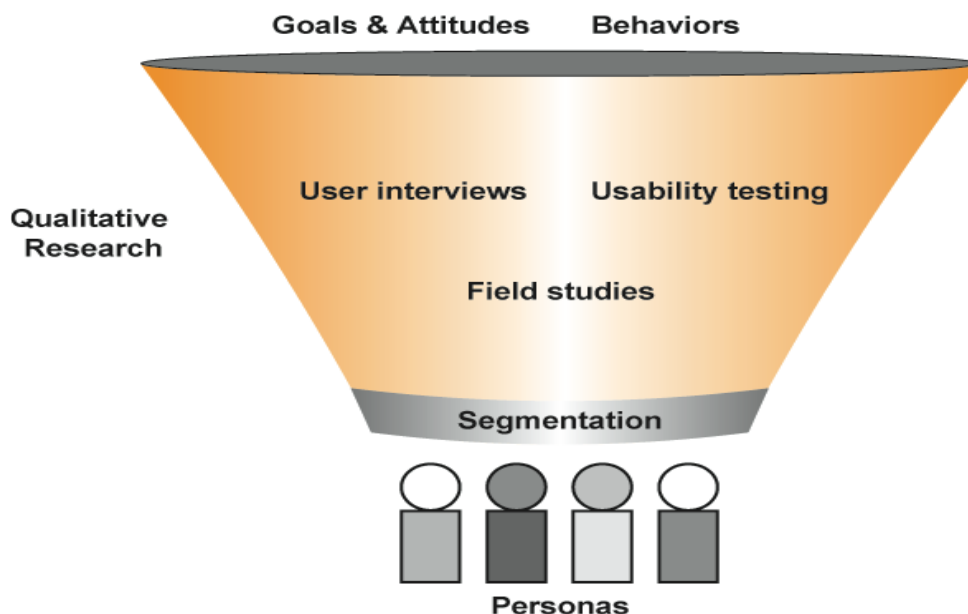
			<p>driven decision-making that occurs in so many organizations. The use of quantitative personas will also rise because the number of variables businesses have about users will only increase as research techniques continue to evolve. Machines are simply better than people at managing many variables at once</p>
<p>Create a persona for each segment</p>	<p>Each type of user evolves into a persona as you add more detail to their goals, behaviors, and attitudes. Each one becomes realistic when you have supplied a name, a photo, demographic information, Scenarios, and more. These steps represent the most common approach to creating personas and following their works successfully for a variety of organizations. It's a relatively quick process and</p>	<p>When you have quantitative research for creating realistic personas, you can be more certain that the decisions you make have statistical significance. Personas are no longer simply fictional creations. Quantitative data doesn't necessarily <i>prove</i> your points, but it reduces the chance that you're wrong. It's also valuable for providing evidence of the magnitude and importance of a particular</p>	

	<p>an excellent way for companies to put their toes in the water and try out personas</p>	<p>issue. With this approach, you get a little more science and a little less art for your personas. The segmentation is still based on qualitative research, but you use quantitative research to obtain evidence to back up your decisions.</p>	
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Source: developed by us with adaptation from the source: MULDER, (S): *Approaches to Creating Personas, The User Is Always Right: a Practical Guide to Creating and Using Personas for the Web*, ppp.4-6-8.

- **Qualitative persona²⁰:**

Figure I-05: Qualitative persona

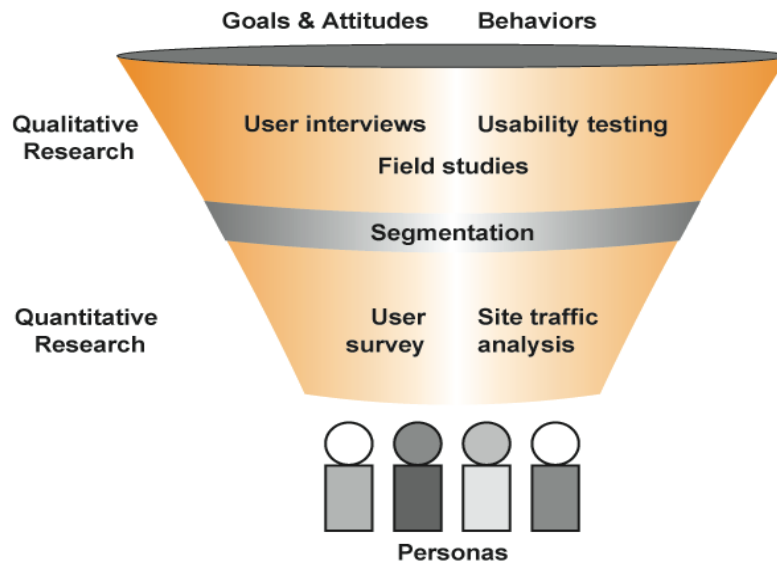


Source: MULDER, (S): *Approaches to Creating Personas, The User Is Always Right: a Practical Guide to Creating and Using Personas for the Web*, p.4.

²⁰ Ibid, p.4.

- **Qualitative and quantitative persona²¹**

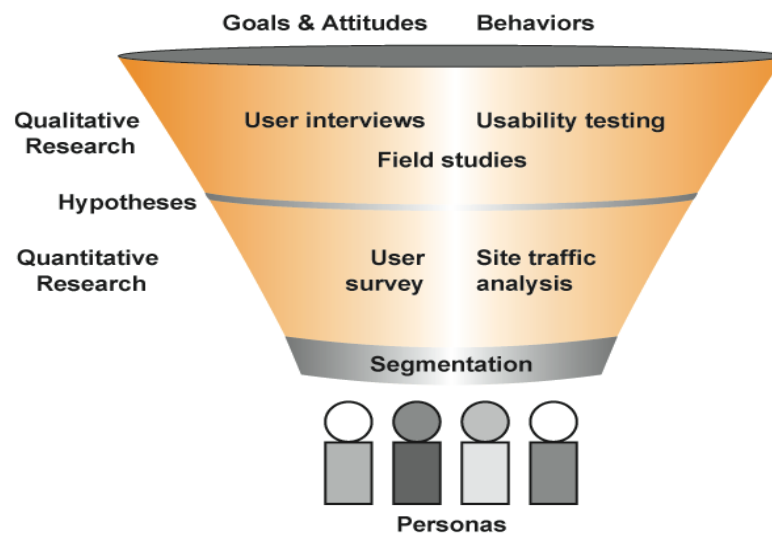
Figure I-06: Qualitative and quantitative persona



Source: MULDER, (S): *Approaches to Creating Personas, The User Is Always Right: a Practical Guide to Creating and Using Personas for the Web*, p.6.

- **Quantitative persona²²**

Figure I-07: Quantitative persona



Source: MULDER, (S): *Approaches to Creating Personas, The User Is Always Right: a Practical Guide to Creating and Using Personas for the Web*, p.8.

²¹ Ibid, p.6.

²² Ibid, p.8.

3) **Advanced Persona Development**²³:

- Customer personas:

When a lead becomes a customer, is his or her journey over for your company? Or will you continue to work to delight him or her in hopes of turning him or her into a brand evangelist? (Hint: It's the latter option.)

- Negative personas:

While buyer personas can help teams understand their audience and reduce costly interactions, it's equally essential to bolster your strategy with negative personas. If buyer personas represent your target customer, then negative personas are pretty much the exact opposite. Negative personas save organizations time and money by identifying archetypes of whom you don't want to sell and market to.

Customers who won't work with your business will end up costing you far more time, money, staff contentment, reputation than they would have given you. Negative personas enable teams to segment out the bad apples by proactively identifying which types of prospects is a potential drain on resources. Finally, identifying negative personas gives teams a reason to cut ties with certain prospects. To help identify the best personas, it's essential to identify the ones that work with you in the first place. Successfully segmenting negative personas can result in a lower cost per lead and cost per customer, resulting in higher sales productivity.

- Micro personas:

While standard buyer personas differ based on the high-level goals, challenges, wants, or needs of an organization's customers or users, micro personas differ based on more subtle features, such as preferred means of communication. One standard persona may have many micro personas, but each micro persona can only be a subset of one macro persona. Let's look at a few examples of micro personas and how they relate to macro personas

²³ The Ultimate Guide to Inbound Marketing Personas, pp.53-58.

1.3.3.2.3. Customer journey map:

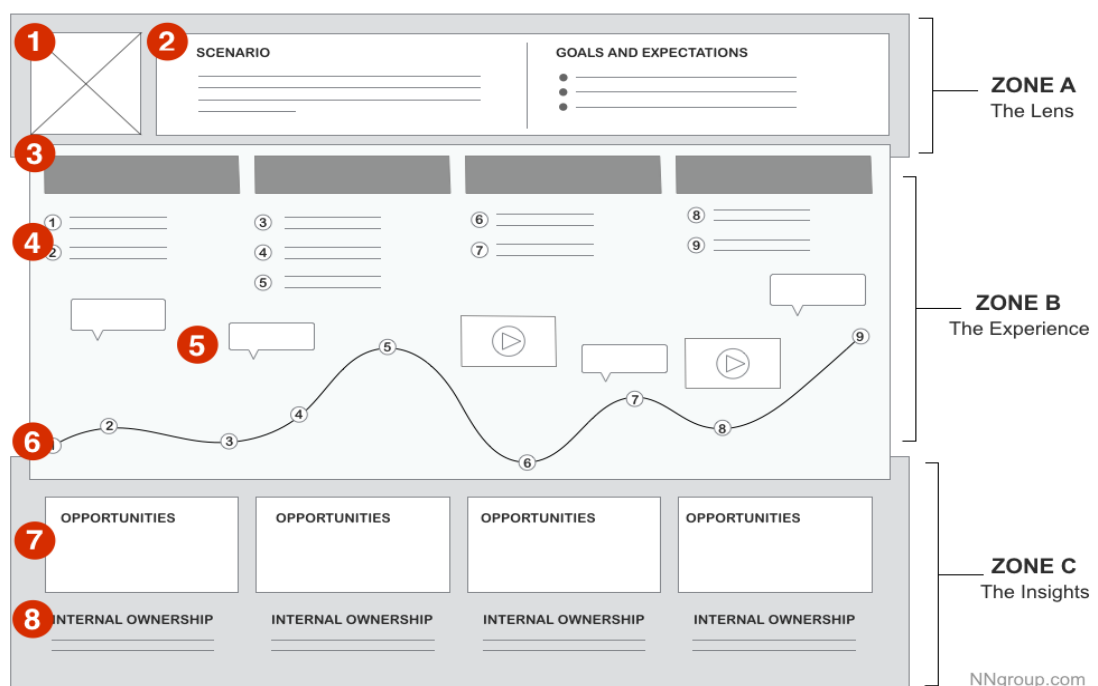
1) Customer journey map definition:

Customer journey map is about writing down the customer's story with a company or a product by mapping how he interacts with it, in a way that explicit the key events, and highlight his motivations, needs and expectations at every event.

CJM²⁴ is a tool developed by **Stephan Gauthier** that allows to identify essential areas of innovation through asking a certain number of people and their experiences in order to identify a series of activities which constitute the experience.

This tool can be described as a graphic representation and a visual depiction of the sequence of the stages of client's relationship with a product or the sum of events through which customers may interact with a service or a product. It lists all possible organizational touch points customers may encounter including the key steps taken before, during and after purchase or use.

FigureI-08: Customer journey mapping²⁵



Source: <https://www.nngroup.com/articles/customer-journey-mapping/> visited 25/06/2021 at 21:44.

²⁴ MATHIEU, (F) and HILLEN, (V): *le design thinking par la pratique*, EYROLLES edition, 1st edition, p.59.

²⁵ <https://www.nngroup.com/articles/customer-journey-mapping/> visited 25/06/2021 at 21:44.

2) Customer journey map components:

- ❖ **Stages:** breaking down the customer journey into stages understand each one apart.
- ❖ **SCOPE Needs and Interactions:** at every stage, we need to write down the needs and the interactions
- ❖ **Key Expectations:** at each stage, we need to capture consumer's expectations and compare it to reality.
- ❖ **Moments of Truth:** along the journey, there's a moment where the customers had to make a decision in our favor or the opposite; these moments need to be captured and understood to better orient their behavior toward the desired action.
- ❖ **Customer Quotes:** at every stage, we need to capture the consumer's thoughts.
- ❖ **Sentiment:** feelings and emotions at each stage need to be highly spotted light on.

3) Steps to make a journey map:

1. Define the objective of the journey map:

Before going through the analysis of customer journey to map it , the first step is to define the goal from this mapping that should be tied to business goals whether it is a better understanding of actual clients ,increasing client's loyalty , purchasing new client's acquisition or improving customer's journey . These different goals define where the focus should be, and allows prioritizing touch points above others depending on the chosen goal.

The goal should be communicated and exposed to all participants on the customer journey mapping.

2. gather and analyze data:

To determine and fully understand journey stages , data should be collected from all the interactions that customers have with the business, through as many sources as possible , customer surveys , internal interviews , market research. And also develop an understanding customer needs, wants, expectations, and emotions during each interaction.

First internal data gathering ; by organizing interviews and workshops or surveys with employees implied in customer's journey , employees help see customer journey from their perspective by providing insights into the processes and systems and pinpoint where obstacles exist that may inhibit them from delivering the expected customer experience.

Second , gathering data from customers, it can be solicited data as asking customers for filling surveys to capture their feedback , but more interesting unsolicited data can provide richer insights , it can be collected through already available sources like Social media comments, Website analytics, Third party review sites, Call center recordings ,Call center agent notes and emails.

Capturing emotion at the exact instant when it's felt is critical to understanding customer needs and wants²⁶

In addition observing customer behavior in the environment where their journey happens; provides a better understanding of the experience and the why that resides behind.

Customer journey data gathering and analysis focuses more on uncovering sentiments and emotions at every stage and event. Sentiment analysis provide useful business information the aim goal is above knowing what they do , but knowing how they feel at that point and how to improve or correct that event to make them feel better. sentiment analysis offers an unprecedented view inside the hearts of customers. To conduct a thorough sentiment analysis on large volumes of data, you will need a technology²⁷.

3. build the map:

- a) **Identify the Persona** : customer journey map is related to the other persona tool; to each key persona a different journey map should be attributed
- **Define the stages:** the collected data and feedbacks help determine the different stages that customers goes through in their experience with the product. In this stage we need to consider the entire progression of steps the person goes through when interacting with the product and the essential events they fall into along the journey. And also it is more about pinpointing the key touch points that we need to focus more on.
- **Show the needs, interactions, and sentiment within each stage:** the third step is about determining customer feelings at each step; were they enjoying interacting with the business at this point? Were they annoyed? Or frustrated and lost? Customers expectations also can be elicited as well as the questions that crossed their minds.
- **Identify key moments of truth:** In this step we should analyze customer decision when he realizes a gap between what was expected and what was found, those make or break moments whether he continues the journey or quit. Moments of truth need to be spotted

²⁶ STUCKI, (K): *the ultimate guide to customer journey mapping*, CLARABRIDGE, p.13.

²⁷ Ibid, p.14.

light on; they serve to illuminate aspects of customers' interactions to reach their expected and desired experience.

- **Identify volumes and frequency:** Checking volumes of reactions and interactions to validate what matters the most to consumers and to determine the most important touch points for every segment their different emotions and pain points.
- b) Improve the experience:**
 - Establish/align listening posts and metrics;

It is about making sure to continue listening to customer to know how the changes are working , and how the customer is being affected. By knowing what customers are saying at the most important points along the journey, Use of voice, text sources and surveys to capture what customers are saying about the product or the company.
 - Potential opportunities for improvement;

Customer journey maps should highlight potential opportunities for improvement as where they can reduce customer effort, or change how they set expectations for customers, improvement opportunities should be defined and prioritized to ensure sustainability of the journey map.
 - Embedding the customer journey into your governance model:

Journey map should be used as framework to evaluate and prioritize improvements and investments. Also, it can serve as communications tool to align different organizational areas around a common understanding of the journey.

Section 02: empathy and innovation; Design thinking.

We have seen in the first section; what empathy-based marketing is, we knew its different modalities to understand better our clients using several tools; empathy maps, creating a persona and designing a journey map.

Now we will be discovering the use of empathy based marketing in innovative problem solving technique called design thinking. We will be defining its concept, main features and steps; and of course with highlighting the use of empathy through all these steps.

2.1. Definition:

Design Thinking²⁸ is a comprehensive customer-oriented innovation approach that aims to generate and develop creative business ideas or entire business models. Essentially, Design Thinking attempts to project designers' approaches and methods onto business processes. The approach is ultimately applicable to all kinds of business ideas – whether they have a product or service character.

Design thinking is a philosophy and a set of tools that helps solve problem creatively, through the lens of human centered design.

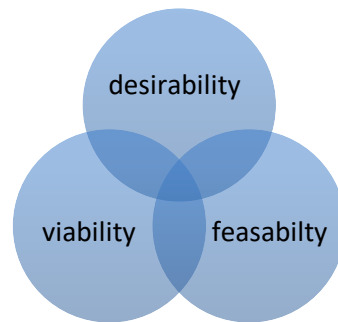
Design thinking²⁹ is a non-linear, iterative process used to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test.

The strength of this approach is the ability to combine the desirability, the economic viability and the technical feasibility that a human can experience of an innovative idea.

²⁸ ROTERBERG, (C.M): *Handbook of Design Thinking*, Kindle Direct Publishing, November 2018, p.01.

²⁹ <https://www.interaction-design.org/literature/topics/design-thinking/> (consulted 26/06/2021 at 3:35 PM).

Figure I-09: Overview³⁰ of Design Thinking



Source: GASPARINI, (A.A): *Perspective and Use of Empathy in Design Thinking*, Department of Informatics University of Oslo, Norway, 2015, p.01.

2.2.The features of Design Thinking:

- a) **Integrative approach:** it means that every components of the design thinking process complete each other's and are considered together in the same framework ; The problem analysis and solution development both process in an integrative way;
- b) **Early customer orientation:** beyond the traditional way of testing final products. Design thinking focuses on the early integration of customer in the process of product creation , customers should determine the go/stop decisions of the process since its designed for them;
- c) **Empathy :** the central element of deign thinking is the ability to put ourselves in the customer shoes and collect the maximum of deep data that would enhance the feasibility, desirability and viability of a product;
- d) **Prototypes :** prototyping is making ideas tangible at an early stage, it is based on testing individual functions, features or components of the product and even a service offer by our potential clients;
- e) **Iteration loops :** is the act of going back to the previous step to modify and correct some decisions or features , in design thinking failure is expected and accepted;

³⁰GASPARINI, (A.A): *Perspective and Use of Empathy in Design Thinking*, Department of Informatics University of Oslo, Norway, 2015, p.01.

- f) **Two main phases:** the first one is the problem space; where we focus on answering what is the problem? And why is it a problem? Second is called solution space where we need to answer how to solve this problem by concreting ideas and testing.

2.3. Design thinking steps:

A. Phase 1: Understand

In the first phase it is first about understanding the problem and the challenge .second it's about determining the 3Ps of design thinking the people that should be integrated , the process and (technical perspective) that we should be working with. And finally the place or the environment.

B. Phase 2: Observe

So many tools can be used in this phase to clarify the problem understanding and to write the exact definition of the target group.

C. Phase 3: Define the problem

After the problem comprehension and the different observations, it should be summarized in a clearly defined question.

D. Phase 4: Ideate

This where brainstorming should have place, ideating is about Finding, evaluating and selecting the different ideas that should be analyzed in a customer centric way and from his perspective.

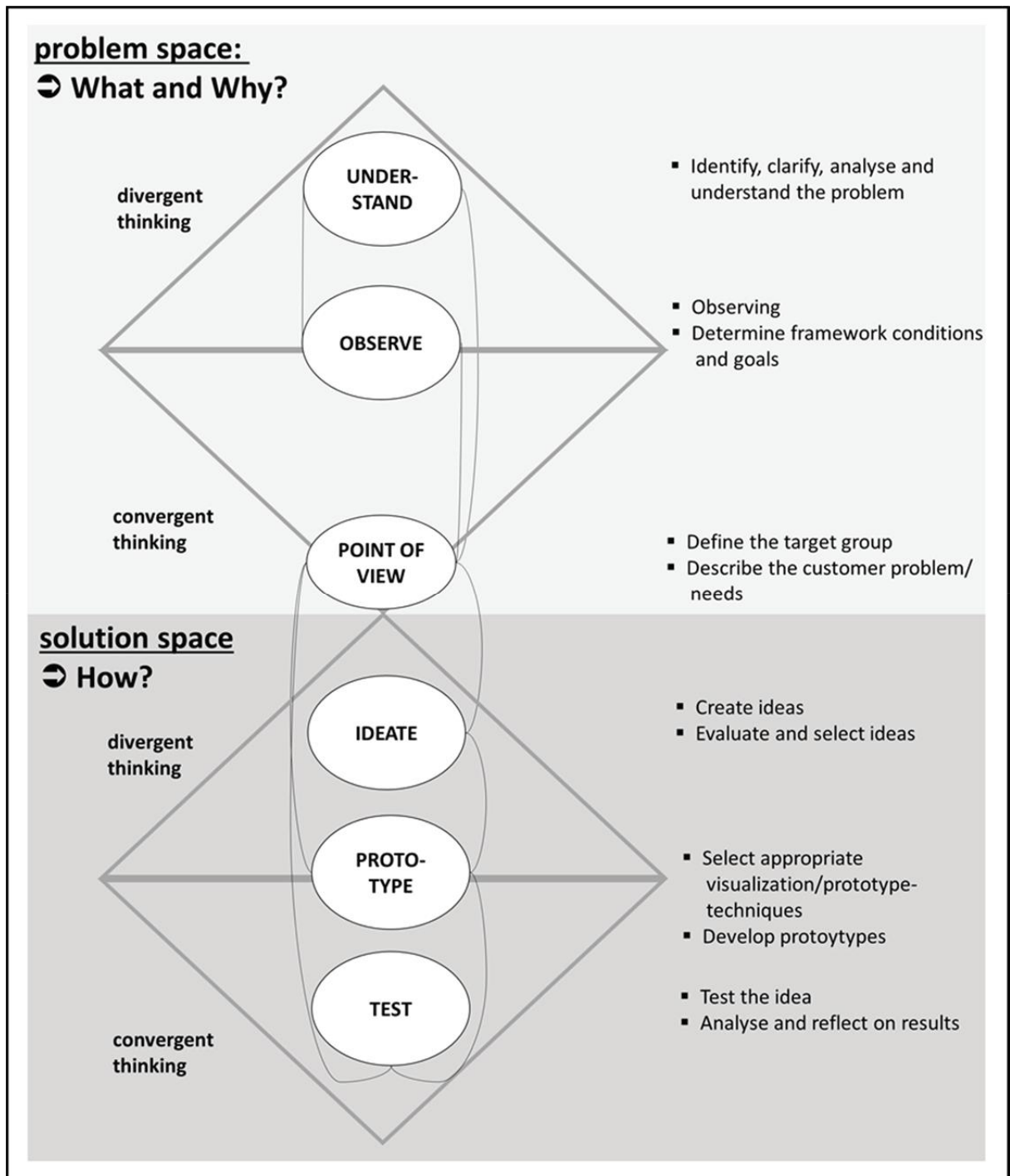
E. Phase 5: Prototype (Develop the prototype)

After generating and selecting ideas; they should be concretized and made tangible rapidly, many tools and methods are used in this phase.

F. Phase 6: Test

Prototyped products should be tested through experiments our potential consumers feedbacks.

Figure I-10: Process³¹ of Design Thinking supplemented with the Double-Diamond model



Source: ROTERBERG, (C.M): *Handbook of Design Thinking*, Kindle Direct Publishing, November 2018, p.06.

³¹ ROTERBERG, (C.M): *op.cit*, p.01.

2.3.1. How to understand the problem?

These matrices are used to deeply understand the problem:

Table I-02: Questionnaire³² to clarify the problem

	problem	non-problem	solution
Who	has the problem? is indirectly affected? believes that they are affected? makes decisions?	is not affected by the problem?	could use the solution as well? can contribute to solving the problem? does not want the solution? could stand in the way of the solution?
Where	does the problem occur?	does not the problem occur?	has something similar already been successfully resolved? is the best place to solve it? could the solution also be used?
When	did the problem start? does the problem occur? does it become an even bigger problem?	does not the problem occur?	should the solution be available? will it improve?
	Is the problem? do you know or don't know about the problem? is not understood about		has been made the solution so far? should the solution necessarily be able to do?

³² Ibid, p.13.

What	is not understood about the problem? is different than it should be? is particularly noticeable? annoys you about the problem? are the individual aspects of the problem?	is not the problem?	are the constants that must not/cannot be changed? is needed for the solution? will be different in the future? is (or is not) important for the solution? are your goals for the solution? do you have to discover?
How	does the problem manifest itself? is it related to another problem? can it be formulated differently?	is it usually going?	should the solution look like? is it tried to be solved so far? could the problem be an opportunity?
Why	is it a problem? is the problem unusual?	isn't it a problem for others?	is the solution needed? do we want to solve it? won't it just solve itself? can it be solved? is it difficult to solve?

Table I-03: Problem clarification³³ according to Kepner/Tregoe

	problem	non-problem	discrepancy	Cause (why is there a discrepancy?)
Who	has the problem?	has not the problem?	differences?	assumption about cause
Where	does the problem occur?	doesn't occur the problem?	differences?	assumption about cause
When	does the problem occur?	does the problem not occur?	differences?	assumption about cause
What	Is the problem?	isn't the problem?	differences?	assumption about cause
How	does the problem emerge? extensive is the problem??	is it usually going? many parts/areas are not affected?	differences?	assumption about cause

Source: ROTERBERG, (C.M): *Handbook of Design Thinking*, Kindle Direct Publishing, November 2018, p.14.

³³ Ibid, p.14.

2.3.2. How to observe:

The results of this step are the clarification of the general conditions and the exact definition of the target group and a deep understanding of the customer's needs and behaviors.

This step can be conducted using different techniques:

2.3.2.1. Interviews:

Interviewing is a method that seeks through a conversation with the interviewee to obtain information from questions, context awareness cards, and other techniques.

Interviews are particularly useful to get at the story behind the interviewee's life experiences. The interviewer should prompt the participant to explain the reasons for these narratives so as to be able to understand the meaning of what is being said. Through interviews, it is possible to expand understanding of social behavior³⁴.

Interviews should be conducted following predetermined protocol that can be adjusted, depending on the conversation by delving into each person's point of view, different perspectives of the whole can be discerned, and it is possible to identify polarities that will help to develop Personas, thus providing raw materials for the generation of ideas in the Ideation phase

2.3.2.2. Cultural Probes:

Is a way used to inspire ideas in the design thinking process; it serves as a means of gathering information about people and their universe. Cultural probes allows data gathering with the minimum of intervention by asking participants to record specific events , emotions or interactions in the context of their day-to-day lives to evoke deep responses. It is often used when the issue investigated unravels over a lengthy period of time.

2.3.2.3. A day in the life:

It is a type of ethnographic study in which a designer observes the participant's activities which he would perform by mere habit and subconsciously in the context of the research.

Through a typical day, for instance, researchers assume the role of the person under review and spend the day acting from another perspective and interacting with the different contexts and people that would occur in daily basis.

³⁴ MAURÍCIO, (V), YSMAR, (V) and ADLER, (I.K): *Design Thinking*, MJV Press, 1st edition, RIO DE JANIERO, October 2015, p.37.

2.3.2.4.Shadowing³⁵:

Shadowing is a qualitative research technique where the researcher accompanies participants over a period of time where they are interacting with the product and record and analyze but still, needs to stay as a shadow without any intervention or any sort of influence to avoid that the participants deviate from their natural behavior. it should be conducted without asking questions or disrupting the context.

Shadowing is particular user centered technique which helps gather a great empathy for them and allows an effective real time data collection which leads to rich and meaningful insights.

2.3.3. How to define the problem?

To define a problem several techniques are used; we have already mentioned three of them: personas, empathy map and user's journey:

2.3.3.1.Affinity Diagram:

It is organizing and grouping Insight based on affinities, similarities, dependency or proximity, creating a chart containing the macro areas that mark the boundaries of the subject under consideration, its subdivisions and interdependencies. When there is a large amount of data coming in from research (desk and/or field research), to identify connections among subjects, and windows of opportunity for the project

2.3.3.2.Conceptual Map³⁶:

It is a graphic visualization, built to simplify and organize complex field data at varying levels of depth and abstraction. Its purpose is to illustrate the links among different items of data, thus allowing new meanings to be extracted from the information gathered in the initial stages of the Immersion phase, particularly from the associations tying them together. During the Immersion phase, to structure the field data, while the project's daily or weekly debriefing is under way, to expedite subsequent, more complex analysis, and also to facilitate the communication of the data to the team, fostering collaboration throughout the process.

³⁵ Ibid, p.72.

³⁶ Ibid, p.74.

2.3.3.3.Guiding Criteria³⁷:

These are the guidelines for the project that serve as demarcations underscoring aspects that must be kept in view over the course of all phases of solution development. They arise from an analysis of the data gathered, from the predetermined scope of the project and the direction suggested by the client. They serve as a basis for determining the boundaries of the project and its true purpose. The guiding criteria should always be present during the development of a project because they offer parameters and guide solutions, giving evidence of its adjustment to a scope that must be respected.

2.3.3.4.Blueprint:

It is a matrix that visually represents in a schematic and straightforward fashion the complex system of interactions whereby services are provided. In this representation, the different service contact points are mapped, that is, the visible and/or physical elements with which the client interacts. These encompass both the client's actions, as well as all interaction with the company, from visible operations.

To background processes. When you wish to observe the service from all sides, in order to pinpoint areas for improvement and new opportunities. The Blueprint describes the physical evidence, the different players, their actions and interdependencies over the course of the journey, making it possible to catch flaws and unnecessary overlap, thus facilitating strategic and tactical innovations³⁸.

2.3.4. How to Ideate?

Process of generating a broad of ideas can be conducted based on the following techniques:

2.3.4.1.Brainstorming:

According to Alex Obsorn – Brainstorming³⁹ is a tool for maximizing a group's creativity in problem solving. It is a conference technique by which a group attempts to find a solution for a specific problem by amassing all the ideas spontaneously from its members.

³⁷Ibid, p.78.

³⁸Ibid, p.87.

³⁹KUMBHAR, (K.N): «*Brainstorming technique: Innovative Quality Management Tool for Library*», content updating training program's conference, December 2011, p.02.

It is a technique and a creative process to stimulate broad number of innovative ideas in a short term it contributes at maximizing a group's creativity in problem solving by encouraging spontaneity and non judgmental in generating ideas.

Brainstorming is an activity which consists in an unrestrained offering of suggestions and propositions. It's one of many methods of ideation to generate fresh solutions to a defined problem and it's a core to the design thinking process.

Four general rules of brainstorming:

- **Focus on quality:** the maximum quantity of ideas generates quality. The larger number of ideas is generated the more probable that the discovered solutions are effective.
- **Don't criticize:** brainstorming is based on non judgmental mindset whether it is a positive judgment or a negative one; welcoming and non criticizing produce ideas. The participants should feel free and comfortable and must be spontaneous in brainstorming session
- **Welcome unusual ideas:** this rule is about Recording all ideas, and welcoming all of them.
- **Improve ideas:** at further steps Good ideas need to be combined to generate a single better idea.

Steps⁴⁰ of Brainstorming:

Every step is important in brainstorming process, ignorance of step will meet incomplete result or disadvantage. Skipping out the steps in brainstorming session can be expensive mistake and time spending. If all steps are carried out properly, it is very powerful to find better solution.

1. **Select the group:** facilitator must select the members not less than 5 or more than 20.
2. **Specify the objectives:** Facilitator should build objectives and define why he wants to brainstorm. He will find out about all members interested and happy for selected central question. Allow people to make noise, shout, laugh, and enjoy.

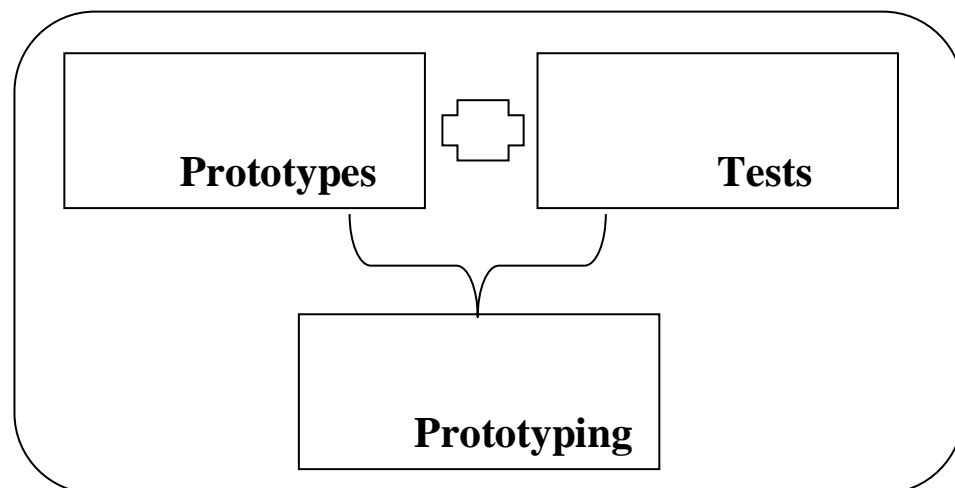
⁴⁰Ibid, pp.4-5.

3. **Define the roles-** facilitator must decide the role of leader, recorder etc.
4. **Explain the rules:** facilitator should explain the rules to everyone before discussion begins. Everyone must be clear about question.
5. **Start the discussion:** begin to start discussion rounds, they should take some rounds and produce ideas.
6. **Record the ideas:** Ideas must be recorded and arranged.
7. **Encourage the Ideas:** wait for ideas, don't hurry, participants must get sufficient time to think and present better idea. Facilitator should encourage the members to present ideas and appreciate all ideas.
8. **Do end on the wild ideas.**

2.3.5. How to Prototype?

Prototyping is the act of making an idea more tangible; the passage from abstraction to physicality to represent reality, even if in a simplified fashion and provide validations. It is an instrument of learning in two respects:

Figure I-11: prototyping⁴¹



Source: MAURÍCIO, (V), YSMAR, (V) and ADLER, (I.K): *Design Thinking*, MJV Press, 1st edition, RIO DE JANIERO, October 2015, p.122.

⁴¹ MAURÍCIO, (V), YSMAR, (V) and ADLER, (I.K): Op.cit, p.122.

2.3.5.1. Level of fidelity of prototypes:

A prototype can be anything ranging from a conceptual or analogous representation of the solution (low fidelity), to assimilating aspects of the idea, to the construction of something as close to the final idea as possible (high fidelity).

2.3.5.2. Techniques used in prototyping:

2.3.5.2.1. Paper Prototyping:

Is a crafted representation of the studied product based on paper it can be simple as well as complex, depending on the level of fidelity, but it usually starts simple than by adding more and more details as the process goes through successive iterations becomes more complex. Paper prototyping can be executed with hands or with the aid of a computer.

2.3.5.2.2. Volumetric Model:

A volumetric model is a representation of a product with its final appearance this model allows for 3D visualization to elicit assessments to adjust the product.

2.3.5.2.3. Staging scenarios:

It's an improvisation of a situation or an experience which can present everything of that interaction between users and the product it can be a machine or a person as a component of a service transaction in order to improve and adjust the experience. Imagination and the ability to improvise is needed for this technique, Researchers are asked to improvise and behave naturally in their actor roles to explicit all touch point of an experience and find a way to improve it

Conclusion:

We could through this chapter called ‘‘ empathy-based marketing ‘‘ have an idea about the use of empathy in business and in marketing more particularly. We have first defined empathy from a psychological perspective what is it and what are its main types.

Then we have seen empathy in marketing; where we have talked about its different modalities; emphatic listening and emphatic conversations. After that we gave a deep detailed look into its different tools; we have seen what empathy map is, explained its different areas: sees, hears, says, does, thinks and feels. Then we jumped into persona creation process; we saw the different types of persona and the different methods used to create them. And another detailed look into customer journey mapping.

Then we tried to highlight the link between empathy and innovation ; by introducing the design thinking technique ; which is an innovative problem solving process based on empathy, we saw its different steps and explained the several techniques used through each step.

Chapter II: Empathy based marketing in the digital transformation era

Introduction:

The first step to empathies with our clients is to understand their environment; how do their lives look, with whom are they currently interacting, and especially to which era do they belong. Understanding the current era is fundamental to reach complete empathy for all clients in every domain.

This chapter is dedicated to understanding the current era; which is the digital transformation era we will be explaining the main characteristics of this era to offer a better comprehension of the actual clients.

In the first section we will talk about the digital transformation of business and examine it in different areas, then in the second section we will give a deep look into mobile technology and the use of empathy to understand mobile users.

Section 01: digital business transformation

The emergence of new technologies have transformed our lives , our culture and even our nature as a human beings, which has pushed businesses to transform as well to keep up with their clients , not only by adopting those new technologies but further more by transforming business models , business strategies and processes.

1.1.Digitization: The Straightforward Term

Digitization can be defined as ‘‘ technical process’’ of taking information and encoding it into digital form , so that computers can store, process, and transmit such Information in numeric format, or binary numbers as zeros and ones . The digitized data is used to automate processes and enable better accessibility.

According to Gartner’s IT Glossary, ‘‘Digitization is the process of changing From analog to digital form’’.

We can mention Converting paper-based texts or documents into digital form as an example of digitization. It’s important to remember, however, that digitization is about the data, signals and media objects (eg documents, images or sounds) conversion.

We can digitize paper but not an industry nor a small business. that’s where digitalization comes up .

1.2. Digitalization:

Digitalization moves beyond digitization; but it is still closely associated to digitization, digitalization essentially means the usage of more IT, in order to enable and take advantage of digital technology and data; however the digitalization isn’t about changing the way things are done, but doing things faster and better because data is easily and instantly accessible; Leveraging digital information technology to entirely optimize processes.

Table II-04: definitions of digitalization

definition	Author
‘‘We refer to digitalization as the way in which many domains of social life are restructured around digital communication	J. Scott Brennen, and Daniel Kreiss,

and media Infrastructures.”	
“ how people interact. As such interactions move away from analog technologies (snail mail, telephone calls) to digital ones (email, chat, socialmedia), both work and leisure domains become digitalized”	Brennen and Kreiss thus
Digitalization is the use of digital technologies to change a business model and provide new revenue and value producing □ Opportunities,”	Gartner
“It is the process of moving to a digital business.”	Gartner’s glossary.

Source: developed by us with adaptation from different sources

1.3.Digital Transformation:

Digital transformation is a natural progression Enabled by technologies, digitized data, and digitalized processes, more suited to this digital era. It’s more about the shift in strategies, culture, and in the way of doing things.

Digital transformation ¹as a consequence of technology development requires the organization to deal better with change overall, essentially making change a core competency as the enterprise. Digital transformation has the ability to deal with uncertainty and respond quickly to change.

Therefore, we digitize information, we digitalize processes and roles that make up the operations of a business, and we digitally transform the business and its strategy².

1.3.1. Digital Business transformation:

«Digital business transformation is a fundamental change in organizational logic, which resulted in or was caused by a fundamental shift in behaviors³».

¹BLOOMBERG, (J): «Digitization, Digitalization, And Digital Transformation: Confuse Them At Your Peril», Forbes Article, April 2018.

² Ibid.

It is the application of technology to build new business models, processes, software and systems those results in more profitable revenue, greater competitive advantage, and higher efficiency. Businesses achieve this by transforming processes and business models, empowering workforce efficiency and innovation, and personalizing customer experiences⁴.

According to a study by the Massachusetts Institute of Technology, digital-transformed businesses are 26 percent more profitable than norms. The challenge of organizations today is to leverage strategy, culture and leadership to meet the potential of digital transformation of business.

Digital business transformation is more about strategy than technology; it's about clear vision for the company's development, and then be supported by the unlimited possibilities of these technologies that are related to the chosen strategy⁵.

Therefore we can Cluster transformation concepts into four constructs:

- **Re-engineering**: improving overall organizational efficiency while only partially addressing the better engagement of the workforce;
- **Restructuring**: improving efficiency without necessarily improving the organizational ability to achieve its long-term goals and opportunity capturing;
- **Renewing**: gaining improved efficiency, effectiveness and innovativeness through employee empowerment without a clear focus on the desired results;
- **Regeneration**⁶: improving existing processes and fundamentally revisiting the direction and portfolio of available opportunities

1.3.2. Approaches to exploring digital business transformation:

Digital transformation can be explored in three areas of business; business processes consumer behavior, and business models.

³MCKEOWN,(I) and PHILIP,(G): «*Business transformation, information technology and competitive strategies: Learning to fly*», in International Journal of Information Management, N°23, February 2003, pp.3-24.

⁴SCHWERTNER, (K): «*DIGITAL TRANSFORMATION OF BUSINESS*», in Trakia Journal of Sciences, N°15 (1), 2017, p.388.

⁵Ibid, pp, 388-389.

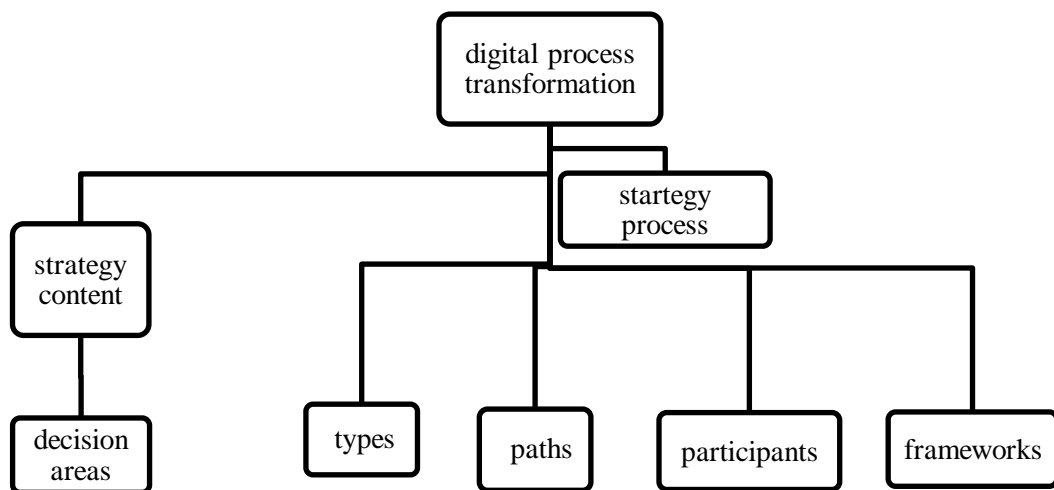
⁶MUZYKA, D and KONING (A): «*On Transformation and Building the Entrepreneurial Corporation*», in European Management Journal, 13(4), 1995, pp.346-362.

1.3.2.1. Business processes transformation:

The use of the newest and the different technologies is not enough for business digital transformation; in contrast, it requires a deep change in business's strategy and therefore business process. Digital transformation strategies should be clear enough to take benefit of the unlimited possibilities of the offered technologies.

So company-level digital transformation seems to hinge on a strategy perspective; companies have recognized the need to govern this complex endeavor by formulating a clear strategy and executive process steps to keep pace with the new digital era.

Figure II-12: business processes transformation⁷



Source: ISMAIL, (M.H), KHATER, (M) an ZAKI, (M): «*Digital Business Transformation and Strategy: What Do We Know So Far?* », University of Cambridge, Working Paper, November 2017, p.07.

Digital transformation is considered to be an overarching strategy guiding the entire organization in its digital transformation path; its broadness requires different alignment; with the company's strategy and with the operational strategies.

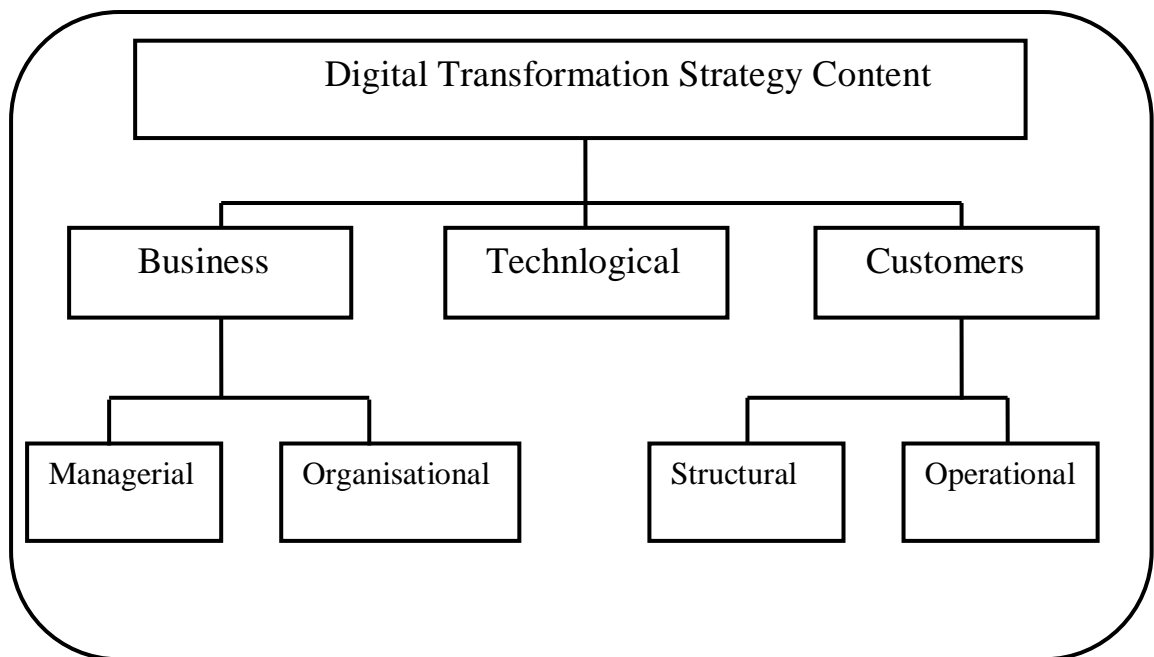
⁷ ISMAIL, (M.H), KHATER, (M) an ZAKI, (M): «*Digital Business Transformation and Strategy: What Do We Know So Far?* », University of Cambridge, Working Paper, November 2017, p.07.

Digital transformation strategy Impacts Company's in different segments and it aims for transformation along multiple business dimensions: Corporate Strategy, processes, and business models, products.

Strategic decision areas have to be incorporated into the strategy formulation process:

- Technological;
- Managerial;
- Organizational;
- Structural;
- Operational.

Figure II-13: digital transformation strategy content⁸



Source: ISMAIL, (M.H), KHATER, (M) an ZAKI, (M): «*Digital Business Transformation and Strategy: What Do We Know So Far?* », University of Cambridge, Working Paper, November 2017, p.16.

⁸ Ibid, p.16.

1.3.2.1.1. Digital transformation strategy process:

To answer how companies transform; and execute the transformational strategy. When operating in the digital world; companies have two strategies types to adopt either its customer engagement strategy CSS or its digital solutions strategy (DSS). the first one focuses on offering a unique ,innovative, customized and integrated customer experience, while the second strategy DSS focuses on reformulating a company's value proposition through the integration of products, services and data .

1.3.2.1.2. Strategy Paths

When companies choose to start transformation journey; the most crucial thing to define is the starting point of this journey. Up on this decision companies will cross different strategies' paths;

- ❖ **The first path:** the digital transformation journey begins with reshaping the operating model by taking advantage of data and digital capabilities within the organization before touching the customer experience through services and products.
- ❖ **The second path:** is controversy to the first one it's about customer value proposition enhancing, extending or redefining it with digital engagement before the operating model.
- ❖ **The third:** transforms both customer value proposition and business model from the start⁹.

1.3.2.1.3. Strategy Participants¹⁰:

the old “divide-and-conquer” approach, where functions are working in silos to optimize their individual performances, are not suited to digital transformation; people should collaboratively experiment with technologies and embrace collaborations across functional and organizational boundaries.

1.3.2.1.4. Strategy Frameworks¹¹:

Business digital transformation is a process that develops through stages, building on one another as opposed to happening all at once ;table below identifies six distinctive phases that can be applied to all of the frameworks, and also equip managers with a structured approach while progressing from one stage to the next.

⁹ Ibid, p.22.

¹⁰ Ibid, p.23.

¹¹ Ibid.

TableII-05: BUSINESS DIGITAL TRANSFORMATION STEPS¹²

Phase	Description
Initiation	Understanding digitalization opportunities, threats and impact
Ideation	Imagining transformation dimensions as options for the business
Assessment	Evaluating digital readiness levels and identifying gaps
Engagement	Communicating the vision and integrating the necessary people.
Implementation	Proceeding with the action plan in various domains
Sustainability	Validating and optimizing the action plan continuously

Source: ISMAIL, (M.H), KHATER, (M) an ZAKI, (M): «*Digital Business Transformation and Strategy: What Do We Know So Far?* », University of Cambridge, Working Paper, November 2017, pp.23-24.

1.3.2.2. Business models transformation:

1.3.2.2.1. Business model definition:

Michael Lewis refers to the phrase *business model*¹³ as “a term of art.” And like art itself, it’s one of those things many people feel they can recognize when they see it but can’t quite define.

“Answer to two most important questions: who is the customer and what Does the customer value” P. Drucker’s

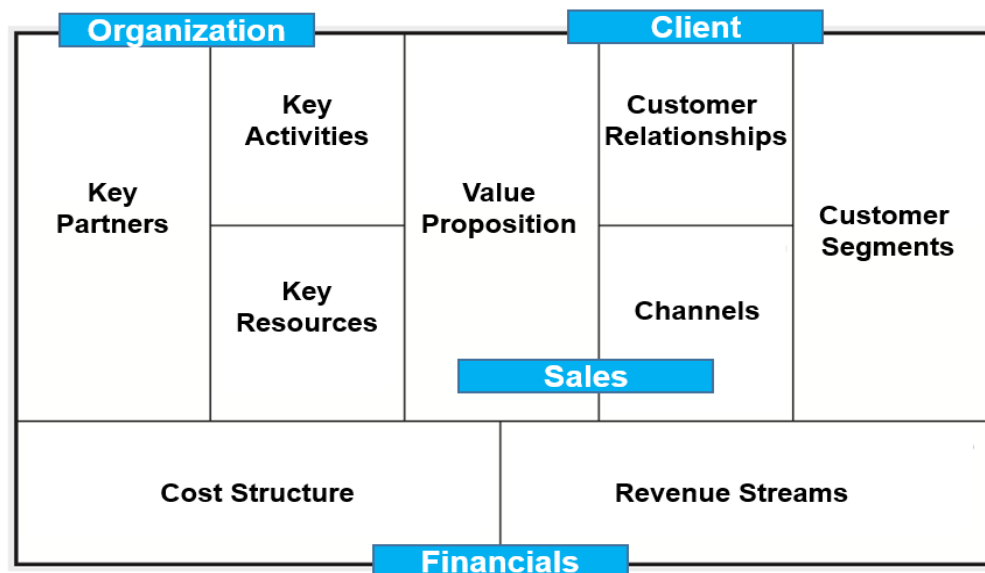
The business model canvas that was first proposed by Osterwalder and Pigneur it is a framework that provides support for rapid and efficient content documentation in the process of identifying crucial components of an organization. Each area of BMC represents bunch of specific questions to be answered. And the Process of filling out the canvas determines BMC , uniqueness . It contains the following components:

¹² Ibid, pp.23-24.

¹³ <https://hbr.org/2015/01/what-is-a-business-model/> consulted 10/05/21 at 1:30 AM.

- key partners;
- key activities;
- key resources;
- value propositions;
- customer relationships;
- channels;
- customer segments;
- cost structure;
- Revenue streams.

Figure II-14: Elements of the business model¹⁴



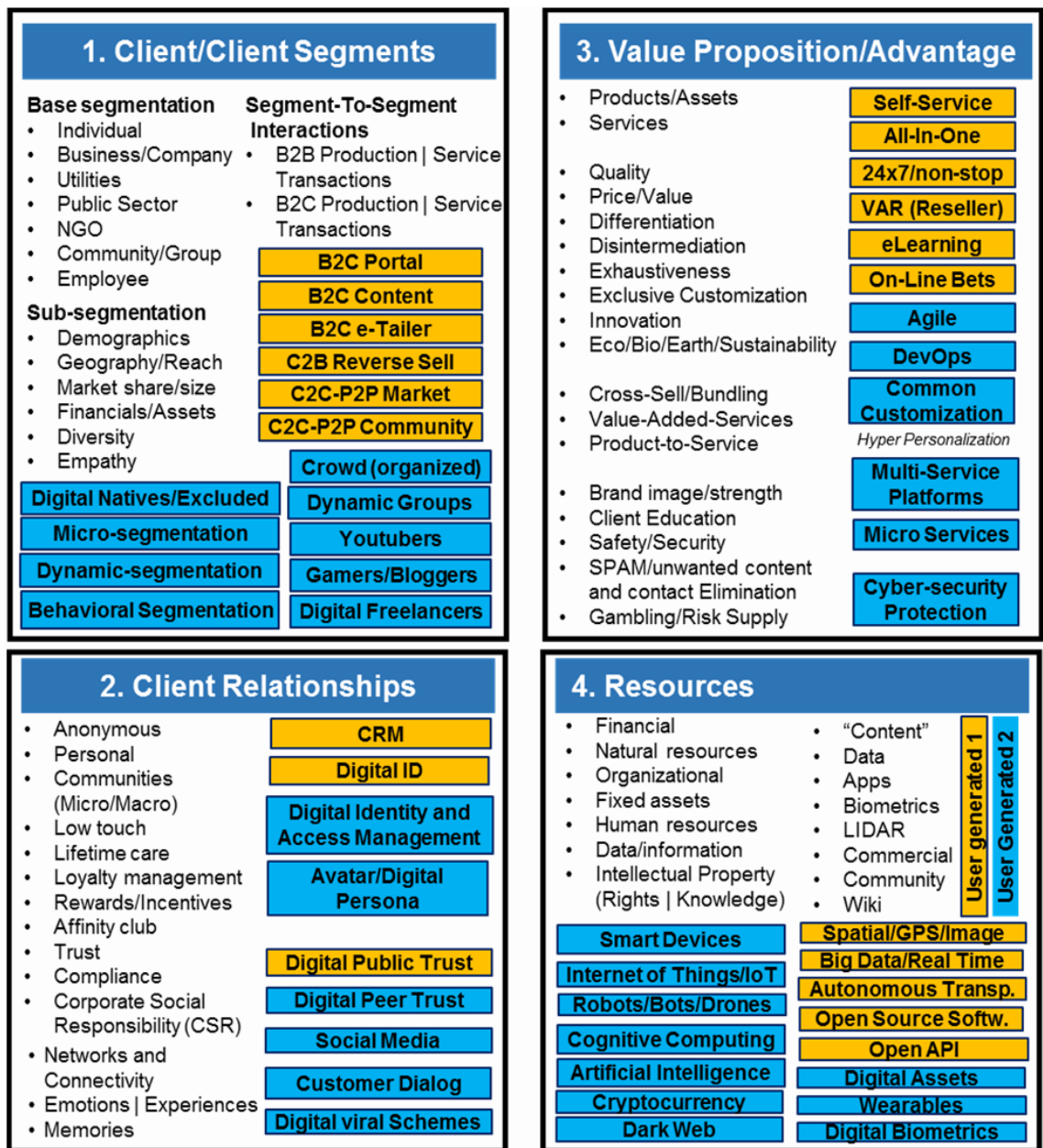
Source: OSTERWALDER, (A) and PIGNEUR, (Y): *Business Model Generation. A Handbook for visionaries, game changers and challengers*, PEARSON edition, France, 2010, pp.18-19.

1.3.2.2.2. Business model digital transformation:

Transforming the business model is done through digital content to existing products and services and introducing new digital solution.

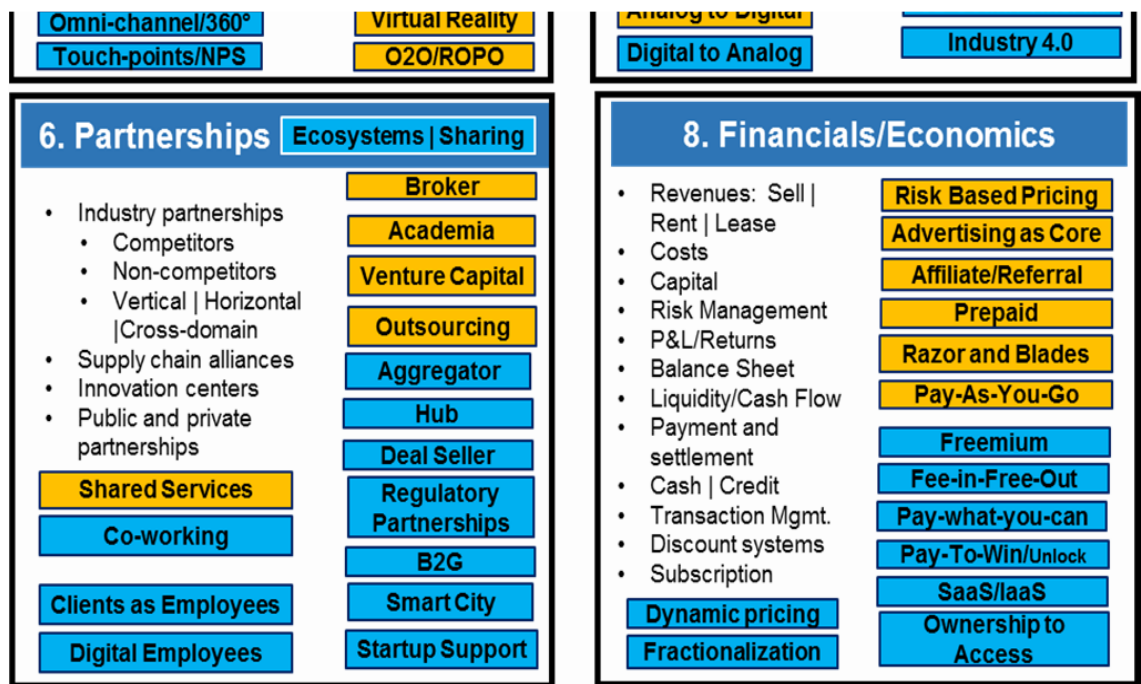
¹⁴OSTERWALDER, (A) and PIGNEUR, (Y): *Business Model Generation. A Handbook for visionaries, game changers and challengers*, PEARSON edition, France, 2010, pp.18-19

Figure II-15: Digital Transformation of the Business Model Morphology¹⁵ (part 1)



Source: Interpretation of Marcin Kotarba, based on OSTERWALDER, (A) and PIGNEUR, (Y): *Business Model Generation. A Handbook for visionaries, game changers and challengers*, PEARSON edition, France, 2010.

¹⁵ Interpretation of Marcin Kotarba, based on OSTERWALDER, (A) and PIGNEUR, (Y): *Business Model Generation. A Handbook for visionaries, game changers and challengers*, PEARSON edition, France, 2010.

FigureII-16: (part02): Digital Transformation of the Business Model Morphology¹⁶

Source: Interpretation of Marcin Kotarba, based on OSTERWALDER, (A) and PIGNEUR, (Y): *Business Model Generation. A Handbook for visionaries, game changers and challengers*, PEARSON edition, France, 2010.

❖ **Brief explanation for the new BMC version¹⁷:**

1. **Client/Client Segments:**

- ✓ The client domain was selected as a starting point for the discussion of the business model (Table 1);
- ✓ in line with the widely adopted client-centric¹⁹ paradigm of contemporary organizations. Primarily;
- ✓ it covers the aspects of segmentation and also the relationships between the segments, forming various configurations of mutual interactions in both standard production and services, as well as transactions.
- ✓ The following elements can be allocated to each ontology group.

2. **The client relationships domain** describes the nature of interactions that organizations may have with their clients (Table 2). The relationships are described by several parameters, for example, intimacy (anonymous to personal), duration (one time to

¹⁶ Ibid.

¹⁷KOTARBA, (M): «DIGITAL TRANSFORMATION OF BUSINESS MODELS», in Foundations of Management, N°10, July 2018, pppp. 128- 131-135-136.

lifetime), span/reach (networks, groups), true nature (financial, emotion, or trust based), or the level of regulations (compliance).

3. Value proposition/advantage:

The value proposition and competitive advantage domain is aimed at describing the core elements that determine the principal purpose for the clients and client relationships and distinguish a given organization from competition (Table 3)

4. Resources:

- ✓ The resource domain describes key sources and supplies used by the business model (Table 4).
- ✓ The wealth of new digital resources presented above suggests that organizations need to be increasingly aware of the changes they are bringing to the existing value chains.
- ✓ Traditional products and services (e.g., physical book or human financial advice) will continue the migration to their digital equivalents, frequently superior across many dimensions (e.g., user experience, availability, resilience, flexibility or unit cost). Moreover, new digital resources will continue to emerge, either disrupting or creating sources of value.

5. Channels and customer experience:

Channels in the business model reflect means of communicating and exchanging value (products and services) with the clients (Table 5). This domain was extended by the author with customer experience, which is becoming a core dimension of evaluating channel advancement and their usability.

6. Partnerships, ecosystems, sharing:

The partnership domain describes cooperation arrangements between various market participants (Table 6). The original BMC taxonomy was extended with the concept of ecosystems (sets of interconnected organizations, usually sharing certain transaction and communication platforms). Although various forms of partnerships existed at the dawn of entrepreneurship, the digital transformation allows to create new types of partnership enabled by the usage of advanced technologies. Instant connectivity and access to the ever-growing sources of data support new cross-sell or cross-service opportunities. On the other hand, the cooperation forms and settlement mechanism are becoming more complex and more challenging from the legal and regulatory point of view (e.g., because of the allocation of

responsibilities and indemnity). One of the key trends to recognize in this domain is the creation of original ecosystems where new, digitally enabled products.

7. Activities/Energy usage:

The activities domain contains a description of core actions performed by the resources within the business model (Table 7). In the activities domain, we observe two primary trends. First, the evolution of well-established activities toward more digital forms and new levels of advancement (e.g., marketing automation or cloud computing). Here we should point out that some activities from Wave 1 served as a base for influencing other areas of the business model morphology in Wave 2. For example, the supervisory control and data acquisition (SCADA) concept that was developed in the industrial setting can be considered a predecessor of the Internet of Things enabled in the personal world, mainly thanks to the advancement in sensor and communication technology and costs. The second trend covers innovative solutions that challenge current paradigms (e.g., safety of transactions is guaranteed by a public distributed ledger rather than the core systems of large “trusted” institutions).

8. Financials/economics:

The financials and economics domain covers the performance aspects of the business model, expressed mainly in financial terms and also in the form of performance indicators and systems of measures (Table 8). The financial and economics domain shows a strong disruptive movement in the area of revenue generation. In Wave 1, the industry was first exposed to business models that built their cash inflows on sources not related to their primary value proposition. In Wave 2, this trend is further extended by exploring economies of scale (collection of small fees from a large pool of users or identifying a community interested in the service to the point of providing the financing for it). Another very important phenomenon is the growth of concepts that abandon classical ownership and encourage usage of a service/product only for the time or application needed by the client.

1.3.2.3.Digital transformation of Consumer behavior:

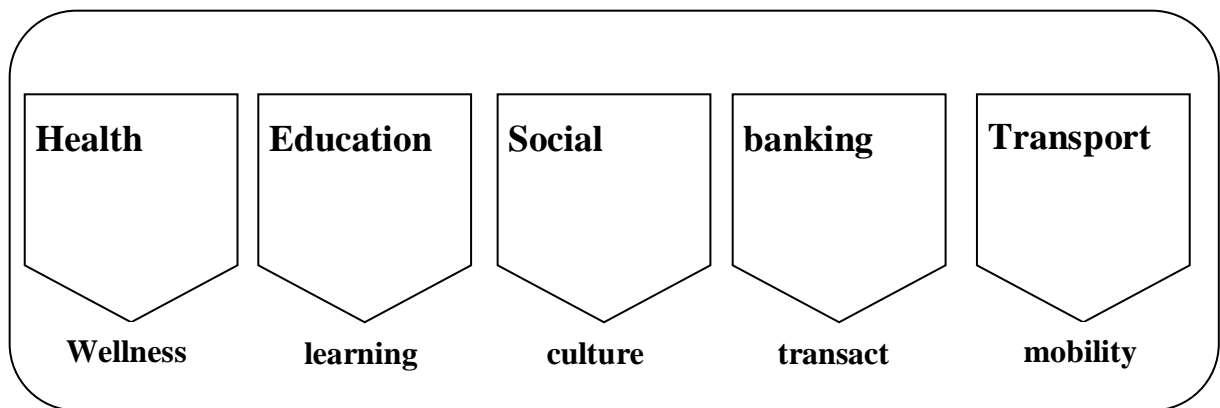
The way people behave and think have known a tremendous change due to the burst of digital technologies; the use of the different technology devices including - Laptops, Mobiles, Tablets, and Smartphone has transformed customer's lifestyle. And so their expectations from products and services experience.

The shift in customer's expectations and lifestyles generate a shift or we rather say progress in consumer's needs although customers needs and wants are analogous in the new digital transformation era as well as in the ancient ages - health, education, banking, or finance, utility services, retail, and transport are fundamental wants and attributes of the humans.

However, the digital transformation world generates progress in our methods of fulfilling those needs; our ways to communicate, transport people or goods, produce and consume.

There is a transformation with a radical change in the way Humans meet their needs or wants.

FigureII-17: Human's Needs or Wants in a Evolving Digital World¹⁸



Source: SHRIVASTAVA, (S): «*Digital Disruption is Redefining the Customer Experience: the Digital Transformation Approach of the Communications Service Providers* », Telecom Business Review: SITM Journal, N°10 (1), September 2017, p.42.

¹⁸SHRIVASTAVA, (S): «*Digital Disruption is Redefining the Customer Experience: the Digital Transformation Approach of the Communications Service Providers* », Telecom Business Review: SITM Journal, N°10 (1), September 2017, p.42.

1.3.2.3.1. Customer expectation's transformations:

Customer's expectations are increasing day by day and it has become complex for companies to manage these rapidly evolving expectations, clients today are hard to please and they are becoming very exigent.

They demand 24*7 services including the next attributes:

- **Seamless:** Customer search for easy, smooth, and noontime consuming interactions, they expect effortless transactions through the digital or voice channels.
- **Stimulating:** customer today is well informed and searches to compare several value offerings of similar products. Companies need to focus on value-creating across their entire client's touch points rather than just pushing, selling, or promoting products.
- **Sensitive:** *Businesses have the advantage* of social channels availability to listen carefully and actively to their clients to develop a deep understanding of what really occupies customers and respond in ways that are intelligent and relevant to customers.
- **Synchronized:** real-time supported and personalized conversations between the Customer and companies.
- **Smart:** customers expect companies and brands to be smart enough to Align with trends to keep their experiences fresh and distinctive.

1.3.2.3.2. Customer experience:

Today CSPs; which are a tool of segmentation that has a significant role in providing the connectivity and enable humans to use or consume the different services to adjust from their wants (or needs) through interactive multiple channels(voice or digital). need to be in incremental steps to align with digital trends and so with the evolving customer behavior through enhanced Digital Customer Experience which is the Digital Customer Experience Transformation (DCExT).

DCExT is a continuous improvement program and a long term strategic initiative in a phased manner. It also significantly reflects the changes are expected in the business model of CSP to adapt the digital disruptions and use it as an opportunity to transform and embrace the

change to enable “*Customer is First*” culture in an organization to improve the long term business profitability¹⁹.

Digital customer experience maturity assessment is fundamental to assess CSPs maturity level to define the starting point of digital customer experience transformation by indicating the baseline of customer service provider communication, which depends on the digital customer experience level of maturity.

¹⁹ Ibid, p.47.

Section 02: mobile application and the use of empathy

After understanding the digital transformation era and its businesses and client characteristics we will give a deep look into one particular technology which is THE MOBILE. In this section, we will be explaining this technology and especially the application mobile, of course with highlighting the use of empathy to understand its user's characteristics.

2.1.1. Mobile Characteristics:

- **Personal:** the mobile is personally identifiable because it basically belongs to only one person.
- **Communicative:** the mobile can send and receive messages in different ways and different forms
- **Handheld:** it is portable and needs to be operated with either both hands or just one.
- **Wake able:** both users and networks can awaken the mobile easily and quickly.

2.1.2. Mobile user's characteristics:

- **Mobile:** mobile users are not sitting attentively, they are moving, walking, or even running. The user being mobile means that their social and physical environment is changing as well, and their context is unpredictable except by the use of the advanced technologies;
- **Interruptible and easily distracted:** the user has broad sources of interruption from the physical world as well as from the device itself; the user transition between physical and virtual tasks is so easy that can reduce users effectiveness in both tasks
- **Available:** in a controversy, the mobile user is easily available remotely, which enables people to be more connected;
- **Contextual:** the context of the user determines how he behaves, and ideally user needs to inform the mobile of the current context so the mobile behaves in an appropriate way;
- **Identifiable:** devices are personal and they usually belong to a single person which makes the mobile's user identifiable.

2.2.Mobile application overview:

Mobile applications²⁰ are consist of software/set of program that runs on a mobile device and perform certain tasks for the user. Mobile application is a new and fast developing Segment of the global Information and Communication Technology. Mobile application is easy, user friendly, inexpensive, downloadable and run able in most of the mobile phone including inexpensive and entry level phone. The mobile application has wide uses for its vast functioning area like calling, messaging, browsing, chatting, social network communication, audio, video, game etc In large number of mobile application some are preinstalled.

2.2.1. User interface (UI) design of an application mobile:

Before understanding what the user interface design is; we should be defining interface first; an interface is a space in which two or more objects can come together and interact.

An interface is a space in which two or more objects can come together and interact. A language, for instance, is an interface for two people who want to communicate ideas to each other. The importance of an interface is obvious: it determines how successful and efficient the interaction is. The term “interface” frequently comes up in connection with computers and human-computer interaction. In computer science and technology HI this term can refer to different things. Obvious examples of different interfaces are a user interface and a computer interface.²¹.

in our case; interface in more precisely about user interface and an application mobile interface; However, user interface is the sum of visual elements, interactions and animations; it’s about the texts users read, images and the buttons users click on.

User interface design decides what the application is going to look like. Which color ,which schemes and how button shapes would be like ; so it’s about designing the look and so the feel of an application’s interface.

An application’s interface needs to be attractive, visually-stimulating and themed appropriately to match the personality of the app, So every visual element feels united,

²⁰RASHEDUL, (I) and ROFIQUL, (I): «*Mobile application and its global impact*», in International Journal of Engineering and Technology, 10(6), January 2010p.104.

²¹ WICKRAMARACHCHI, (P.M): « *UI/UX User Interface & User Experience*», Media and communication Design: Department of Integrated Design, N°3, p.05.

both aesthetically, and in purpose and also an application interface needs to intuitive to offer to the user an effortless interaction.

2.2.2. What is user experience (ux) design?

The user experience of an application mobile; answers the how question, how a user would use it and interact with it, UX design is in charge of determining how the user interface operates, how easy or difficult is this application to use.

There are two scenarios of a user experience; either it's a good experience where the interface works well and feels smooth and seamless or its bad where the navigation or the interaction is complicated, unintuitive, clunky, and confusing.

“ Users have great expectations when they visit Web and mobile applications. They increasingly want an experience that's valuable, easy to use, aesthetically pleasing, and emotionally satisfying. To retain and gain customers, it has to continually win their hearts and minds by providing them with a compelling user experience (UX) that is useful, usable, and desirable”²².

2.2.2.1.The Elements of User Experience:

- ✓ **Visual Design:** like images, graphs and texts.
- ✓ **Navigation Design:** elements that facilitate the user's movement.
- ✓ **Information Design:** the presentation of information.
- ✓ **Information Architecture:** structural design of the information space.
- ✓ **Content Requirements:** content elements.
- ✓ **User Needs.**
- ✓ **Application Objectives.**

2.2.3. User research of an application mobile:

User research or user study, is referred as an approach of early user involvement in product (in our case an application mobile) development, it is based on studying usability experienced by users ; and that's what makes the difference between market research and user research ; market research studies persons as clients and customers while user research study

²² GUALTIERI, (M): *Best Practices In User Experience (UX) Design* , FORRESTER Edition, September 2009, p.01.

persons as users whom we can define as individuals interacting with the product, whereas a customer is a person who pays for the product and buys it.

Customers and users have different motivations toward products, the roles are frequently interlocking and both groups are important information sources and stakeholders in product development.

It is believed that usability, customer satisfaction and requirements quality are achieved through the early involvement of potential users in product development.

For a better understanding of user research we will tackle the two terms; user and usability deeply next below:

2.2.3.1. Usability of an application mobile:

Usability is associated with these multiple attributes:

- ❖ **Learnability:** The system or the application should be easy to understand and to learn.
- ❖ **Efficiency:** The application should be efficient to use so that once the user has learned it, a high level of productivity is predicted.
- ❖ **Memorability:** The application should be memorable so that the casual user is able to return to the application after some period of not having used it without having to learn it again.
- ❖ **Errors:** The application should have a low error rate so that users make the minimum errors possible during the use of the application, and they need to have the possibility to easily recover from them. Further, catastrophic errors must not occur;
- ❖ **Satisfaction:** The application should be pleasant to use so that users are subjectively satisfied when using it.

2.2.3.2. Users:

So Users can be classified into the three main types based on their experience with the application, with mobile in general, and with the task domain:

1- The users' experience with the specific user interface (application) user's experience level with the application mobile should be taken into consideration; it is a crucial dimension that is first referred to when talking about user expertise.

2- The users' general experience with mobile: this dimension also has a fundamental impact on users and so on application interface design.

3- The user's knowledge of the task domain addressed by the application: except the user's experience level with a specific application or with the mobile in general, application domain experience needs to be discussed too, to avoid painful experience caused by unfamiliar concepts, words or abbreviations.

2.2.3.2.1. Types of users:

A. Novice:

Applications should be well explained in detail for novice users; to make their journey as a user, painless. Designers need to make everything clear by sending feedbacks and opportunities. Application mobile should speak with the language of these users to seem controllable for them.

B. Experts:

These users have rapid response time and will require short feedback and explanation .for a painless journey, Expert users will look for less detailed explanation.

2.2.3.3.Tools used in user research

- **Interviews:** User research is more about collecting quantitative data, that would be perfectly gathered by personal interviews which are the most widely spread method when having set the target audience of the product, and to get potential users involved into the creative process.
- **Personas:** With this technique, designer collects the data about the potential target audience, its psychological and behavioral habits and creates an imaginary user with these characteristic. Based on this data, the designer models users' interactions with the application and identify what would possibly please him and what would make struggle in the process.
- **Surveys:** Answering asked questions by users give the actual information enabling designers to understand their preferences and wishes deeper.
- **Focus group:** Popular method presenting the moderated discussion of the product, its features, benefits and drawbacks within the group of people potentially close to the target audience. Altering some characteristics of the group, for example, age, gender, education

level, tech literacy, researchers can receive the variety of data and see how these features can influence user behavior²³.

- **Task analysis:** Understanding the task users want to accomplish through the application enables designer to consider the fast and efficient ways to achieve those goals.
- **Eye tracking:** with the use of some devices; we track user's eyes to pinpoint the most important touch points with the application to take advantage of the most noticeable parts .
- **Participatory design:** asking users to contribute at application creation.
- **Clickstream testing:** The analyses of the most clickable parts of the layout with the aim of designing clear interactions and reveal the problems²⁴.
- **Daily Reports:** asking user to interact with the application for a long period of time , to give him the needed time to discover the application .
- **Desirability testing:** asking about style and visual preferences

2.2.3.4. User research and empathy:

A basic question in user research is how to find out what users really need which is pretty implicit because figuring out user needs of an application is not that obvious and it's not easily revealed because even the user might be ignorant. However, the problem of requirement information from user can be attributed to poor communication between users and designers and Misinterpretations between them The most frequently mentioned requirements elicitation problems and empathy-based solutions are discussed below:

❖ **Users do not know what they want, or they cannot articulate it:**

A difficulty is that part of the users' knowledge has become tacit through automation (Mitchell and Chi, 1985; Wood, 1997). In well-learned tasks, much of the relevant knowledge is no longer consciously available for the person and nonverbal skills and everyday self-evidences are difficult to articulate²⁵.

Users are unaware of the technical possibilities because they do not know what they need, they cannot articulate the needs, because they are subconsciously experiencing them.

²³ <https://uxplanet.org/user-research-empathy-is-the-best-ux-policy-5f966ba5bbdc> **consulted 10/05/2021** at 2PM.

²⁴ Ibid.

²⁵ KUJALA, (S): *User Studies: A Practical Approach to User Involvement for Gathering User Needs and Requirements* , Helsinki University of Technology, Department of Computer Science and Engineering, Finland, 2002 , p.18.

Therefore, the challenge is not to make user explicit their needs but to study users and their activities in their environments and uncover their unspoken knowledge.

Thus, can be perfectly achieved through the following empathy-based marketing tools:

- ✓ **User empathy map:** tool discussed earlier, it allows designers to watch and understand the worldview of their users. In addition, it helps to identify key insights and understands target personas better. Knowing how the end-users feel, what is he thinking about what does he hear and see helps designers to perfectly jump into the user's environment and explicit the subconscious knowledge and the tacit data.
- ✓ **Journey map:** can be a great tool to explicit user's needs, designers have a limited amount of time to prove to users that the application is worth the download and can help them accomplish what they want before they lose interest.

So UX and UI design challenge²⁶ is Turning first-time users into long-term customers and this requires an analyze of where users are coming from and what they want to do and that's what journey map aim to answer.

Questions to map user's digital journey:

- Why did the user open or download the application ?
- Is the application easily understandable?
- Does the user take a long time to accomplish his goals?
- How does the user evaluate his experience ?

❖ **There are too many users to study:**

One fundamental problem in creating any product and especially application mobile is identifying the customer. In addition, it's impossible to meet all potential users and adjust the application or the product upon their preferences; therefore empathy-based marketing tool is needed: creating an imaginary persona is a perfect solution, for which we need to gather the maximum data of our potential users and use it to create a persona.

²⁶ <https://www.appcues.com/blog/user-journey-map/> consulted 05/05/2021 at 2AM.

Conclusion:

We could through this chapter called ‘’ empathy based marketing in the digital transformation era ‘’ understand this current era; and more precisely in the context of business.

We have seen the shift in business model, business process and the consumer behavior, how businesses are being more clients centered and how the client is being more exigent and hard to please. How his needs have progressed and how his expectations are getting higher and higher.

Then, in the second section we talked more precisely about mobile technology, mobile users characteristic then we jumped into application mobile and we spotted the light on method used to improve these application mobile, called user research which is based on empathetic marketing tools.

Chapter III: Empathy-based marketing research to improve user experience of an application mobile

Introduction:

We have seen in the previous chapter, what is empathy based marketing and what are its tools and modalities then we have highlighted the link that exist between empathy based marketing and innovation by introducing the problem solving technique : design thinking.

Then in the second chapter we described the digital business transformation, by showing its impact on client nature , and behavior. Then on business process and business model. And then we gave a detailed look into mobile technology and we spotted the light on the use of empathy in the improvement of an application mobile.

The third chapter is a combination between the two previous chapters; a mixture between psychology, marketing and technology. we will conduct a marketing research based on empathy to improve user experience of an application mobile ‘‘APOCE’’.

Section 01: presentation the company Brenco engineering and consulting

In this chapter we will give a brief presentation of the company and its products and services. Then, we will present our research methodology and goals.

1.1.The Host Company; Brenco engineering and consulting presentation⁶⁸

Brenco is an Algerian consulting and engineering company specializing in market intelligence, business modeling, design thinking, and supporting organizations based on human-centered strategies.

Over the past 5 years, Brenco has shown a strong commitment to the development of the Algerian start-up ecosystem, through the detection and support of entrepreneurs in the digital industries, food processing, and recycling.

For Brenco, the children of today must and will be the green and social entrepreneurs of the future. Brenco has therefore decided to integrate people and nature into the training activities and concrete projects that it has undertaken.

Since 2017, Brenco has introduced more than 1,500 young students to design thinking, business modeling, green entrepreneurship, and business creation voluntarily.

Brenco, develops partnerships with Algerian and regional actors to have its capacity to support entrepreneurs, allowing them to participate in international training, exchanges, competitions, and fundraising activities.

1.1.1. Brenco engineering and consulting services:

1.1.1.1.Market research and feasibility:

Brenco is specialist in Qualitative and quantitative market studies, opinion polls, focus groups, mystery shopper surveys, marketing feasibility, and social-economic studies. The new projects to test an idea and reduce uncertainties, and control risks.

1.1.1.2.Digitilization strategy:

Brenco engineering and consulting helps companies to build digitization strategies.

⁶⁸<https://brenco-algerie.com/> (consulted 27 .05.2021 at 3AM) by adaptation.

1.1.1.3. Conceptual reflection:

Brenco engineering and consulting support companies in the conceptualization of their new products/services centered on their internal or external customers and their needs.

1.1.1.4. Internet of things (ido):

Brenco engineering and consulting have developed expertise and technological solutions that assist companies in their activities and their development.

1.1.1.5. Virtual and augmented reality:

Brenco engineering and consulting supports companies to create, live and bring to life virtual and augmented reality. She offers Professional indications, training, virtual tours, gamification, disease simulation through the use of virtual reality and augmented reality.

1.1.1.6. 3D Printing:

Brenco engineering and consulting helps companies prototypes at 0 logistical and financial risk with the use of 3D scanning and printing equipment.

1.1.2. Brenco engineering and consulting Products:

1.1.2.1. Immediately by Brenco:

RightNow by Brenco is a white-label cloud solution (Mobile App & SaaS) that will allow companies to offer a new UX user experience to Customers or Citizens through this communication channel that everyone wants "Mobile First User". RightNow by Brenco will allow teams to manage everything via a SaaS designated for this purpose. **"Make your strategy data-driven"**

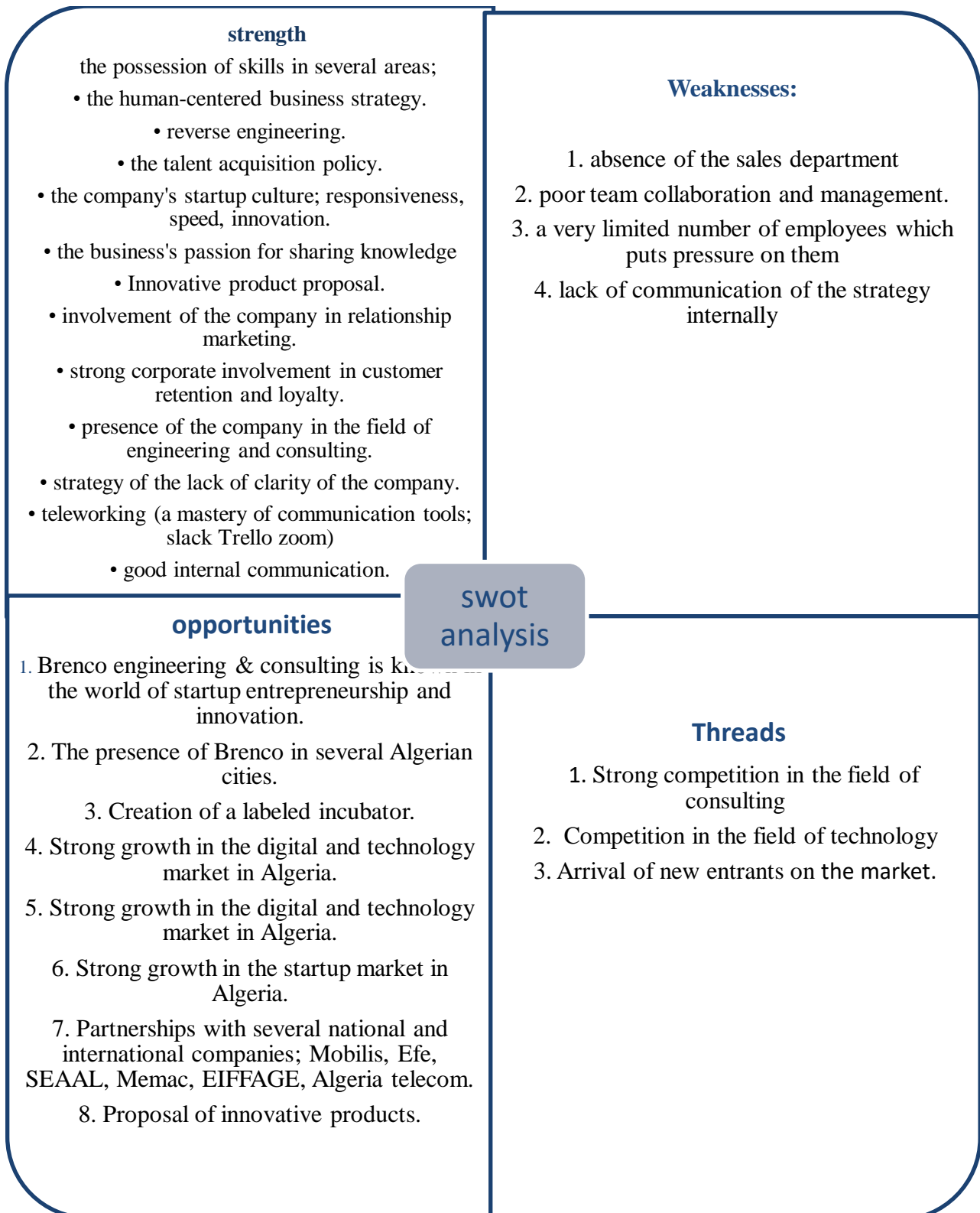
1.1.2.2. The Digital Market-Place des Espaces Office

The Digital Office is a platform as well as a mobile application that will allow companies to find a space to work, organizer of a meeting or an event throughout Algeria. The application is also a way to make companies spaces profitable by setting up a location on the platform. **"See your space differently"**

1.1.2.3. CityLocker logistics IoT solution

Citylocker is an intelligent delivery solution based on connected cabinets (IoT / IoT), a mobile application for order tracking, and a SaaS for logistics process management.

Figure III-18: Brenco engineering and consulting swot analysis



Source: elaborated by us.

Section02: Study representation

After representing the host company Brenco engineering and consulting and its different products and services and also the company's SWOT analysis; in this section we will first present our research methodology and goals then we will present the research.

2.1. Research presentation:

2.1.1. Project brief:

“ this project is collaboration between the Algerian organization charged of clients rights protection ‘’ APOCE ‘’ and the host company Brenco engineering and consulting.

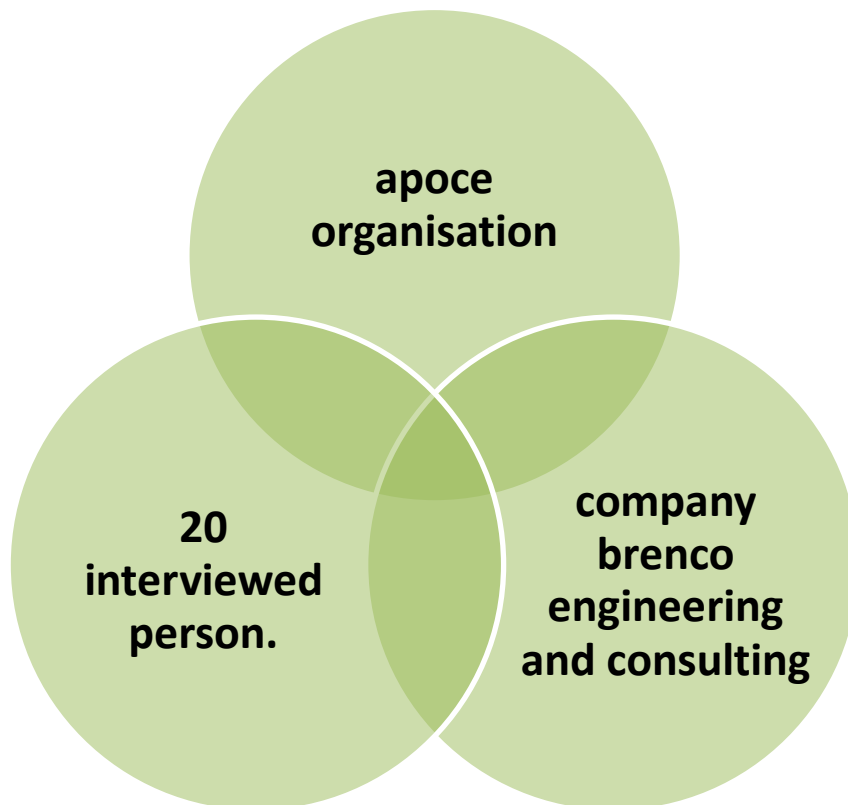
lately APOCE started getting so many claims , where came the need to digitalize their process by creating an application , that would make her work more efficient , rapid and less tiring and in another hand that would facilitate the claim process for Algerian citizens.

Brenco developers worked on creating the application and we contributed at improving its user experience by proposing options to add on this application in hope to Reinvent claim process and make it less painful to the user ‘

2.1.2. Project's ecosystem definition:

First step and the first thing to define is ecosystem where our project will take place:

Figure III-19: Project Ecosystem Presentation



Source: developed by us

2.1.3. Research methodology:

We have worked with quantitative research method where we conducted one to one interviews with 20 people each ten of them represent a sample:

- A. The first sample:** young people from 20 to 27 years old students and fresh graduates because we esteem that they would be familiar with the use of technologies especially mobile . And for the context of claiming, this generation express them self easily especially through social media therefore, they believe in the efficiency of posting a bad comment and they believe that their voice has a certain weight.
- B. The second sample:** old people from 50 to 68 years old, they have different mentality from those of the first sample, they are not so much into self expression, and they are not familiar with the use of new technologies.

We have conducted these interviews; through zoom platform, because our sample was chosen from different cities to make the research richer by knowing the different mentalities and behaviors of different environments.

Each interview lasted for 40 minutes to one hour, It depend on the nature of the interviewed person; some of them were talk actives and others were straight to the point .

Along the research we tried to stay as passive as possible, to not to guide the interview toward a certain answers nor to control or effect their thoughts or sayings. We made sure to let the person speak freely by choosing to conduct the meeting in the language of the interviewed person, because our ultime goal was to make them comfortable, to help us get useful insights into their perspective.

We have also used the emphatic listening and emphatic conversation techniques; by not adding any new information, but only reflecting their sayings to assert that their talk is being well understood.

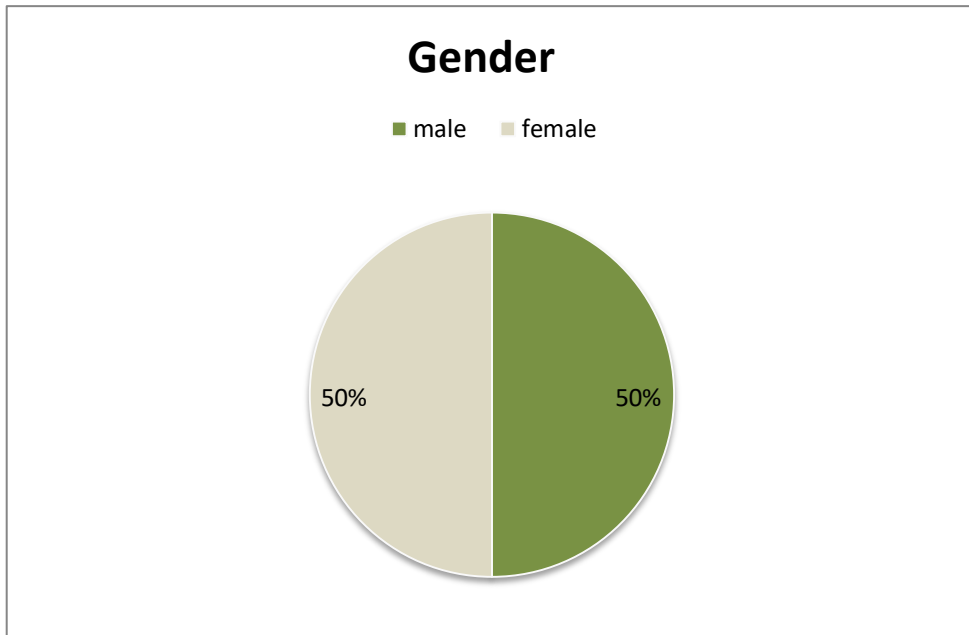
In addition the interview was not directive, nor direct we tried to ask broad questions, and we also made sure to not to tell the goal of the research; therefore they were answering the givens questions without knowing the goal of the research.

Our interview questions were divided into three parts:

- 1) **The first part:** it was an ice breaker , we asked the interviewed person to comment on an image , just to make him comfortable.
- 2) **The second part:** in this part we asked indirectly what would keep people from claiming and what would motivate them to claim in both virtual and real world.
- 3) **The third part :** in this part , our focus was shifted on the interviewed person journey with claiming, we asked them to walk us through a story that happened to them where they claimed or had to claim , but they did not.

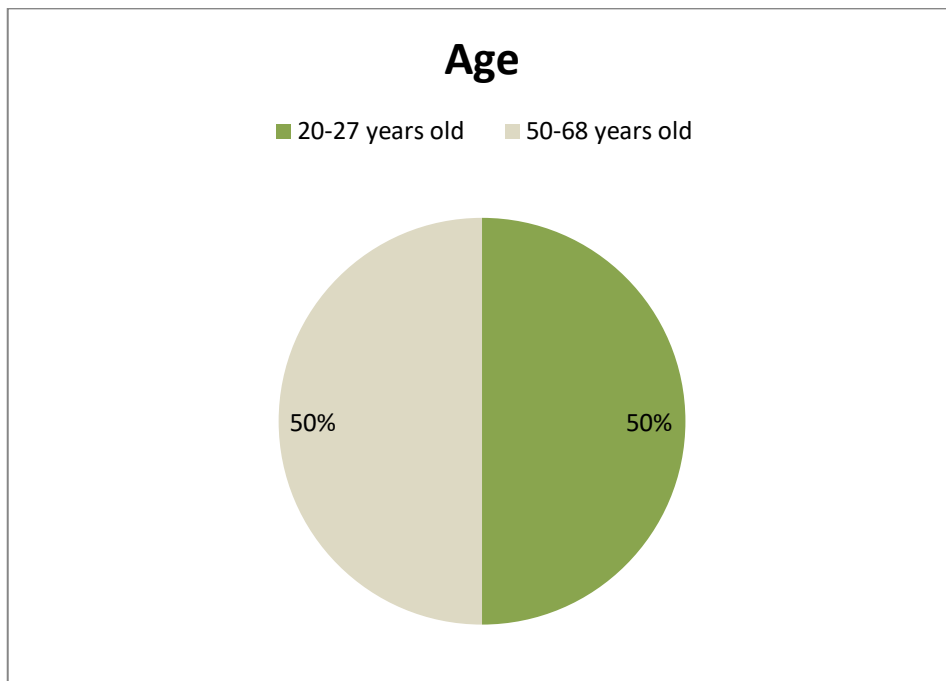
2.1.4. Samples presentation:

Figure III-20: sample gender presentation:



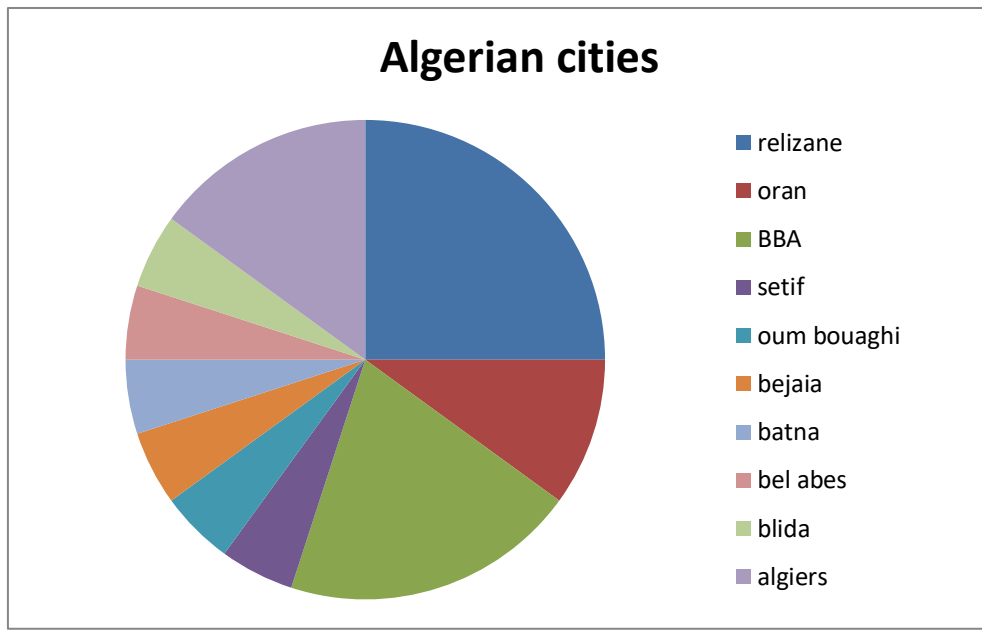
Source: Developed by us

Figure III-21: sample's age presentation



Source: Developed by us

Figure III-22: sample cities presentation



Source: Developed by us

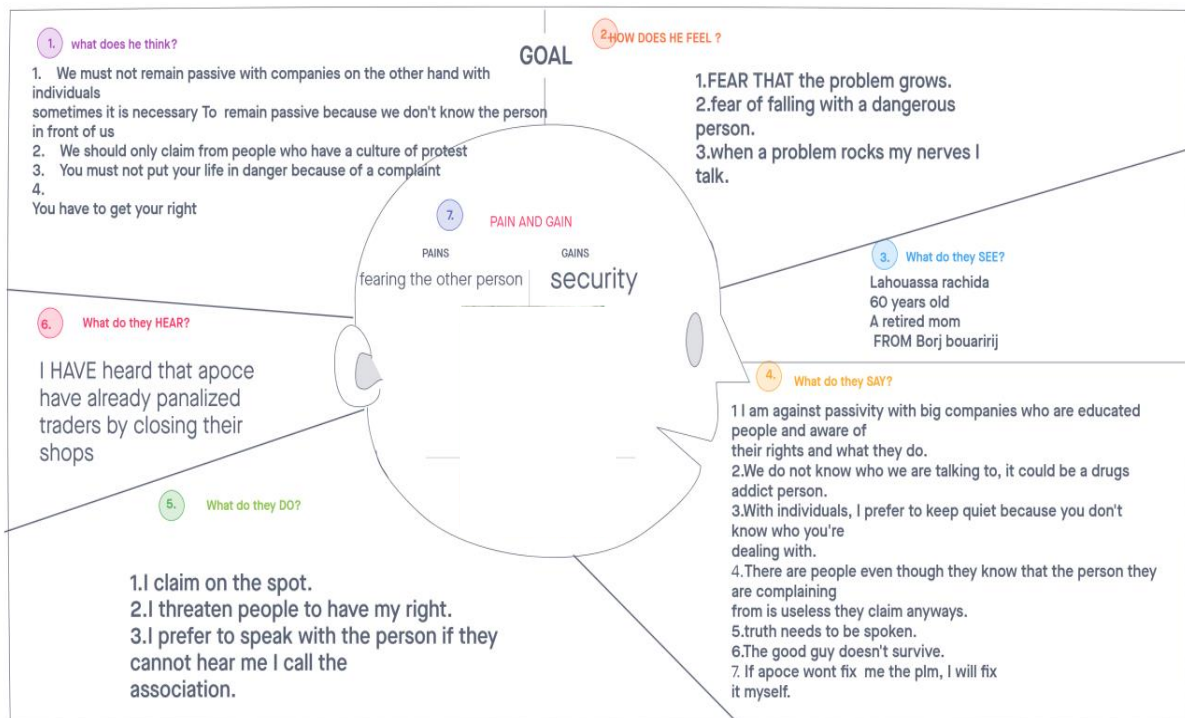
2.1.5. Empathy maps presentation:

To every interviewed person we mapped an empathy map; to go straight to the point we gathered people who has similar empathy maps in one map and kept only those who are different.

Then we conducted an interview with Apoce organization members and we have built an empathy map for them as well.

We present down below empathy maps:

❖ **Lahouassa rachida**



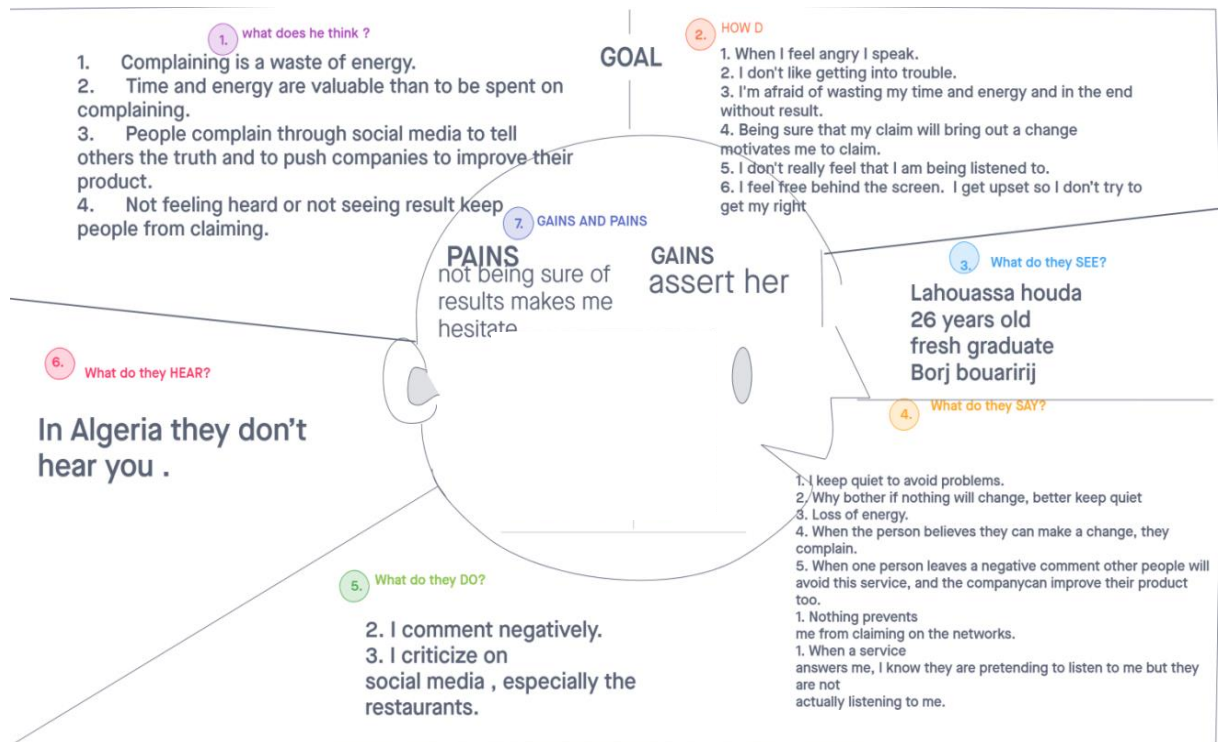
Source: elaborated by us

❖ **Karkatou yahia's empathy map**



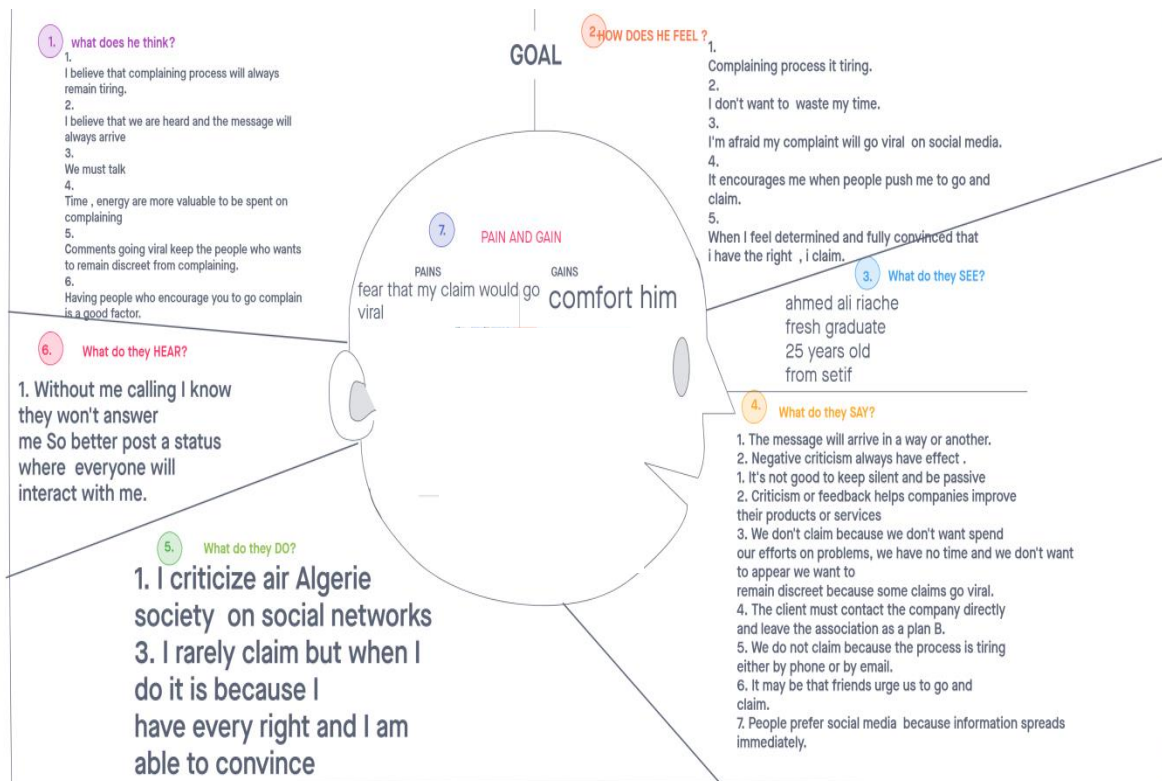
Source: elaborated by us

❖ lahouassa houda empathy map



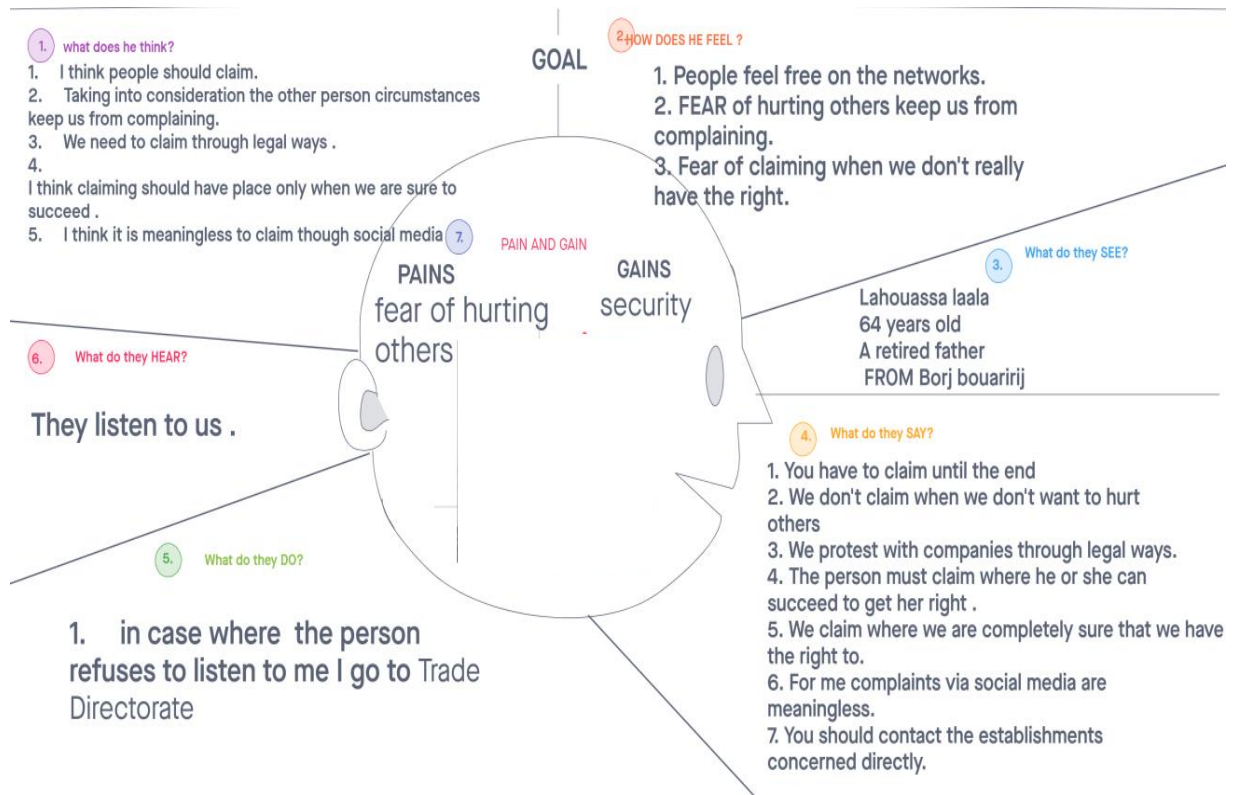
Source: elaborated by us

❖ Riache mohammed ali's empathy map:



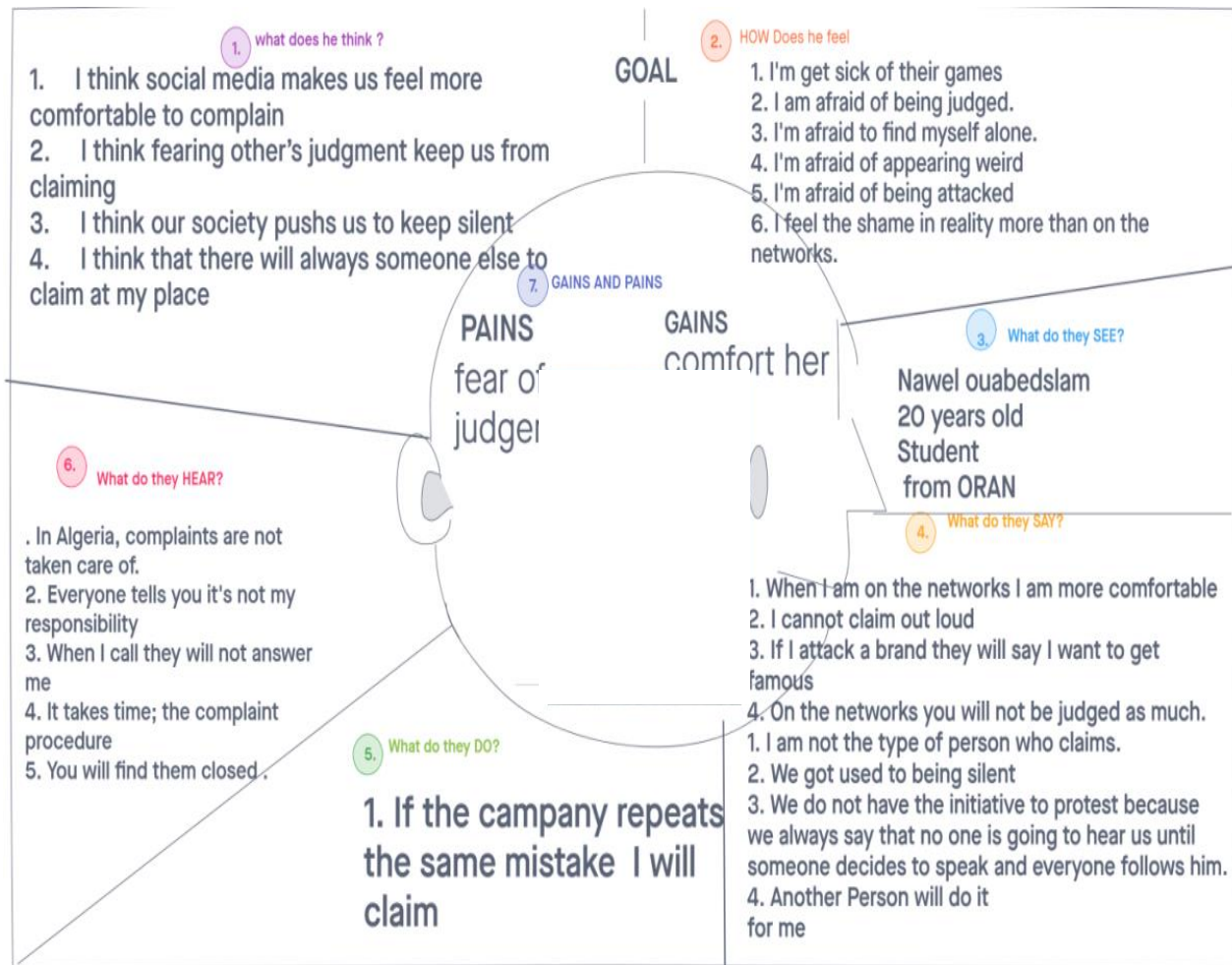
Source: elaborated by us

❖ Lahouassa laala empathy map



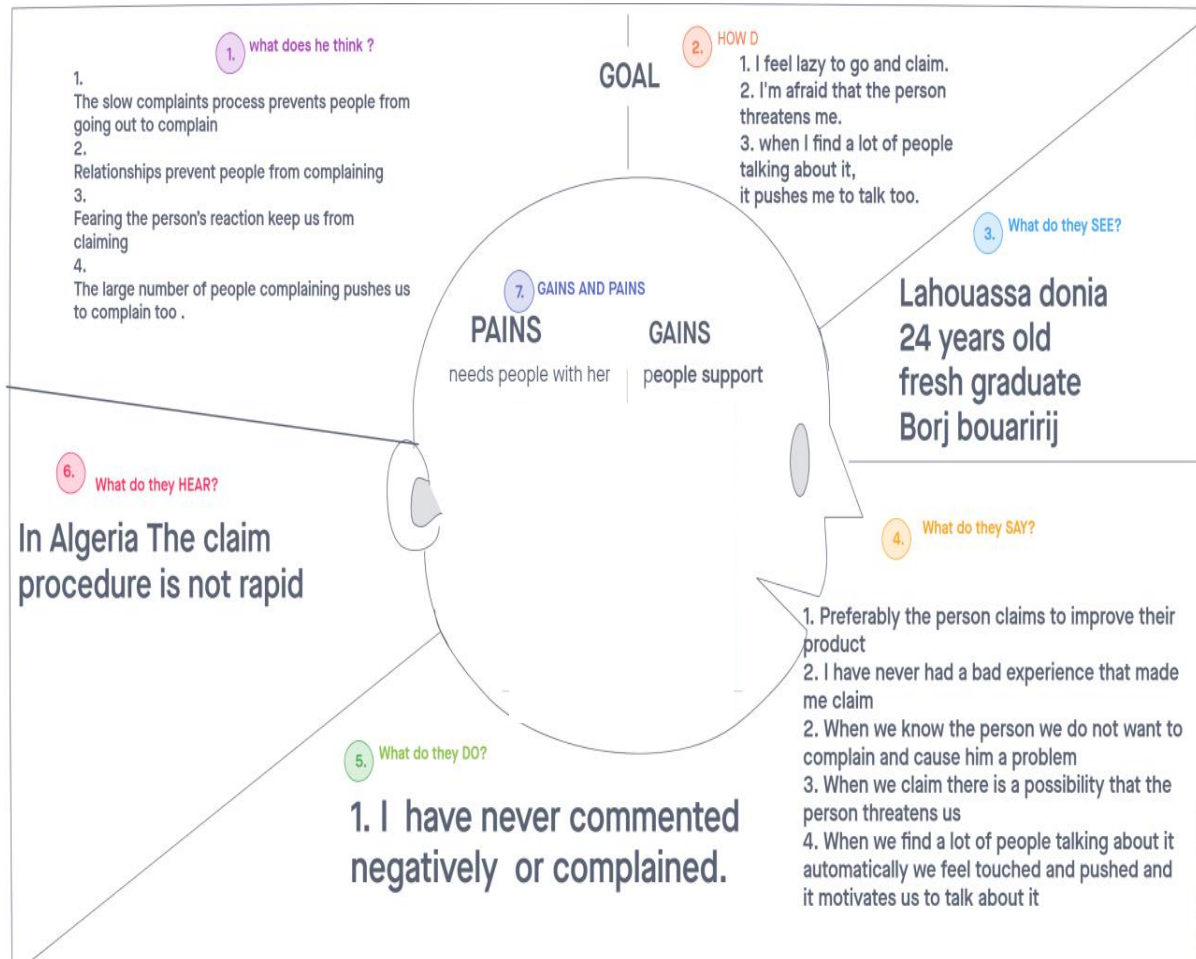
Source: elaborated by us

❖ Naouel ouabdesselam's empathy map



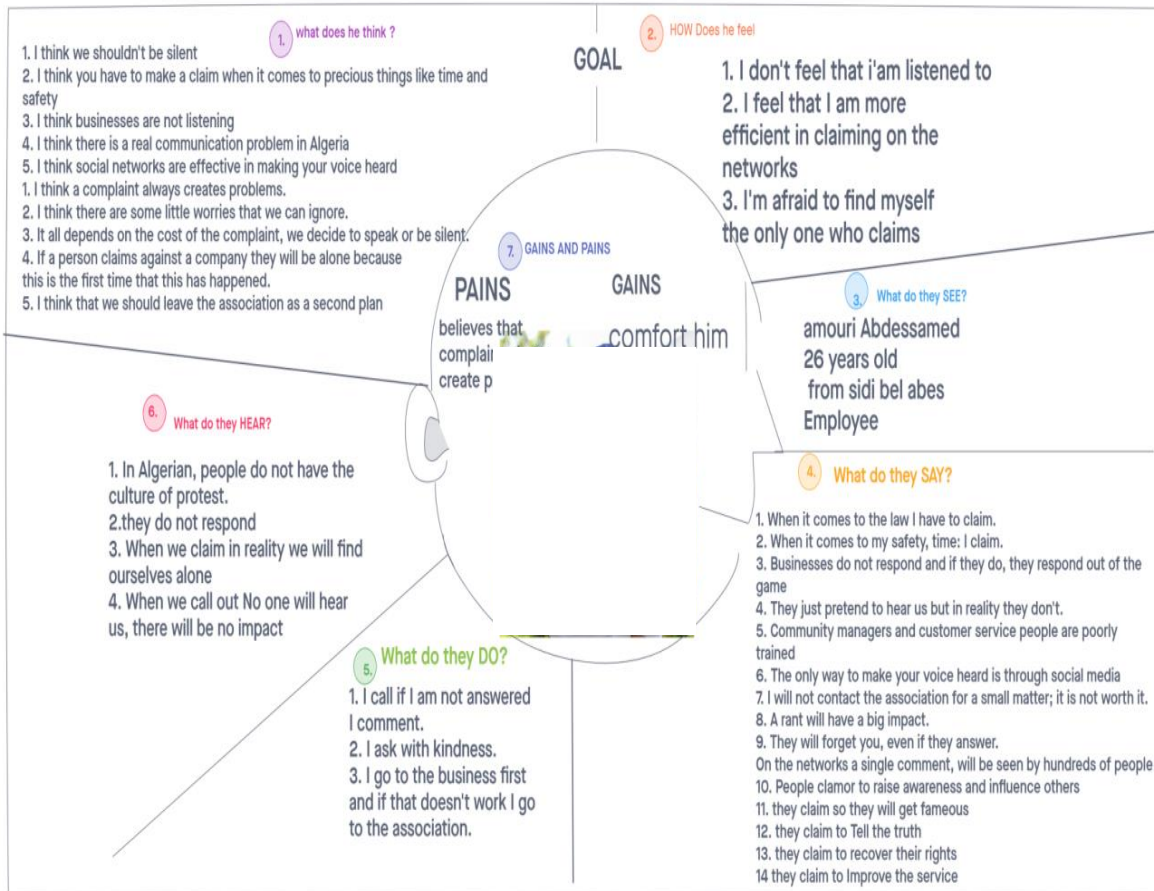
Source: elaborated by us

❖ lahouassa donia empathy map



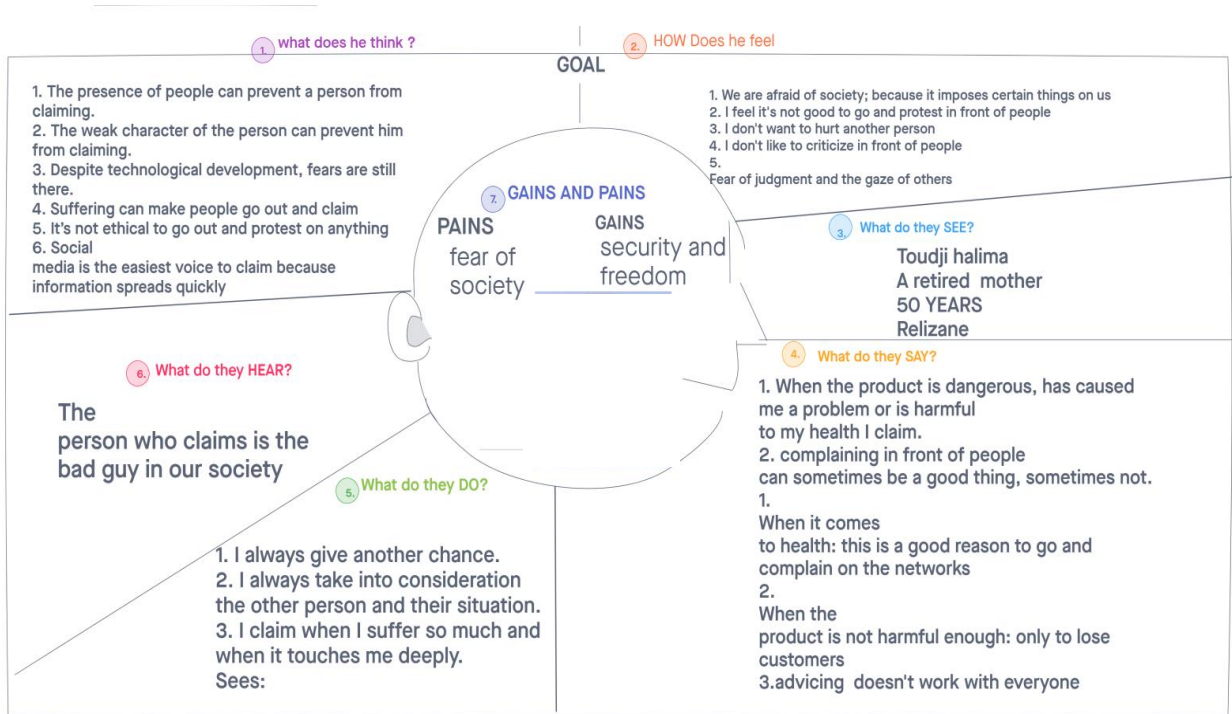
Source: elaborated by us

❖ Amouri mohammed abdessamed



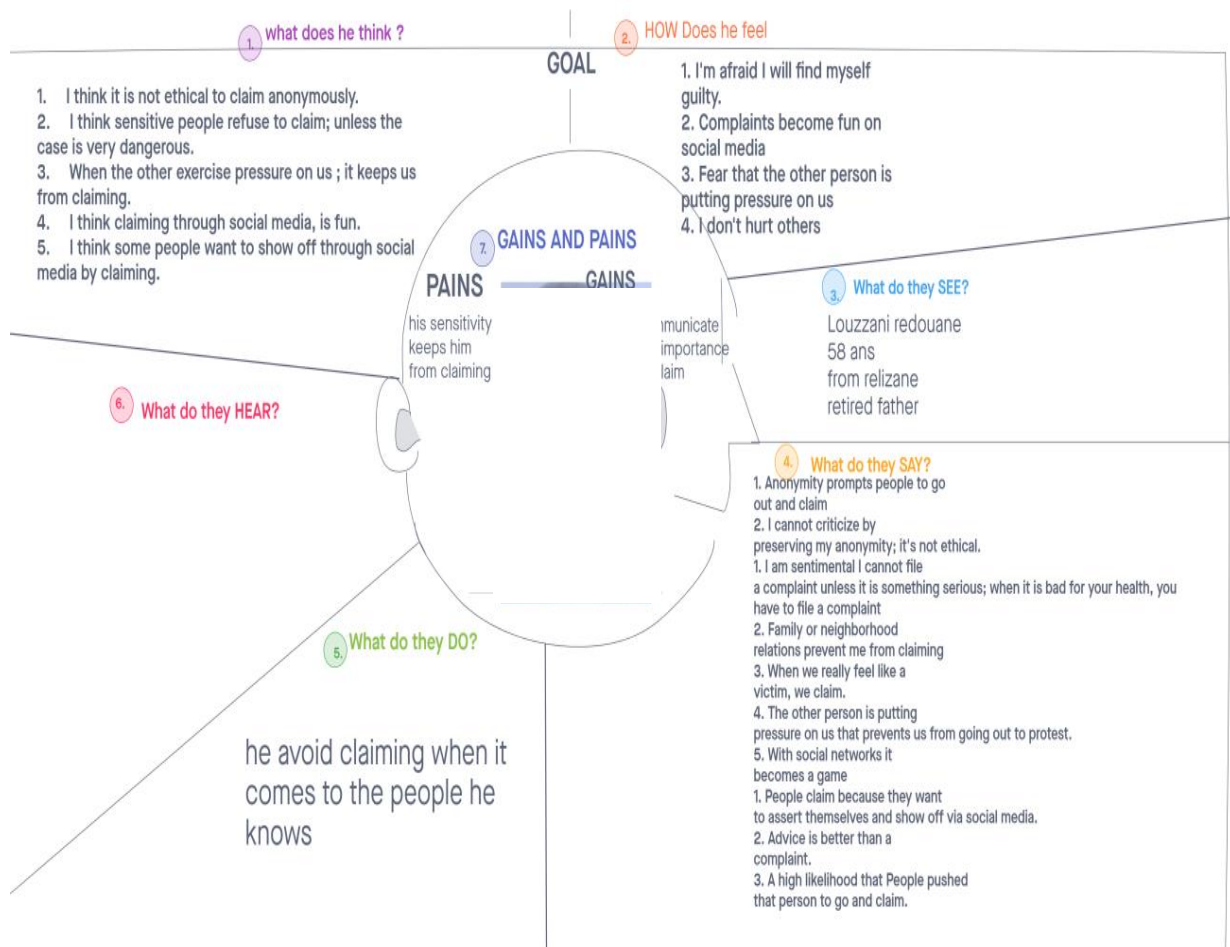
Source: elaborated by us.

❖ Toudji halima's empathy map



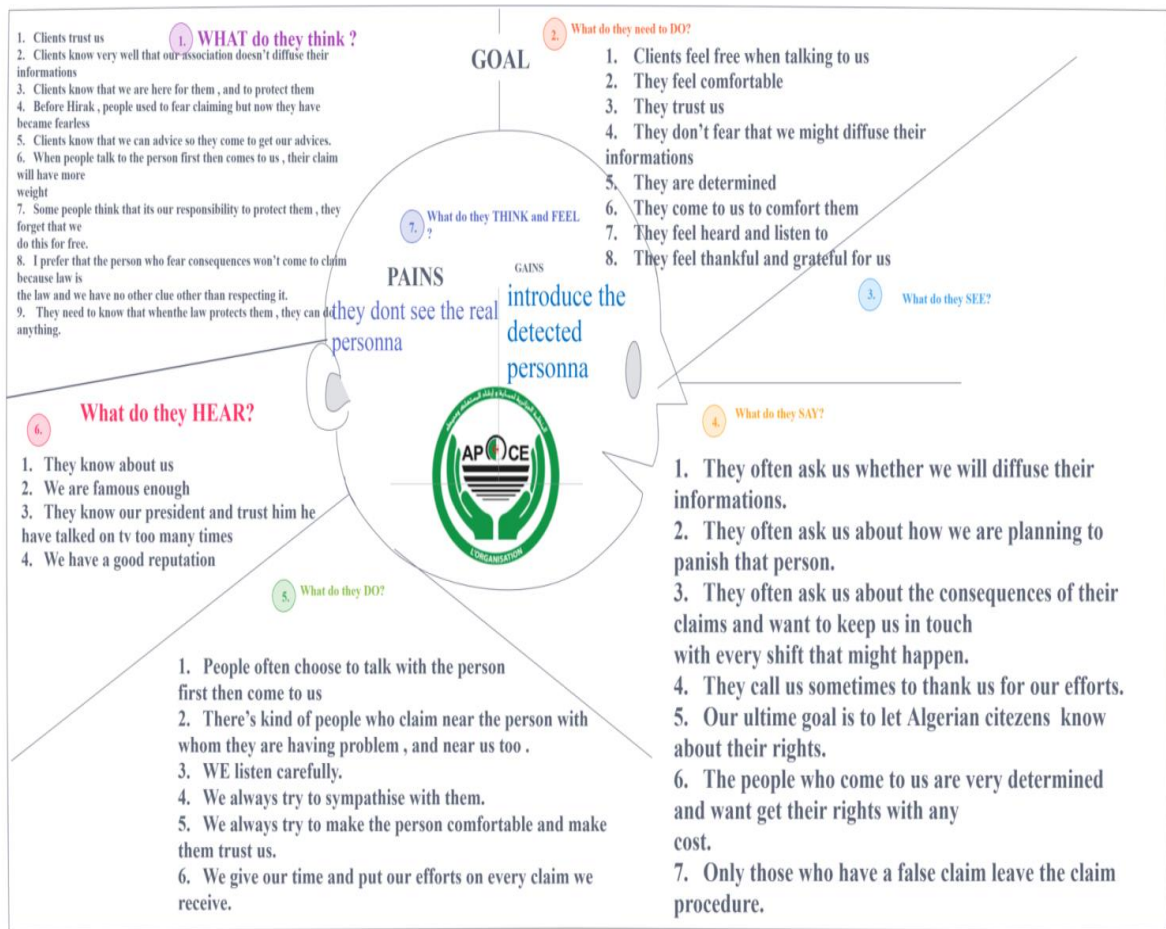
Source: elaborated by us.

❖ Louzzani redouane's empathy map.



Source: elaborated by us

❖ **APOCE's empathy map.**



Source: elaborated by us

2.1.6. Persona creation:


After conducting interviews with normal Algerian citizens and presidents of APOCE, it appeared that we have three types of persona:

- a. **Imaginary persona:** that we would call Mohammed. through the interview with the Apoce president, we tried to visualize and write down the characteristics of the imaginary person that APOCE is unconsciously addressed to.
- b. **Detected persona:** through our interviews, we could detect two personas each one presents two segments and two types of people in claim context the first one we would call Kenza because the interviewed Kenza represents the most the first segment. The second persona we would call Halima because the interviewed Halima represents the most this second segment.

2.1.6.1. Imaginary persona presentation:

Figure III-23: Imaginary persona presentation

mohammed






Age



25 to 34 years

Highest Level of Education

Master's degree (e.g. MA, MS,

Social Networks

brief about mohammed the imaginary personna

mohammed is a very determined person who wants to get his rights at any cost, sometimes even when he doesn't have the right to .

he trusts us because he has already heard about us and saw us on TV.

our president is famous enough and he trusts him and knows that he is a correct person, he doesn't really have fears toward us because we make him feel comfortable, and he knows that we would never diffuse his information so he feels free with us and he freely let things out of his chest .

This person doesn't search to know about the consequences of her claim, because he believes that law is above us all and it should be respected.

Sometimes she wants to keep us in touch with consequences of her claim whether it is good or bad .

She often thank us for our efforts and our time, and she knows that we are a non profit association so he is patient with us and he knows that we help for free so he tries to help us too by making the procedure easy for us.

Source: elaborated by us

2.1.6.2. Detected persona:

Figure III-24: detected persona 1



Source: elaborated by us

Figure III-25: detected persona 2

Source: elaborated by us

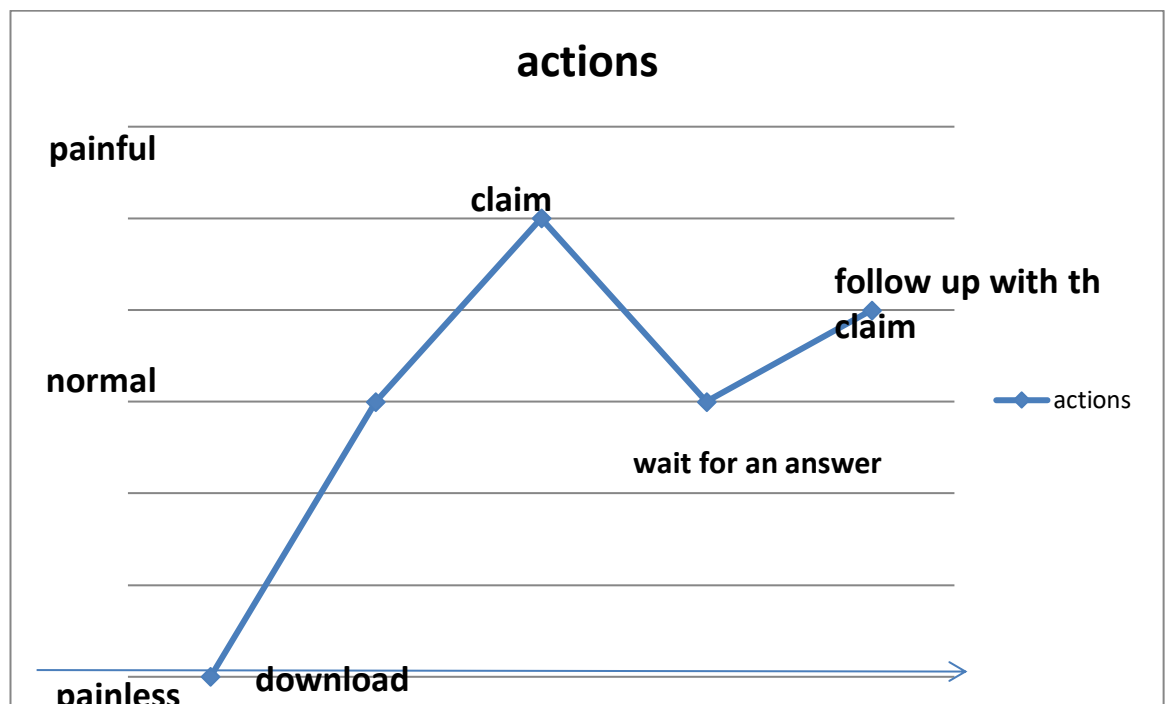
2.1.7. Journey map presentation:

To the developed personas: kenza and Halima we developed three journey maps:

- 1) The first is action's journey of the user with our application.
- 2) The second is thoughts and feelings journey of the user while taking a certain actions with our application.
- 3) The third is application options and features we propose and i

2.1.7.1. Persona Halima's journey map presentation:

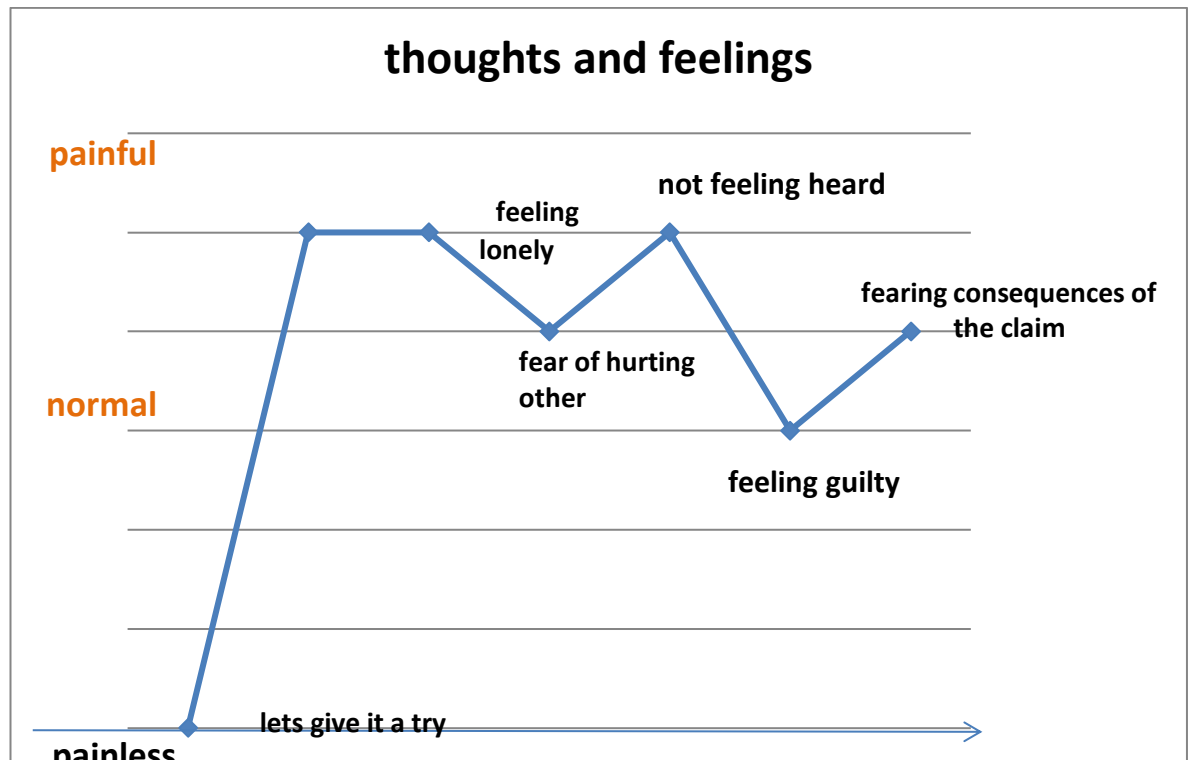
FigureIII- 26: halima journey map



Source: elaborated by us

2.1.7.2. Persona Halima journey map part two presentation

Figure III-27: persona halima journey map presentation part 2



Source: elaborated by us

2.1.7.3. Kenza journey map presentation part one

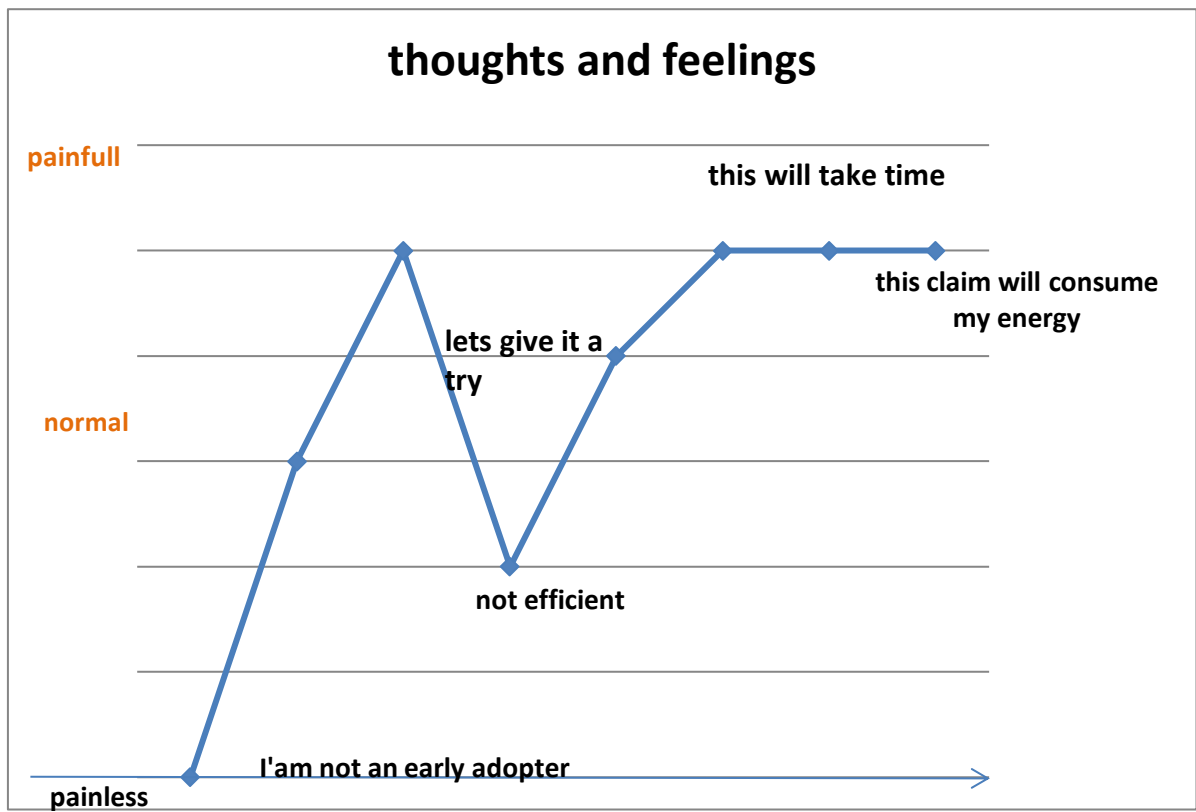
Figure III-28: kenza journey map presentation part one



Source: elaborated by us

2.1.7.4.Kenza journey map presentation part two

Figure III-29: kenza journey map presentation part two



Source: elaborated by us

2.1.8. Understanding the environnement:

2.1.8.1. Understanding the problem part one:

Table III-6: understanding the problem part 1

	Related to the person	Related to the person receiving the claim
Obstacles Before Claiming	<ul style="list-style-type: none"> ○ we don't have the culture of complaints ○ related to a personality trait ○ •I do not have the time ○ we don't have time and we don't want to appear ○ we want to remain discreet ○ The presence of people ○ Character of the person ○ Fear of society ○ ethics ○ protest in front of people ○ I always take into consideration the other person and their situation ○ I am sensitive ○ Advice is always better than a complaint ○ There are little worries that we can ignore ○ I need time to adopt new technologies I am very hesitant. ○ I am not fast and I do not easily and easily adopt new technologies ○ claiming alone ○ Laziness ○ We got used to being silent ○ No one will do it for me ○ I cannot claim out loud ○ they will say that I want to make the buzz 	<ul style="list-style-type: none"> ● they don't have the culture of complaint ● Family or neighborhood relationship ● if they exercise pressure on me ● they do not answer ● it's communication ● we know the person ● I know they won't answer me
Obstacles After claiming	<ul style="list-style-type: none"> ● being guilt ● appear weird ● being judged. ● The fear of being judged ● We feel the shame in reality ● I don't have time to follow up the claim 	<ul style="list-style-type: none"> ○ Everyone tells you it's not my responsibility ○ they will not answer me ○ no one will hear us ○ my claim might make them loose customers ○ they don't really listen to me ○ They will forget you ○ They just pretend to hear u

Source: elaborated by us

2.1.8.2. Understanding the problem part two :

Table III-7: understanding the problem part 2

	Related to the process
Obstacles before claiming	<ul style="list-style-type: none"> • Loss of energy • I will get into troubles • the process is tiring • a waste of time and energy • Administration and coming and going • A nerve wracking procedure • the fact of getting up, moving towards this association, and telling them about the claim • The slow procedure • Complexity
Obstacles after claiming	<ul style="list-style-type: none"> ❖ Conflicts ❖ the problem will certainly grow ❖ nothing will ever change ❖ It will take time

Source: elaborated by us

2.1.8.3. Understanding the problem part three

Table III-8: Understanding the problem part three

	Motivation		
	Related to the person claiming	Related to the person receiving the claim	Related to the claim procedure
Before	<ul style="list-style-type: none"> ○ when I get nervous i talk ○ It may be that friends pushes us to go and claim ○ when I have all the right ○ when I feel free to talk ○ when the product is harmful for my health 	<ul style="list-style-type: none"> ○ when the same problem repeats over and over ○ products offered for sale that disrespect the values of our society ○ when the person I'm claiming against is a calm person and accepts criticism 	<ul style="list-style-type: none"> ○ I claim when I see a lot of people claiming about it too ○ when the claim procedure is easy. ○ Anonymity ○ when claiming is fun like on social media ○ when the apoce

claiming	<ul style="list-style-type: none"> ○ the product represents a danger ○ when the product affects my health ○ something serious ○ when I really feel like a victim ○ I have to be honest and I am able to convince <p>When I feel comfortable Negative criticism always have weight when I feel safe. Counseling doesn't work for everyone</p>		association is certified by the state
After claiming	<ul style="list-style-type: none"> ○ when I'm sure I can win the case 	<ul style="list-style-type: none"> ○ people will avoid this service. ○ improve their products or service ○ raise awareness and influence others ○ Improve the service ○ protect people with us ○ educate people ○ improve the product 	<ul style="list-style-type: none"> ○ when my claim will be seen by hundreds of people ○ when the claim spreads immediately

Source: elaborated by us

2.1.9. Defining the problem:

2.1.9.1. The main problems

- a. Not feeling heard
- b. Fear of hurting others
- c. Fearing the other person
- d. a slow claim procedure
- e. fear of being guilty
- f. fear of being the only one who claims
- g. fearing the consequences of the claim

2.1.9.2. The main Motivation

- ❖ Make people aware of the problem.

2.1.10. Understanding the problems:

2.1.10.1. Not feeling heard:

Table III-9: understanding the problem 1

	problem	Non-problem
Who	<p>Who has the problem:</p> <p>The persons who have already tried to claim and the concerned organization did not respond.</p> <p>the persons who have heard that in Algeria claims are not taken in consideration.</p>	<p>Who has not the problem :</p> <p>The persons who had a good experience with claiming and their claims were heard.</p>
where	<p>Where does the problem occur ?</p> <p>In the mind of the client who is hesitating to claim.</p>	<p>Where doesn't occur the problem ?</p> <p>It doesn't occur in the mind of the person who is determined to claim.</p>
When	<p>WHEN does the problem occur?</p> <p>Thinking that they won't hear you occurs when the person hesitate to claim.</p>	<p>When does the problem not occur?</p> <p>It doesn't occur when people already see results, and see responses of their claims.</p>
What	<p>What is the problem?</p> <p>Thinking at the moment of claiming that they won't hear you and decide to do not claim.</p>	<p>What is not a problem?</p> <p>Thinking at the moment of claiming that they won't hear you and claim anyways.</p>
How	<p>Does the problem emerge?</p> <p>The problem emerges in form of passiveness of the client.</p>	<p>How is it usually going?</p> <p>The client talks about his rights and claims and believes that his voice will</p>

		be heard.
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Source: elaborated by us

2.1.10.2. Fear of hurting the other person:

	problem	Non-problem
Who	Who has the problem : Sensitive people, who think of others and take other's situation in consideration before claiming.	Who has not the problem : People who think that law should be respected no matter what consequence will be.
where	Where does the problem occur ? It occurs in the mind of sensitive people	Where doesn't occur the problem ? It doesn't occur in mind of law people
When	WHEN does the problem occur ? It occurs when the person wants to claim but fears the consequences on the person or when he knows the person Or when he fears society judgment.	When does the problem not occur ? It doesn't occur when the person knows the consequences of his claim or he doesn't know the person Or he believes that law should be respected no matter how.
What	What is the problem ? The problem is when people fear to hurt the other person so decide to not to talk at all.	What is not a problem It is not a problem when a person asks about the consequences and decides to claim.
How	Does the problem emerge : Passiveness of the person	How is it usually going The person claims

Source: elaborated by us.

Table III-10: understanding the problem 2

2.1.10.3. Fearing the other person

Table III-11: understanding the problem 3

	problem	Non-problem
Who	Who has the problem : A person with a weak character, ignoring the law Or Unaware that the association maintains anonymity.	Who has not the problem : A person with a strong character or a person who knows his right Or a person who knows that the association apoce maintains anonymity.
where	Where does the plm occur ? At simple shops when dealing with persons	Where doesn't occur the plm ? It doesn't occur with companies
When	WHEN does the problem occur ? It occurs when the other person seems to more powerful than the person who wants to claim. Or seems dangerous and can threaten him.	When does the problem not occur? When the person claiming knows that organization Apoce doesn't diffuse his information.
What	What is the problem ? Fearing the other person and deciding to not to claim.	What is not a problem Fearing the other person but claiming anyways .
How	Does the problem emerge : Not claiming and remaining silent	How is it usually going People don't fear the concerned person because they know they can claim with the protection of APOCE

Source: developed by us

2.1.10.4. a slow claim procedure

Table III-12: Understanding the problem 4

	problem	Non-problem
Who	Who has the plm : Companies and apoce organization.	Who has not the plm : Companies who respond quickly
where	Where does the plm occur ?	Where doesn't occur the plm ?
When	WHEN does the prolem occur ? It occurs when the person claiming is in a hurry or when he doesn't know how much time he needs to wait.	When does the problem not occur? When the person claiming is not in a hurry and have all his time and trusts the organization Apoce that it will respond.
What	What is the problem ? It is a problem when the person wants a quick answer; and they take time to answer so he quits the procedure.	What is not a problem? It is not the problem when the person decides to wait even if the procedure is not rapid.
How	Does the problem emerge : The person claims then doesn't follow his claim because its not worth the wait nor the efforts Or when the person doesn't know how much time will it take so he quits.	How is it usually going The person receives a quick answer ; or knows how much time it will take from the beginning

Source: developed by us

2.1.10.5. Being guilty

Table III-13: Understanding the problem 5

	problem	Non-problem
Who	Who has the plm : People who ignore their rights.	Who has not the plm : People who know their rights
where	Where does the plm occur ? At public places as well as behind the screen.	Where doesn't occur the plm ? at public places as well as alone and behind the screen
When	WHEN does the prolem occur ? When the person doubts his rights and feels that he is not sure to have the complete right.	When does the problem not occur ? When the person is sure that he has the right or try to ask whether he has the right or not then claim.
What	What is the problem ? The problem is when the person doubts his right to claim and decide not to claim	What is not a problem It is not a problem when a person doubts his right then decides to claim anyways.
How	Does the problem emerge : Passiveness of the client.	How is it usually going The person doubts his right, try to understand and do a research then claim

Source: developed by us

2.1.10.6. Being the only one who claims

Table III-14: understanding the problem 6

	problem	Non-problem
Who	<p>Who has the problem :</p> <p>Person who fears the consequences and fear the results of their claims. And need people to assert that they have the right.</p> <p>Person who fear problem and prefer to go with the flaw , to minimize the cost of his claim.</p>	<p>Who has not the problem :</p> <p>People who believe in law and assume their decisions and they usually take the initiative to talk even if nobody else is claiming.</p>
where	<p>Where does the problem occur ?</p> <p>It occurs at public places as well as where alone</p>	<p>Where doesn't occur the problem ?</p> <p>It doesn't occur where there's already people claiming</p>
When	<p>WHEN does the problem occur ?</p> <p>When the person wants to claim then hesitate because he is the only one who wants to claim.</p>	<p>When does the problem not occur?</p> <p>When the person is completely convinced that he has the right to claim.</p>
What	<p>What is the problem ?</p> <p>The problem is that people fear claiming alone so they end up not claiming at all</p>	<p>What is not a problem</p> <p>It s not a problem when a person fears to claim alone but claims anyways.</p>
How	<p>Does the problem emerge :</p> <p>Passiveness of the person</p> <p>Or claiming in group</p> <p>Or claim after companies who already have a lot claims</p>	<p>How is it usually going :</p> <p>When a problem happens the person claims directly because he believes that his claim alone can be sufficient.</p>

Source: developed by us

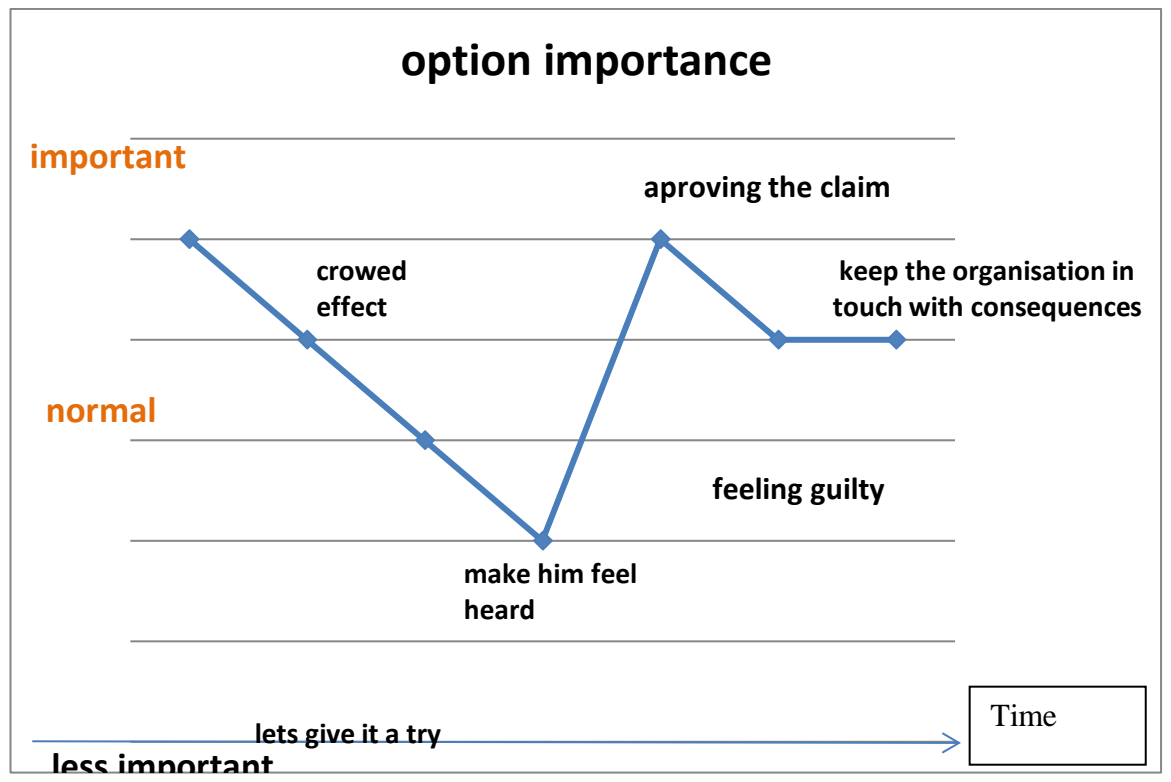
2.1.10.7. Fear the consequences of the claim :

Table III-15: understanding the problem 7

	problem	Non-problem
Who	<p>Who has the problem :</p> <p>People who predict that the person who received the claim will behave in inappropriate way after the claim and the organization will not keep up with the consequences.</p>	<p>Who has not the plm :</p> <p>People who know that the association will follow up with their cases.</p>
where	<p>Where does the plm occur ?</p> <p>In the mind of people who doesn't know that apoce will keep up with the consequences of their claim.</p>	<p>Where doesn't occur the plm ?</p> <p>In the mind of people who will keep up the organization with the consequences and know that they will be taking them into consideration.</p>
When	<p>WHEN does the prolem occur ?</p> <p>Before and after claiming</p>	<p>When does the problem not occur</p> <p>When people know since the beginning that they can keep up the organization with consequences.</p>
What	<p>What is the problem ?</p> <p>The problem is that fearing consequence keep people from claiming</p>	<p>What is not a problem</p> <p>When people ignore the consequences and fear them but Decides to claim anyways.</p>
How	<p>Does the problem emerge :</p> <p>Passiveness of the person and not claiming</p>	<p>How is it usually going:</p> <p>The person knows about the consequences or ask about them than decide to claim</p> <p>Second case where the person doesn't want to know about the consequences but want to claim anyways</p>

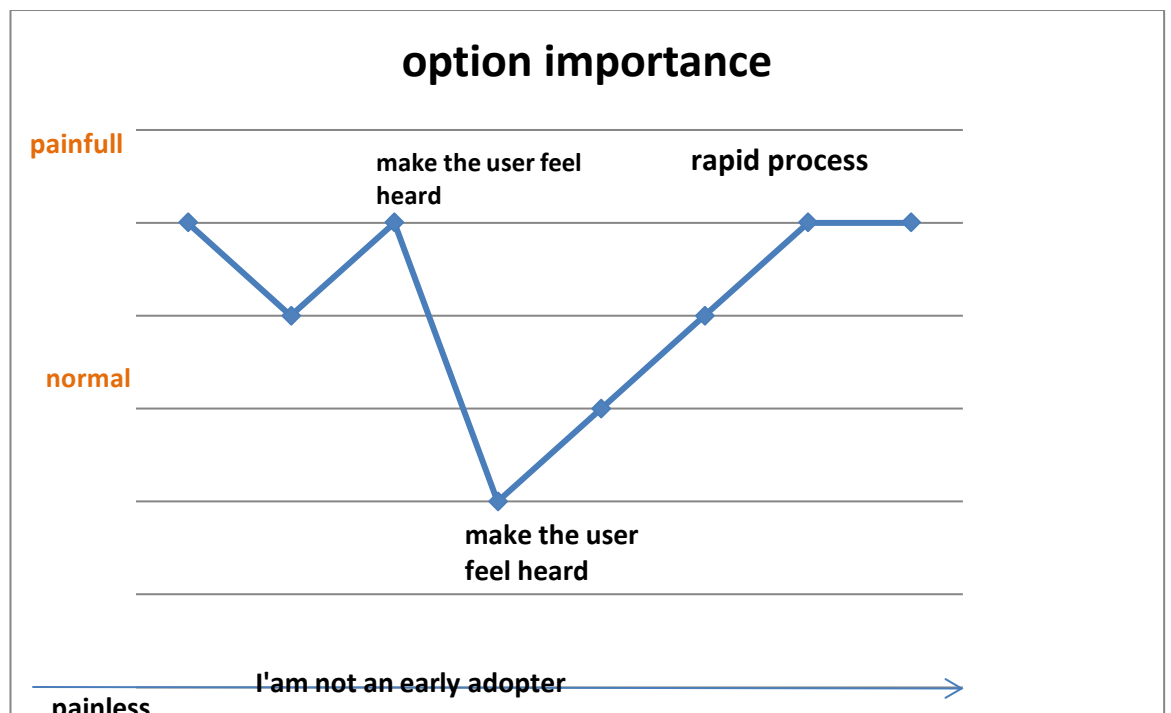
Source: developed by us

Figure III-30: Application features importance for the persona : kenza



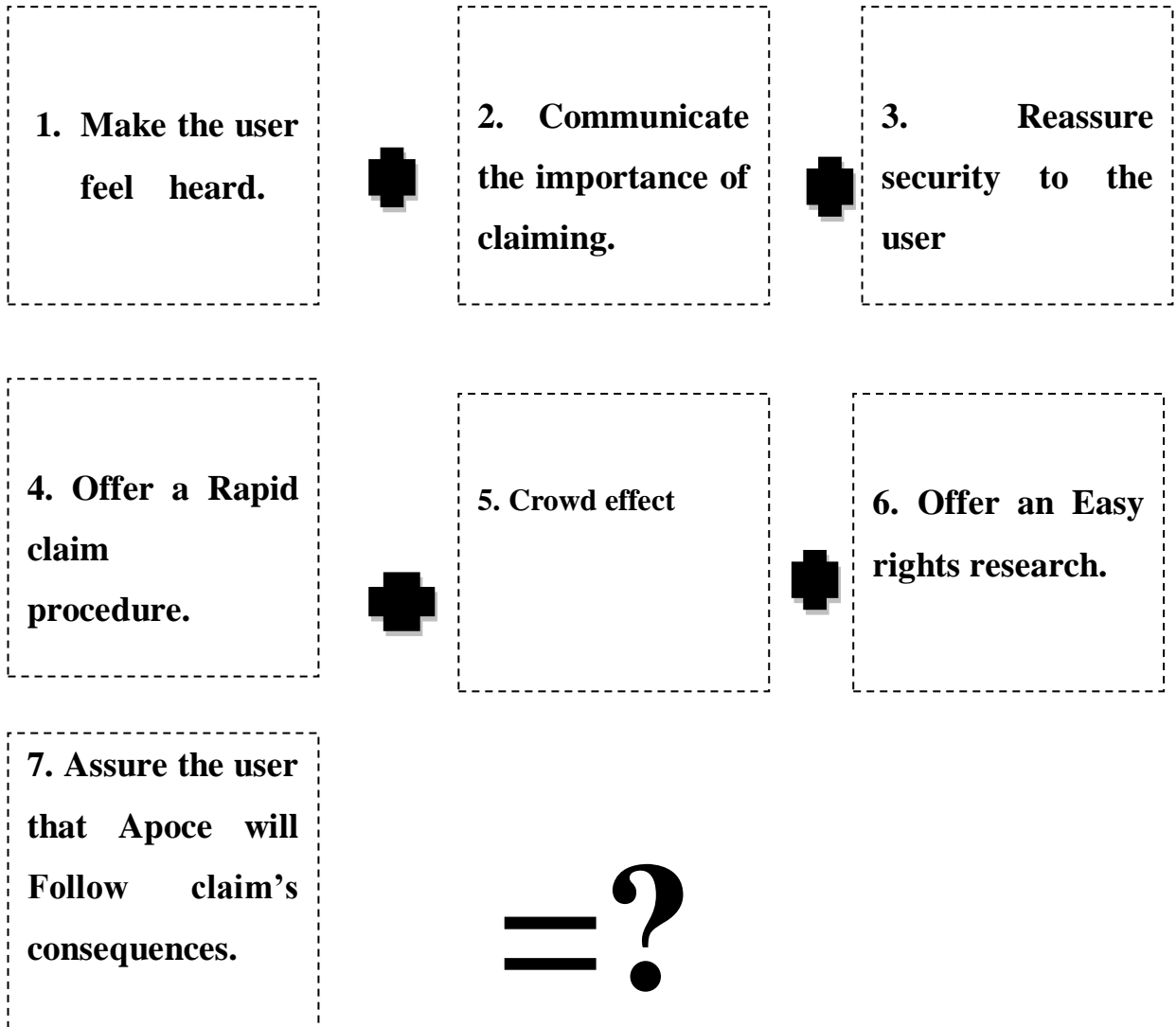
Source: developed by us

Figure III-31: Application features importance for the personna Halima:



Source: developed by us

2.1.11. Challenges to reveal :



2.1.11.1. Explaining each challenge and the approach used to solve the problem:

**1. Make the
user feel
heard.**

This challenge is a response to the first problem discussed previously that what keeps people from claiming is that they don't feel heard before the claim during the claim and after.

There for we need to design the application in a way that would make the user feel heard; our approach is :

- 1) add comforting messages in the right areas.
- 2) Add an option that would tell the person about the number of claims received and treated in one week or since the first use of the application.

**2. Communicate
the importance of
claiming.**

This second challenge is about people who hesitate to claim because they fear to hurt others, we need to make them aware of the importance of their claim.

Our approach to solve this problem is :

Adding an option that would indicate shops or buyers to trust. on a map and with geolocalisation, for example if someone is in a new or unfamiliar place and wants to buy a meat as an example; he would open the application indicate his localization then see which shops have already been controlled. And the apoce organization guaranties that they have a good product , and this could be after a claim and apoce have taken the right action with the concerned person or the concerned shop. And now she can guarantee to the application's

users the good quality of products, And this could never have happened if that ‘X ‘person didn’t claim.

Shortly this option is for goal to highlight the good side of claiming.

**3. Reassure security
to the user.**

This challenge is for the problem of fearing others ; when the person seem to fear the person they want to claim from , they hesitate so we aim make the user feel secure when claiming , **our approach to solve this problem:**

- 1) Communicate the fact about the association that she doesn’t show user identity to the person or the part that they are claiming from.
- 2) We add messages before claim area which comfort the user that their identity will remain secret.

**4. Offer a Rapid
claim procedure.**

This challenge is response to the problem that people refuse to claim because they think that the process will take so much time ; our approach to solve this problem is as next :

- 1) The problem of the user is not that he is not capable to wait , but because he doesn’t know how much time he got to wait make him think that the process will take time and loose interest in claiming , so our proposition it to Tell the user how much time , he got to wait from the beginning by showing him how much time does the organization often take to respond.

- 2) Also we thought of sending message right after sending the claim , telling the user that he would receive notification once his case starts being treated.

5. Crowd effect

As a respond to the problem , that people often fear being the only one to claim ; we thought of causing a crowed effect which makes the user feels less lonely and gets encouraged by the number of people claiming with him , our approach to solve this problem is as next :

- 1) Offering the possibility to user to claim either alone or with a group of people , that they might experience the problem with him as well.
- 2) Option that shows how many people are claiming at the same hour the user is claiming in hope to comfort him .

6. Offer an Easy rights research.

As a response to the fact that people fear being guilty at the end , this problem that we have explained of people's lack of knowledge of their rights make them fear being guilty ; our approach to solve this problem is :

- 1) An option that facilitate right's research for the user , by organizing them as much as possible in a way that helps the user knows his right easily.

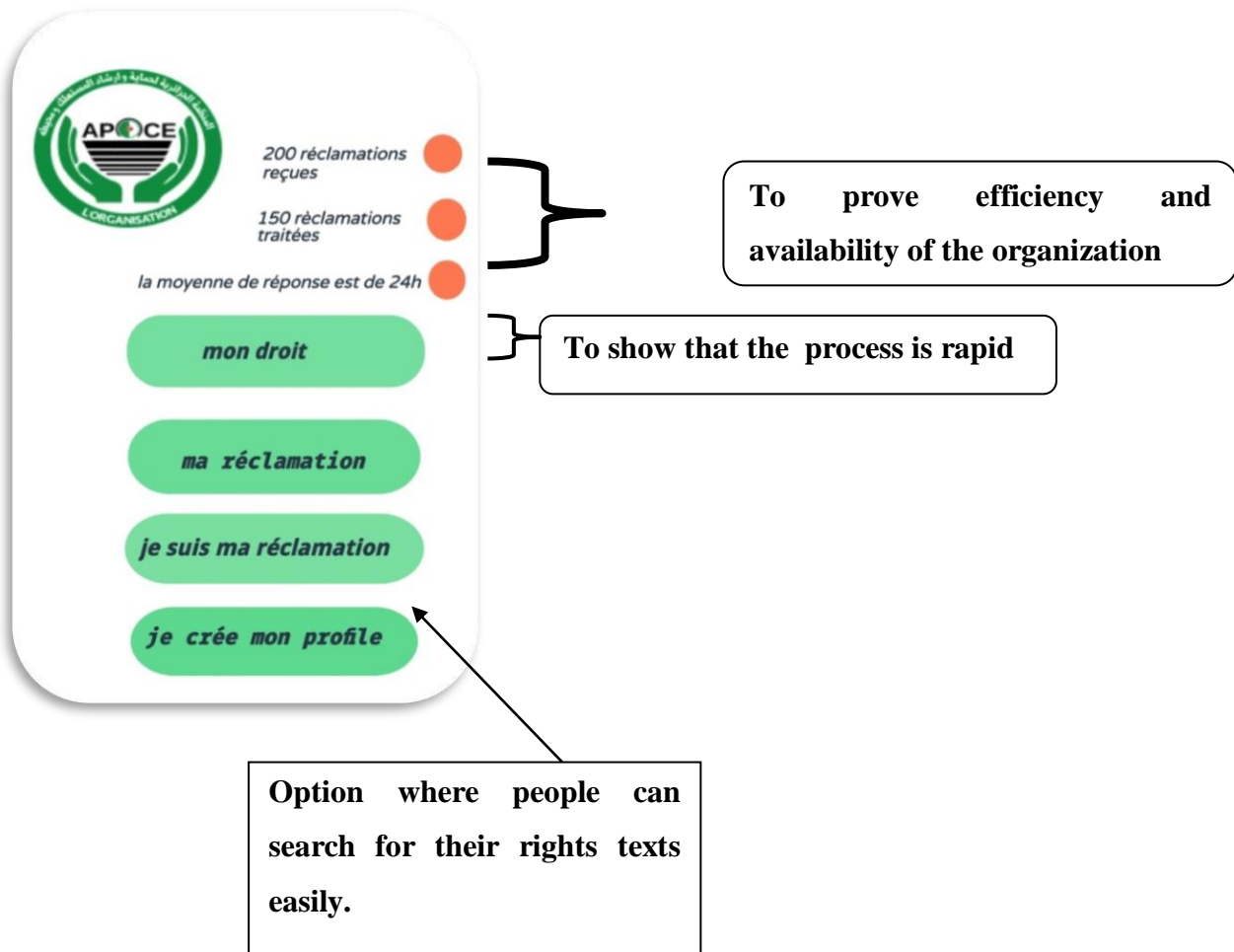
**7 Assure the user
that Apoce will
Follow claim's
consequences.**

As a response to the fact that people fear the bad consequences of their claim , our approach to solve this problem is as next:

- 1) Offer the possibility to the user to follow his claim.
- 2) Give the possibility to the user to keep apoce in touch with any consequences.

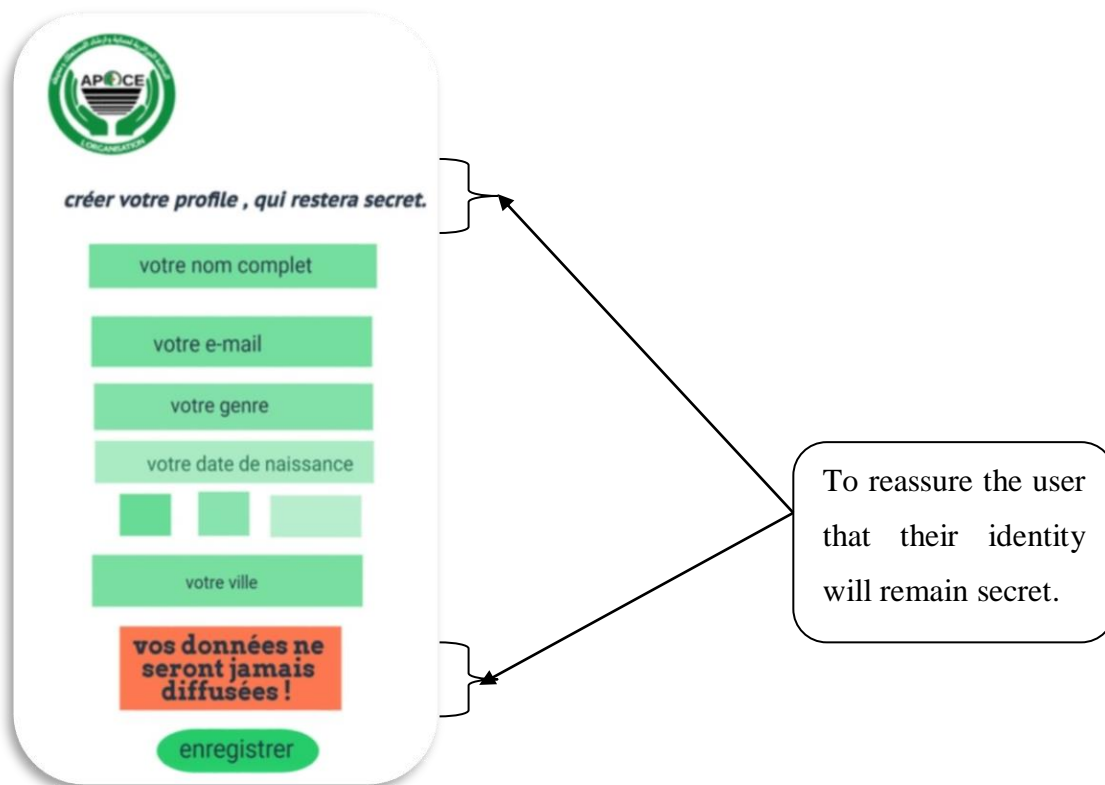
2.1.12. Prototype:

Figure III-32: application prototype 1



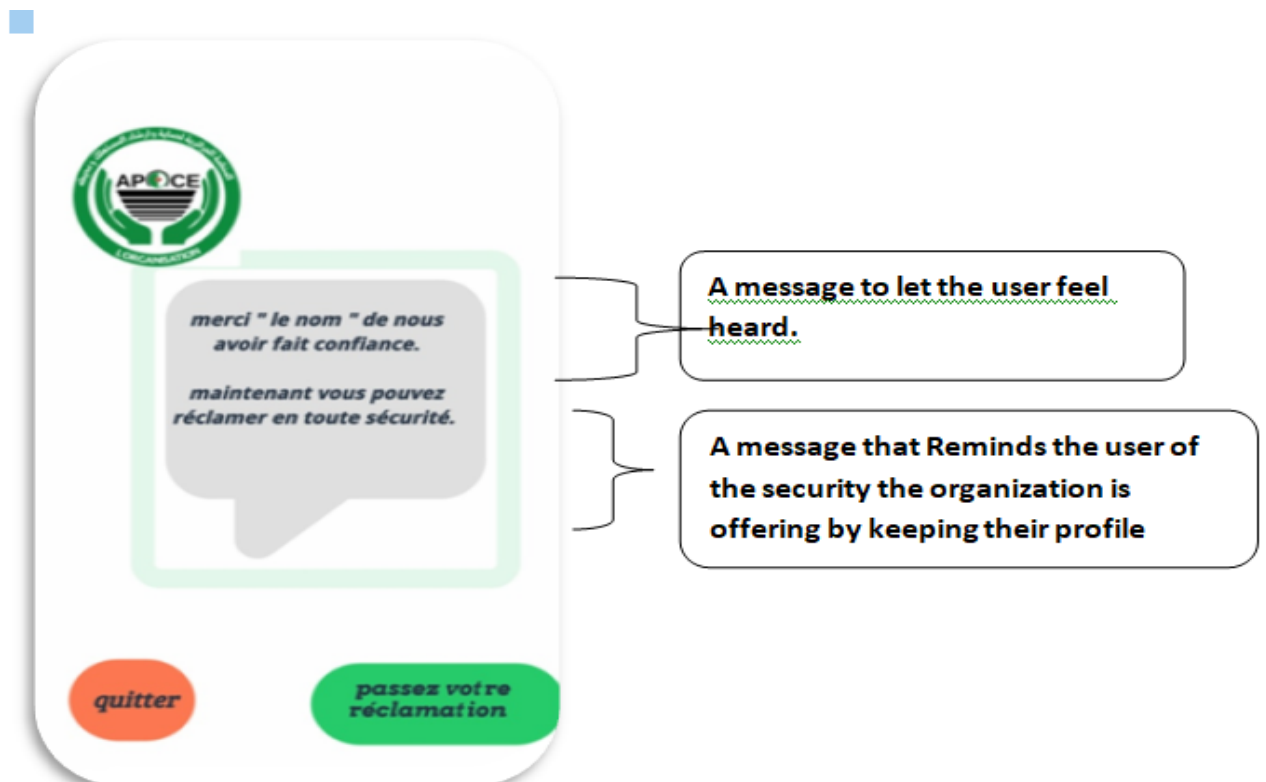
Source: elaborated by us.

Figure III-33: prototype 2



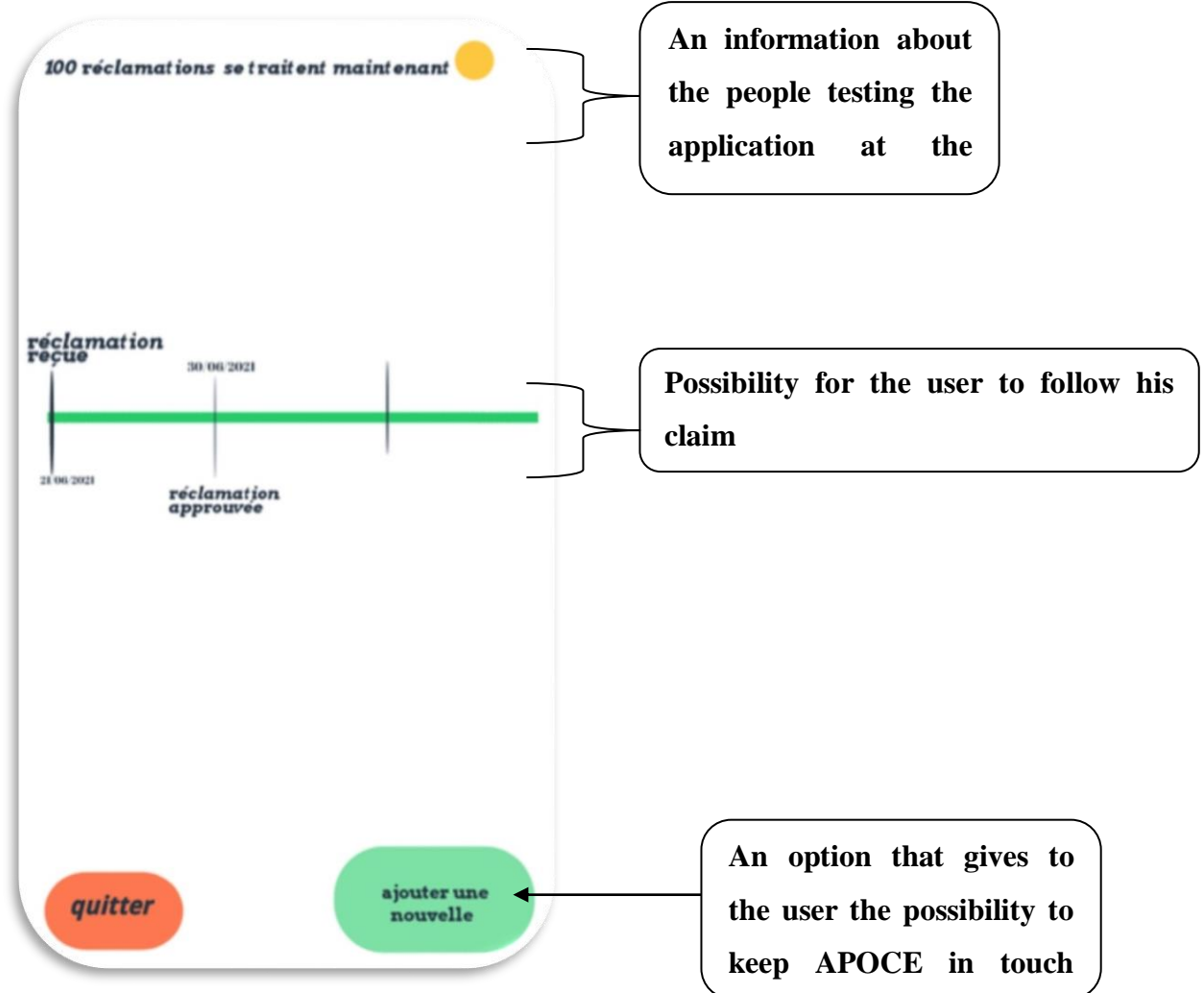
Source: elaborated by us.

Figure III-34: prototype 3



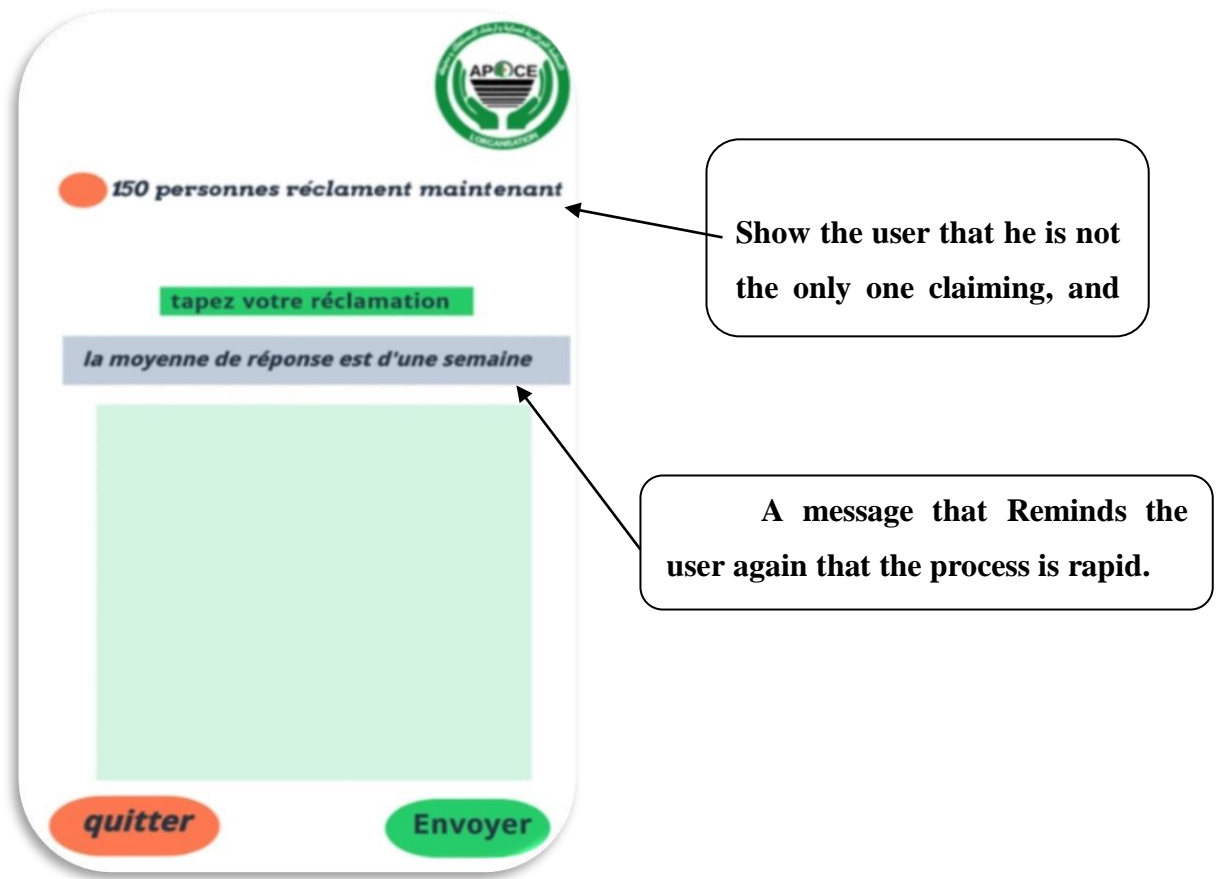
Source: elaborated by us

Figure III-35: Prototype 4



Source: elaborated by us.

Figure III-36 : prototype 5



Source: elaborated by us

This option helps the user to find in this nearby the shops that had been already controlled by Apoce, this implies the guarantee of high quality products.

Figure III-37: prototype 6



Source: elaborated by us

2.1.13. Testing:

We gave the prototypes application to Two persons chosen from the samples we have previously interviewed, to use it, and we followed their journey with a shadowing technique where we kept silent and tried to notice their behavior.

1. Users found that the added options were good and had significant importance if they are claiming for real; they said that they understood better the role of APOCE , that didn't know before and they mentioned the fact that the identity will remain secret.
2. For the option that shows number of claims treated on this application; user found it significant and that it would help them trust better the application.
3. For the message that shows how much time the company does take to respond; users commented that it is comforting.
4. For the option of receiving notification; user said it would help them conserve their time by avoiding checking the application every time.
5. For the option that shows how many users are claiming, users said that it is comforting and they feel less lonely.
6. For the option that helps know search for their rights easily; they said that they have already dreamed of it.
7. They said that the receiving messages are comforting too especially when rewriting the claim, and mentioning their names.
8. Users said that knowing from the beginning how much they got to wait is so comforting.

Conclusion:

Through our research; we successfully could gain useful insight into Algerian customer's behavior and attitude in context of claim. Therefore, we could get out with two types of attitude the first we presented by the persona Kenza and the second one Halima. As a conclusion we can say that social shame, lack of security are the main obstacles that keep the person from claiming; in addition to the neglected customer services in the most of Algerian companies which have contributed in implementing the idea that ‘’ in Algeria, they would not hear you ‘’ and that's exactly what makes it difficult for APOCE to push people to talk about their rights. Because the problem is deeper than it seems.

But the application mobile with the proposed features, would certainly have an impact in raising awareness and talking to Algerians fears and comforting them. This project still needs to be worked on to discover more issues and propose the suitable solutions for them.

General conclusion:

Given the theoretical development we have discussed, it appears that the burst of new technologies have brought a tremendous shift in client's lifestyles, behaviors and so attitude; and if we talk more particularly about mobile technology the client in this context which is called a mobile user, has his own characteristics: he is contextual, mobile, available and most importantly distracted and disturbed.

The need therefore to achieve a deep understanding of mobile users is indisputable for the designers, to offer the suitable application that would capture user's attention and help them achieve their goals in a limited amount of time before they disable their product; mobile application.

The options and the features we added on APOCE application; are fruits of a long empathy process; where we have tried to understand claim psychology, for the purpose of highlighting the main problems and obstacles that would keep a person from claiming.

And by creating two different Personas that represent the most our Apoce users different segments.

This helped us to empathies with the target more efficiently and more deeply, there after; we mapped a user journey for each persona that spots light on their actions thoughts and feelings.

More over we mapped proposed features importance, for each persona which helped us determine obviousness of each feature and its position in the user journey timeline. Feedbacks received from the application testers have proved the efficiency of using empathy in developing innovative and useful solutions.

And also the use of design thinking technique which is based on empathy, prototypes and tests in improving a user experience with the minimum cost.

To get some answers, and in order to so, three secondary questions were formulated:

- 1) Does empathy-based marketing help understanding client's needs?
- 2) How would empathy based marketing contribute at improving a user experience?
- 3) Does empathy-based marketing help to find solutions and solve problems?

At the end of this work, therefore, we are to express an opinion on the said hypothesis

- 1) **“ Empathy based marketing offers great tools to understand client’s needs”**.
 - ✓ **Confirmed hypotheses** ; based on our research, empathy-based marketing helps to get useful insight into client’s behavior , attitude , environment , feelings thoughts , thus it helps understanding client’s needs by understanding the main cause that lies behind.
- 2) **We can improve client’s experience with empathy, by understanding the depth of client’s problems.**
 - ✓ **Confirmed hypotheses**; empathy based marketing aims to understand the depth of problems; by tackling them at their roots. It is a process of root cause analysis; it is based on looking at the complex systems around those problems to finally determine solutions to them, therefore, contribute at improving the user experience.
- 3) **Empathy-based marketing can be used in a problem solving process**
 - ✓ **Confirmed hypotheses**; empathy based marketing is a part of a problem solving method, called design thinking. and it is used in the early phase of understanding and observing the problem . empathy based marketing offers great tool to find innovative solution by spending the most of the time familiarizing with the problem and empathizing with those who face the problem , as proved in our research empathy based marketing helped us develop useful and innovative options to add on the application mobile .

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