

A Work Project, presented as part of the requirements for the Award of a Masters Degree in Management from the NOVA – School of Business and Economics.

**How to design and develop There App: a mobile app focused on live video streaming, promoting new social interactions.**

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**Abstract**

This work project aims to demonstrate how to design and develop an innovative concept of video streaming app. The project combines technology push and market pull theories into developing a product that is more suitable for the customer needs, with the particularity that there is no other way of seeing any place in the world, live and on-demand.

An analysis on the bigger influencers in terms of design-thinking and new product development, as Tim Brown or Paul Trott, lead to a better understanding on how There App should evolve, keeping in mind the customer desires and technical features.

Keywords: There App, Design-Thinking, New Product Development, Start-Up.

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## 1 Scope, Objectives and Methodology

The present research work is part of a three-piece work project in partnership with There App<sup>1</sup>, a live-streaming mobile platform, in the Field Lab of Entrepreneurial Innovative Ventures. The main goal of the study will be to understand how to design and develop an innovative app, by gathering information from all the internal and external sources in order to create a product that is pleasant for the user and delivers its promise.

On March 2014, four Portuguese entrepreneurs decided to develop an app based on an innovative concept, to be able to request a live video from another user in the platform. That was the beginning of a There App's dream.

The overarching research question of this work will be: How to design and develop an innovative mobile app based on exchanging on-demand live video streaming between two unknown users?

Consequently, the work project will be divided in three sub-research questions: 1) Is There App technically feasible? 2) Business or Consumers – which groups should There App address to? and 3) How to design and develop an app that addresses to the chosen group of customers?

The research strategy for this project is based both on quantitative and qualitative data. An analysis on the bigger influencers in terms of design-thinking and new product development lead to a better understanding on how There App should evolve, keeping in mind the customer desires and technical features.

Evaluating the availability of technical features required for There App and how the users perceive them, as well as assessing the tendencies about the current state of mobile Internet usage and speed can achieve the answer to the first sub research question.

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<sup>1</sup> Besides my part of the work in Design-Thinking and New Product Development, Alexandre Prata (Nova Sbe MSc Management student #1418) analyses the general business model of There App, and Eduardo Quinteiro Lopes (Nova Sbe MSc Management student #1614) examines the company's macroeconomic context, industry structure and market attractiveness.

The second sub research question is answered based on a comparison of other mobile apps' success cases and to which types of users they initially built their platform to, and evaluating the core competences of our team.

Finally, the methodology used to answer the third sub-research question starts by the following sequence: Design problem citation, prototyping early sketches, and evaluating customer statements. After the beta version of There App is released, a questionnaire is conducted, with the number one goal of discovering in which ways would the consumers preferably use There App. Other important findings aimed with the survey are to discover information such user behaviors in terms of mobile app usage, the way users share content online, and the predisposition the users have to pay for an app or watch an advert instead. Afterwards, also relevant interviews are evaluated and commented. In the end the final mockups are presented, along with a VRIO analysis and a House of Quality examination.

## **2 Literature review**

“One of the most effective ways in which design thinking can have impact is if it is taken out of the hands of designers and put in the hands of everyone” – Tim Brown, President of IDEO.

In order to better understand design thinking and new product development, one should first define innovation. Innovation as a concept as always suffered some variants depending on the author's interests. For example, on one hand, according to Abernathy & Utterback (1978), innovation is anything that is new to a business. On the other hand, Henry and Walker (1991) state that it is not enough to conceptualize and invent a product, but the same product should be exploited, in order for it to be considered innovation.

According to Myers and Marquis (1969), however “[Innovation] is not just the conception of a new idea, nor the invention of a new device, nor the development of a new market. The process is all these things acting in an integrated fashion”. Myers and

Marquis' view was far ahead of their time, since their perception of innovation is the base for the modern design thinking.

We are in the era of Big Data, which guide the human mind into a quantitative approach to problem solving. However, a human perspective is essential to decodify that same data. The model that tries to disrupt this analytic approach, by including intuition and creativity in the decision-making process, is called Design Thinking

Tim Brown defends in his book a “human-centered approach to problem solving”, in which he believes that, when somebody is developing a new product, he should focus first in the needs and experiences of real people as a way to get the insights of the real problem. In 2008, Tim Brown described design thinking as “ a discipline that uses the designer’s sensibility and methods to match peoples’ needs with what is technological feasible and what viable business strategy can convert customer value and market opportunity.” Design thinking is, in this view, the entire process of building a product or service.

In periods of change, the world needs new solutions, simply because our existing solutions are being obsoleted. Tom Kelley has his own formula for success.

To support both the design thinking methodologies and the study that is going to be conducted in this work project, we are going to take a look at Tom Kelley<sup>2</sup> and his book, “The Art of Innovation”, in which he provides the simple 5-steps development process used in IDEO. According to Tom, one must understand the clients; the market; the technology; and perceive the changes through observation of real people in real situations, visualization of possible solutions and users; and prototyping. In the end there is the implementation of the concept.

This integrated process is what starting a start-up is all about.

Ideally, for an established company, the focus is on creating several design concepts for the future of the app by starting with a design problem from the scratch and testing the several concepts in the market. However, There App is a start-up, and as any other start-

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<sup>2</sup>General Manager at IDEO

up, it faces limitations that influence the new product development, such as monetary or time constraints.

According to Paul Trott's book, there are two models of linear invention: technology push or market pull. The first is the old school model of building a product, in which the Marketing department only acts when it has to push the product "down the throat" of the consumers. Trott defends that the technique used should be a mix of market pull, that privileges marketing as the beginning of the process of innovation, and technology push. By combining the latest advances in science and technology (sometimes not known by the average user) and the needs of society and the market place, the result is most of the times a product that people need and will use, that uses the latest technology available to fulfill its goal.

And that is an example of what happened with There App developing, a true innovation based on true customer needs.

### **3 Initial Concept**

The idea for There App first appeared on March 5<sup>th</sup> 2014. The founder members, of the app were three NOVA SBE graduate students - Alexandre Prata, Eduardo Quinteiro and Miguel Farrancho<sup>3</sup>, and a designer - Helder Luis.

At that time, and in the following 2 months, the team was on temporary secrecy mode and could not disclosure the innovative streaming concept to the world, at least until the team was sure that there was an opportunity and started building the first prototype. Then, on May 2<sup>nd</sup>, There App was one of the 29 start-ups that got selected for The Lisbon Challenge<sup>4</sup>, a three months accelerator based in Lisbon that would give the team the right inputs in terms of mentoring to create a unique and desirable product.

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<sup>3</sup> During the time at NOVA SBE, the three entrepreneurs combined have lived at least 4 months in Brazil, Sweden, China, Poland, South Korea, Italy and Germany, which allowed them to interact with different cultures and different types of consumers around the world.

<sup>4</sup> Lisbon Challenge is an ambitious 3-month acceleration program aimed at eager international startups in information and communication technologies sectors and in prototype or product phase, looking for a truly innovative and empowering experience. It aims to offer consistent methods and resources for startups acceleration, only possible due

From the beginning, Helder Luis, an experienced designer<sup>5</sup>, was part of the founders' team. He has over 20 years of experience in web and mobile development, as well as leading teams in these environments. He is deeply passionate about design and has, throughout his career, founded seven companies in this area.

Due to the initial secrecy around the idea, fearing that a new entrant would copy the concept and overtake the team's development, the designer's customer oriented contributions were of huge importance to build the initial set of features, according to the team's vision. Helder was crucial at the start, as a validator, since he not only knew how to initially arrange an app to make it pleasant for the user<sup>6</sup>, but also if the initial sketches, the concept or the future visions were technically feasible.

#### **4 Is There App Technically Feasible?**

##### 4.1 Technology behind There App

The team wanted to create something easy to use, despite all the technological complexity. The app presents itself to the user through a simple and direct user interface, thus granting a human quality to the app.

The application depends heavily on video streaming and real time low bandwidth interactions, as well as push notifications and geolocation techniques<sup>7</sup>.

In the backstage, the technology needed to make There App succeed, namely Web RTC<sup>8</sup>, only recently became available through more powerful devices and robust

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to Beta-i's acquired know-how and benchmark with top global startup acceleration programs. The program finishes with the international Investors Day and a roadshow to Boston, Silicon Valley and London.

<sup>5</sup> Helder Luis - BSc. Technical drawing and marketing (IPAM). Work experience: Multimedia designer, graphic designer, programmer, web & mobile developer and owner (EthereType, Notype, Lab52, SwipeTwice), Head of Mobile division (Seara.com). To exemplify, Helder built apps for Bayer, Lufthansa, Metro de Lisboa or Delloite, among others. <http://www.helderluis.com/>

<sup>6</sup> The document with preliminary brand guidelines, with information such as logo, font type or the official There App image, is an example of how Helder's knowledge enriched the team when it came to user communication.

<sup>7</sup> In order for There App to run properly, the user must have the GPS tracker turned on, and will be notified of an incoming request by a notification in the smartphone screen.

development tools. For instance, in order for the app to be financially viable<sup>9</sup>, the team had an outsourced partner<sup>10</sup> (OpenTok) included in the app, to assure the streaming broadcasting (using Web RTC) and quality between two or more people.

To embrace the largest number of users, the application was idealized to be released both in IOS and Android. Hence, the development of the app would focus on using native Objective C and Java, respectively.

A practical design example of a way to achieve the simplicity required at the eyes of the user, was to have a 3 click interaction app, meaning that the user only has to tap the screen as low as three times after opening the app to get a live streaming in his smartphone. Likewise, making it simpler, easier, and more affordable for people to do what they historically have been trying to do<sup>11</sup> is a great way to create growth.

#### 4.2 Research Department – Major impactful trends for There App

When searching for trends that may impact the opportunity for There App, the focus should be on tendencies about the current state of mobile Internet usage and speed, across the globe<sup>12</sup>. We wish to find out whether people use their smartphones outside their homes and if the mobile internet they consume is fast enough to support There App's requirements.

According to the findings, there were 2,32B estimated worldwide mobile-broadband subscriptions in 2014.

Regarding the speed of the mobile Internet, the bandwidth required for HD quality streams (3.5G+ connection) is between 1 and 2Mbps. Nowadays, 49 countries

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<sup>8</sup> WebRTC is a free, open project that provides browsers and mobile applications with Real-Time Communications (RTC) capabilities via simple APIs.

<sup>9</sup> A Web RTC developer's wage to develop the internal streaming service costs around \$8000/month, which is unbearable for a start-up.

<sup>10</sup> OpenTok is the leading cloud platform for adding live video, voice & messaging to your websites and mobile apps. It charges as low as \$50/month to its clients.

<sup>11</sup> Throughout history, the means of communication and information gathering evolved from smoke signals with which our ancients used to communicate, to a live HD video that can be requested and shared between users (There App).

<sup>12</sup> A deeper analysis of the industry and market trends will be done in another work project from the same Field Lab.

worldwide average a mobile connection speed higher than 2Mbps, which means that the users that live in those countries are more than technologically capable of running There App in their smartphones.

Concerning the usage types of mobile Internet, on-the-go occasions of use are those of interest for our concept and the ones we will inherently focus the most on.

The graph (Appendix 1) shows the information regarding the typical location of usage of mobile Internet in our five countries of focus. The main conclusions we can take from the graph is that Smartphone users are actively using mobile Internet on their phones anytime they are away from home.

The collection of this data only helped potentiate the opportunity, given the purpose of There App.

## **5 Business or Consumers – which groups should There App address to?**

There are two possible types of consumers for There App – the user and the event manager. Although they both seem attractive initially, since There App is meant to privilege the exchange of content between two users, there is a big difference between them: the users don't need event managers to have a 100% running app, while otherwise event managers without users are useless. This means that by relying on user-generated content, There App can potentially generate value by only addressing to this group.

If we take a look on both Facebook and Snapchat, two very well known platforms, they have some things in common: they both have billion dollar valuations, and they both started uniquely with consumers and then moved to the monetization technique – advertisement, as well as incorporating corporate users to the platforms. Basically, only after both apps developed an enormous user base they started focus in monetization<sup>13</sup>.

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<sup>13</sup> Only after Snapchat managed to retain 27 Million users, they started thinking of including corporate users and advertisers. <http://www.wsj.com/articles/snapchat-discussing-new-content-service-with-advertisers-and-media-firms-1408486739>

There is another group – advertisers, which we will not consider as real consumers for this work project, since we do not have to adapt the app for the advertisement to be present, we should instead adapt the advertisement into the app. In terms of monetization, the plan is to achieve growth virality and penetrating the market, following the example of the well-successful apps above. There App’s revenue model will thus be based on location-based advertisement. The team believes there is a tradeoff between user experience and the monetization ability with advertisement. Our user growth rate will obviously be higher if we forgo adverts. Still, we are open to implement an advertisement platform, in favor of sustainability.

Our initial target will be of specific groups of people that share similar interests and behavioral patterns, namely university and exchange students<sup>14</sup>. We believe both these focus groups have higher engagement towards mobile apps and social networks and the word-of-mouth effect between them will more likely lead to viral growth and high brand awareness.

In the long run, we expect our user-base to be dispersed in terms of demographics and usage patterns, one that leverages our empowering and versatile platform.

When we reach to that phase of development, we wish to include corporate users in our platform, such as event managers. In the optimal future, business users could even register to have their brand present on the platform with their event logo, photos and description, for example. Users that want to see a live stream of the event would access the business’s profile and ask to get free streaming.

Ultimately, the team defined the goal for There App – to build a platform for the users, that, in the future, would be able incorporate easily the events on the app.

## **6 How to design and develop an app that addresses to the chosen group of customers?**

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<sup>14</sup> Since  $\frac{3}{4}$  of the team has a good knowledge of the University’s environment, culture and behaviors, addressing to this specific group will most likely be more beneficial to the success of There App.

## 6.1 Design Problem

The initial **design problem** was that **there is no centralized way for people to access and share visual information regarding any location on the planet, in real-time and on-demand.**

The design problem is still true today, as the main competitors did not try to imitate the concept nor other (public) start-up is building a similar app based on live streaming on demand. Sup is an example of an app that allow the user to request a live video directly from a friend (pull information), a view that ignores the location of the user as well as diminishes the importance of the content. There App also aims to a larger audience and a larger interaction between users, since the users don't need to be friends to change relevant video content based on their location. A further analysis regarding the uniqueness of There App when compared to its competitors can be found below in the competition section.

Finding the right answer for this design problem, which means designing the right product, will empower the users with quicker and more accurate information, individually or as a group.

## 6.2 Initial Sketches

“ If I asked people what they wanted, they would have said faster horses” – Henry Ford.

Henry Ford's immortal sentence in the early 1900's well describes the importance of the innovator's mind in discovering a solution where no one else did. Confident on that, the team built the initial sketches for There App (APPENDIX 2-4), in order to show the user exactly how his life was just about to get simpler. The initial name of the app, not

for long, was Moments. The app would allow users to request a live-video or picture from other anonymous<sup>15</sup> users represented in a map, just by clicking on them.

The first internal changes to the initial sketches were the name switch to There App (Appendix 5), with the subsequently creation of the logo (Appendix 6) and eliminating picture sharing out of the plan, since the core to create empathy between the users was through video, we focused on that. The moment a user sees the video stream, he immediately projects himself into the experience of seeing what others see, and grasps the environment.

### 6.2.1 Customer Statements

When There App’s project was finally exposed, along with the Facebook and Twitter pages, a website (<http://thereapp.net>) was created. In it a visitor could find a 1-minute video<sup>16</sup> about the concept and a form for anyone to sign up for the upcoming beta version. A question in the form asked the customers how did they imagined to be using there in the future, in which each answer acted as a handy **customer statement** of a specific future user.

Below are the dominant customer statements. Each statement in the left represents what are the most valued characteristics by each user. In the right side there is the interpreted need and the feature of There App that will address to that same necessity.

Table 1 – Customer Statements

Customer Statement	Interpreted Need and Product Features
“I want to be able to visit places I’ve never been to.”	There allow you to choose the place in the world you want to see, as long as other person is there.
“I want to share cool videos with friends	There let you share moments with friends

<sup>15</sup> Personal information of users is not revealed, so as to prevent privacy and tracking issues.

<sup>16</sup> <http://vimeo.com/89244700>

in real-time and be able to watch them later too if I'm offline!"	as they are happening and the videos save automatically so you can see them later on <sup>17</sup> .
"I want to see where it's worth going depending on others' experiences".	There allow you to check all the places you want before going there, and watch a video through the "eyes" of another.
"To get inspiration for travelling"	There let you specifically choose to watch your favorite places.
"I'd like to just fly around the world and explore when I'm bored."	With There you can see what's happening live in the world, anyplace you want.
"To discover some new parts of the world!"	There shows you the most popular videos and let's you see places you couldn't see other way.
"To check bars/restaurants/parks atmosphere!"	With There possibilities are limitless. You can connect to virtually anywhere and still hear what is happening. You get the complete ambiance of the place.
"To be everywhere!"	Actually, There can virtually take you from the sunrise in Peru to the sunset in Thailand in a matter of minutes.
"To decide between two beaches using real-time video info."	Using There App you experience two places in real-time, and decide where to go upon your own conclusions.
"To share travel experiences!"	There allows you to share moments with the ones you want, instantly as they happen.
"To share surf conditions!"	With There you can share a video at the beach to whoever wants to see it.
"To share moments with my loved	There allow you to share moments with

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<sup>17</sup> Customer anticipated future app feature: Timeline

ones!”	your friends in real-time.
“To share moments with my friends and see what other people around the world are doing.”	There let you both share your moments with your friends and request a live stream from any unknown user.
“To search for the nearest beach with proper waves. As a surfer, I would use it daily.”	With There you can check how the nearest beach is, daily.
“I want to see any place in the world without paying for it”	There will be free for the user and available in every possible country.
“As an exchange student, I would use it to get in touch with my country and have real-time access to hotspots in Lisbon.	There will be available worldwide and will have the Lisbon’s main events highlighted.
“For fun and to check new places!”	There will let you be digitally entertained.
“Search for places all over the world and share the most outstanding moments of my day with my friends”	With There you can see any place worldwide, video record the chosen moments and send them to friends.
“I’d like to do both streaming and viewing”	There not only allow you to gather real-time videos but also to share videos with others.
“To check clubs, parties, and connect with friends!”	There App will let you check the ambience of the ongoing parties and share that information with friends.
“I am not sure about it, but I would probably use it with my friends.”	There is all about connecting with friends!

Now that the customer statements are gathered, they will be matched to the customers’ intrinsic needs. If the user can have his need unconsciously fulfilled, then his well-being will increase while using There App. Following we are going to identify the evolution of such needs.

In 1943, Maslow developed a hierarchy of needs, in which he said that in order to be able to feel the impact of the fulfillment of a necessity, one must first have all his more essential needs satisfied. As it is represented in (Appendix 7), the first needs to be satisfied are the physiological ones, such as sex or eating. In the other extreme of the pyramid, there is the self-actualization, a state in which a person can improve their problem solving or creativity skills. However, this theory was criticized due to its biased western susceptibility (Hofstede, 1984), since the hierarchy only applies to a western type of culture.

A more recent study (Tay & Diener, 2011) based on Maslow's propositions was conducted between 2005 and 2010 across 123 countries. The results were reasonably consistent across all the cultures in study. The main findings were that the fulfillment of each need had a practically independent effect on well-being, which means that if there is an increase of satisfaction at any level of the Maslow's pyramid, the user will experience an increase on the overall happiness.

Therefore, in this section of the work project, we considered that the user intuitively want to satisfy its physiological, safety, belonging, esteem and self-actualization, independently. As secondary needs one can state that the humanity always looked for faster, better and cheaper way of completing tasks.

Beneath there are the top 5 characteristics of the app preferred by the users (according to customer statements), in which each one of them will address to fulfill a certain intrinsic or secondary need, and thus making the user happier.

### Belonging

- Real-time visual and audio content - With There, possibilities are limitless. You can connect to virtually anywhere and still hear what is happening. You get the complete ambiance of any place and you can share that information with your loved ones.
- Both share and request real-time content - There let you either share your moments with your friends and request a live stream from any unknown user.

## Self-Actualization

- Automatic video saving for watching later – If an user is offline at the moment he is receiving a video, for the subsequent 24hr<sup>18</sup> the videos will automatically be saved so that the user can log in and check both the video and the conversation his friends had over it. This makes the user feel that he is in control, and can spontaneously decide when to check the app, without losing any content.

## Secondary needs – Faster and cheaper

### Faster

- Be entertained effortlessly – There App can work as simply as tapping the screen three times after opening the app to get a live streaming in the monitor of the smartphone. Also, in a matter of minutes one can see the sunset in Peru and the sunrise in Thailand, which was virtually impossible.

### Cheaper – Free

- Free service – There App does not charge any money to the users.

So far we analyzed the primary customer statements and at the eyes of a future user, the app should allow the user to stream videos (with sound) in real-time to multiple friends or watch a live streaming happening anywhere. Videos and texts save automatically so that users can watch the videos afterwards. All free of charge and free of effort.

Additionally, there was one particular suggestion that we embraced after an internal meeting between the four founders. The contributor was Sean Marshall, a British professional diver, who spends 6 months travelling every year around the world. He is

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<sup>18</sup> The videos are only automatically saved for 24hr due to cloud-server costs. Calculations on the impact of video saving on costs are measured in other work project of the same field lab.

much of a digital traveler as he is a world traveller. He wrote that it would be cool to have - “A random location feature, for when you’re bored and playing on your phone or just need inspiration”.

This comment reminded the team that a feature that allows the users to randomly join a live connection happening anywhere, would be much alike to what users are already doing with the internet or television - passive media consumption habits. This feature will prevent the user to get bored easily, and thus its greatest goal is for customer retention.

The team decided to call the feature “Random” at first – current “Happening Now” - since the goal was to randomly show a live streaming from anyplace in the world. Nowadays people want to be entertained, and as what happens with Tinder<sup>19</sup>, the user would have a slide-to-alternate feature to ease the process between changing connections.

At this point, after analyzing the customer statements, the desire of the future users to interact with friends within the app should be stressed. To address to this wish, There App would from that moment be idealized with one more feature, the ability to broadcast in real time to multiple friends, imagining a live Snapchat.

### 6.2.2 Competitors

As There App is a unique innovative concept, currently, there is no video-sharing platform that gives users real-time access to anything they want to see on-demand and the ability to share media to multiple friends in real-time. We can, though, point out some of the closest competitors of There App in terms of features:

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<sup>19</sup> Tinder is a popular matchmaking mobile app that show photos of another users that are in a chosen radius. The app allows the user to anonymously like or reject them by swiping right or left. If two users like each other then it results in a "match" and Tinder introduces the two users and opens a chat.

- Peekintoo was also a start-up that, as There App, had the anonymous users represented with a dot in an interactive map. Peekintoo did a major mistake though, that the user points out in the map the location he wants to see and basically wait for other person to go there and stream the video. It turned out not to be as dynamic as they predicted. There App addressed to this issue by letting the users request video streams directly to each other, just by clicking on a dot, thus simplifying the process and creating a direct line of communication between users.
- Mobli (<https://www.mobli.com/>) allows the users to broadcast whatever they want to the world, creating a personal channel. It is an interesting concept, but it lacks interesting content, since as we open the app all we can see are teenager girls talking about their existence. In There App all the video content is relevant, since the user is the one that requests it. Also, the user will have the possibility of broadcasting what they want to his friends, since those are the ones that may be interested in the content<sup>20</sup>.
- Just as There App, Sup (<http://www.supme.com/>) has identified that a new generation of mobile app users want to get content live and on-demand, as opposed to traditional "push" methods of broadcasting of other social networks. Even though Sup and There App are both live, on-demand social networks, our motivation is on creating a wider social network, with a bigger focus on the geolocation aspect. There App gives users the opportunity of connecting with anyone in the network, friend or not, and receiving a live video feed of the location they want. There App will also let users to stream live video to multiple friends, allowing them to share moments they are experiencing, while they're experiencing them. This also distinguishes us from Sup in the sense they interact with friends by "commanding" them, while There App's focus is simply allowing users to broadcast their moments to their friends.
- Other platforms that partly fulfill the same need of providing information like Facebook, Foursquare or Whatsapp can be considered indirect competition.

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<sup>20</sup> Since There App is all about providing relevant content to the user, it wouldn't make sense to let the user broadcast a streaming to the world, and increase exponentially the useless videos in the platform and thus decreasing the interest of users.

These answer users' questions about a certain location/event but are not able to do so in real-time and/or are limited to one's circles of friends.

Table 2 – Comparison between competition and product features

	Real - Time	Video content	Not limited to circle of friends	Content uploaded by user to the world.	Content uploaded by user to friends.	Content requested by user (on-demand).	Direct user-to-user video interaction
There App	X	X	X		X	X	X
Peekintoo	X	X	X			X	
Mobli	X	X	X	X			
Sup	X	X				X	X
Facebook				X	X		
Foursquare			X	X			
Whatsapp	X				X		X

The table below shows the main differences from There App to its competitors, analyzing the type of interaction users have within a platform. One can clearly see that there is no platform that uses real-time video the same way, while creating new social interactions (not limited to friends) and the content being on-demand.

### 6.3 Beta Version/Prototype<sup>21</sup>

Since day one, There App's team was focused on building a working first version. However, the task got harder with time, since the initial concept was getting outdated with all the inputs and contributions, when compared to a future version that was being idealized. A flow of the first version of There App can be seen in (Appendix 8).

The team knew that despite fulfilling the main goal of connecting two anonymous people, the app lacked the viral features the future version would include, such as the saving and replay features (inactive in beta) or the film to friends.

There were two main goals for the beta version at the time:

<sup>21</sup> Interactive video at [https://www.youtube.com/watch?v=MI3e4aVt\\_Xw&feature=youtu.be](https://www.youtube.com/watch?v=MI3e4aVt_Xw&feature=youtu.be)

- To gather all the feedback from The Lisbon Challenge's entrepreneurial environment and the main ideas from guests mentors or future users.
- To check if the core concept of video requesting was efficient, problem solver, and which features were worth keeping.

### 6.3.1 Survey

After the beta launch, nearly 200 people answered a survey (appendix 9), in which we tried to cover all ranges of age and education. From the 171 participants, 85 were male (86 female) from the age 15 to 61. We tried to make this survey as international as possible, hence 20 countries were represented<sup>22</sup> in the answers. There App is aimed to be global, so the fact that we got respondents from North America, South America, Africa and Europe gives a much better general overview of the worldwide opinions and cultures. Regarding the degree of studies we received answers from those who have the high school diploma till those who have a Masters degree or a PhD<sup>23</sup>.

The main goals of this survey were to: validate opportunity to create There App, through gathering information on smartphone and mobile app usage patterns; peoples' willingness to pay for mobile apps, and individuals' receptivity for mobile advertising and live events.

The main results were the following:

- 40% of the respondents access a social network more than 10 times a day, while 35% does that 5 to 10 times a day, which when summing up means 75% of the respondents access a social network at least 5 times a day.
- On average, 21% of the respondents share media content to another person from the smartphone at least once or twice a day.
- When asked to choose in which situation would preferably the respondents use a mobile app, the two most chosen alternatives were: knowing how a venue is before going there (82%) as well as sharing moments with friends (87%).

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<sup>22</sup> The countries represented are: Portugal, Spain, France, Germany, Greece, Belgium, Italy, Latvia, Poland, United Kingdom, Czech Republic, Switzerland, Austria, Netherlands, Turkey, USA, Canada, Brasil, Kenya and Angola.

<sup>23</sup> Distribution regarding degree of studies: High School – 18; Undergraduate Degree – 85; Masters Degree – 67; PhD – 1.

- According to the survey, an impressive 83% of the respondents never paid for a mobile app. Why would they start now?
- For our satisfaction, 67% of the respondents download an app mainly for the service provided. People are using apps that allow them to save time, by improving some process. In our case the fact that a person doesn't need to drive 30 minutes to find the bar empty and boring already saves him time to go to another place.
- Consequently, 92% said they would not pay for a mobile app that provided these two services above.
- 63% of the respondents would not mind to watch a 10-20 second video advertisement instead of paying for the app, while 44% would welcome in-app adds that could rely on their personal information and suggest them items of interest.

This survey serves as a proof that nowadays everyone uses the smartphone daily to either post content online or to access information. There is no central channel to look for visual information, upon request. Most of the times a person must call a friend and hope the friend is in the right place to report the ambience, and they are still getting all the information second hand.

If unconsciously, someone is already satisfied by searching for outdated information online or by calling a friend, how would he feel if he could now access a service that provides real time footage of any place in the world, and be able to make his own decisions?

In order to prove the desire for interaction with friends perceived from the customer statements and customer interactions, we can look at how many people would use an app to share content with friends (87%) and say that they would not mind to have this feature<sup>24</sup> in There App.

Also, the team's first impressions after conducting the customer statements analysis, was that they would not pay for such an app. In fact, 83% of the respondents never ever paid for an app, which explains that in order for There App to expand its customer base, There App must be free. Surprisingly, the users are much more willing to watch a

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<sup>24</sup> Push-to-action to broadcast to friends.

commercial video instead of paying (63%), which is a valid alternative to monetize the app.

There was clearly an opportunity to make a new product for the users eager to request and share live information. Even Mark Zuckerberg said once, regarding the Oculus, virtual reality glasses that can broadcast what other people are filming, “Imagine not just sharing moments with your friends online but entire experiences”. There App was aiming at this futuristic concept, through the smartphone.

### 6.3.2 Relevant Suggestions

While at a beta stage, There’s team was drinking the juice of one of the most challenging accelerators in Europe, which means constant mentor and customer engagements. The team was in search for important validation, and there is no one better for that purpose than both successful entrepreneurs and high-qualified businessmen, since they know the culture and behavior of society. We do think that the suggestions below are of greatest importance, especially when we are talking about a concept that only could be implemented recently.

Some important advices for the development of the app, which came out of those meetings, are specified below. The team then compared the suggestions with the findings from the survey, which can both be found in the text and in the table below.

- Josh Mathews, student at Babson College (Boston), suggested There App highlighted the best videos recorded through the app, by keeping the 4+star rating videos up to 24h in the map. According to the survey above, most people downloads an app for the service provided. If the service they want to use is to see how a place is, it makes sense that they have displayed in the map the high quality videos that were recorded in such venue.
- Mr João Cotrim de Figueiredo, President of Turismo de Portugal, stated it would be interesting to provide videos of locations or events at There App, this way stimulating the tourism in Portugal. Since the users want to know how a venue is

- before going to the place, we think it is of good taste if we provide them the best events and places to attend.
- Uri Gonda, a serial entrepreneur with over 15 years of hands-on experience in design, product development, market research and venture capital, said that a simple interface would have to be designed that creates an addiction to passive consumption of media. In order to help with digitally entertaining the user, the “Happening Now” feature would be of crucial importance. Looking at the survey, this feature would tackle the users that want to discover new places in the world.
  - There App’s advisor Andrew Hughes, the founder CEO of AbZorba Games and experience in start-ups with exists through trade acquisition, thinks There should always be free to the consumers, to enlarge user base. Also, in the future, the event or establishment managers that want to video broadcast what is happening to the app user, could have a special paid account. This affirmation goes in line with what we found out already, that people not only would not pay money to buy such an app, most of them would not pay money to buy any kind of app.
  - Mr. Tiago Silva Lopes, PT Director, advised the team to develop the streaming solution internally, without outsourcing that function to Tokbox. However, while Tokbox’s monthly fixed cost is bearable, it is not financially healthy to hire a Web RTC specialist in this phase of the project. This commentary was used not to validate any market needs, but to validate the use of Web RTC as the technology to assure streaming connections and quality.
  - It was Leonardo Xavier, founding partner at Quodis and CTO at Observador.pt, that suggested the name “Happening Now” for the random feature suggested by the users. We adopted the change since the title is very explicit when it states that the user is about to see what is happening now.
  - Tobias Schirmer, a representative from the European Commission visiting Lisbon Challenge, mentioned that the success is based on a collaborative approach in human interaction. There App is up to that, since groups of friends can take real group decisions based on a video they all saw.
  - Nowadays studio Manager at Miniclip and former Manager of Skype for Business team at Microsoft in San Francisco, Marius Monolach said that

integrating Facebook friends in the map would be a good way of increasing interaction. In the survey we could see that people love to share content knowing they are doing it with a friend. Consequently, that feature was introduced with success and the facebook friends of a given user switched to be colored blue in the map.

In the table below there is a match between the person who provided the suggestions and to which kind of user need they aim to fulfill. Some of the advices, namely from Tobias Shirmmer, Leonardo Xavier and Tiago Silva Lopes, were not included, since their comments do not address to any specific need. Instead, their comments provide validation to some features of the app.

Table 3 – Comparison between features suggested by relevant people and user needs.

Features Suggested	User Needs	User wants to know how a venue is	User wants a service with quality	User wants the app to be free	User wants to be digitally entertained	User wants to share content with friends
Josh Mathews		X	X			
Mr. João Cotrim de Figueiredo		X	X			
Uri Gonda					X	
Andrew Hughes				X		
Marius Monolach						X

Below are pointed the most relevant conclusions of the Beta version, after taking in consideration all the customer reviews and survey:

- There is a lack of content available for the initial user, when the user active base is not that large. To face this issue, the map in the future version of There App

will have time filters, which allow the users to see in the map the best videos (rating 4+) that were recorded up to 24 hours before.

- Whenever a user is at home or at work it is not comfortable to share using There app. That is why the team thought of including offline zones. The user would signalize his home and work place and he would not be bothered within those areas.
- Whenever a user misses a request, he is notified and can always go back to it later, the same way someone that misses a call gets a sign of missing call in the phone.
- A version including the possibility to share to friends should be idealized.
- The blue dots in the map indicating the Facebook friends would now be part of the future vision of the concept.

#### 6.4 Idealized Final Version and Final Thoughts

After the team have conducted the internal and external analysis regarding there App, and all the features being supported by quantitative and qualitative data, three major conclusions were reached:

- People want to know how a place is before going there.
- Users want to share their favorite moments with friends.
- Users want to be entertained digitally.

Interactive mockups for the last version of There App can be found at <https://marvelapp.com/25a0bd>. As it was told in section 2 of this work and in other

work project<sup>25</sup>, this final version must leave space for the inclusion of events in the app. As one can see in the images, the section in the map that says “Places” would be the perfect spot for the event section to enter. As we could not get access to official footage of the iconic Portuguese places by Turismo de Portugal, we consider this substitution to be the best option.

When it comes to the advertisement, it was also told previously that the advertisement would be incorporated in the app in a non-abusive way. The best way to do it is to present the user with a video advert<sup>26</sup>

In order to fulfill the customer wants, the team created an interactive version with the final mockups of There App<sup>27</sup>.

Also, in order to compare some main customer wants with There App’s design requirements, the team built a house of quality (appendix 10). The basis beneath the house of quality is the belief that products should be designed to reflect the customer desires.

In this case, it is possible to take some conclusions out of it,:

- The three most important design features according to the customer wants are the interactive map, the push-to-action button and the 3-click interaction.
- There App only loses to its competitors when it comes to ease of use. Basically this can be explained due to the implementation of more features in There App than there are in Snapchat, Mobli and Sup, thus making the process a little more complex.

As Porter’s 5 forces analysis provide the company with an external sensibility, VRIO is a tool used to analyze the firm’s internal resources and capabilities in order to access if

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<sup>25</sup> As it is stated in Alexandre Prata’s work project for the same Field Lab, there are 6 sequential objectives for the development of the app: 1 – User acquisition and retention; 2&3 – User base growth & user daily usage; 4 – Advertisement integration; 5 – Event managers’ acquisition and retention; 6 – Event managers’ engagement.

<sup>26</sup> In the survey conducted, 63% of the respondents would rather watch a 10-20 second video and then get access to the stream, instead of paying for the app and access the same stream.

<sup>27</sup> Interactive mockups of the final version can be found at <https://marvelapp.com/25a0bd>

those same resources can be a source of sustained competitive advantage. According to Barney, J (1991), there are four attributes that a resource must fulfill in order to be a source of sustained competitive advantage – Valuable, Rare, Costly to Imitate and Non-Substitutable.

The resources that are relevant for the analysis are: Copyright on the architecture in terms of design and code; Experience and capabilities of the employees<sup>28</sup>; Capacity to raise equity and the innovativeness of the project.

Table 4 – VRIO Analysis to the most relevant resources.

	Valuable?	Rare?	Costly to imitate	Exploited Properly	Competitive implications	Economic Implications
Copyright	Yes	Yes	Yes	Yes	Sustained Advantage	
Employees	Yes	Yes	No		Temporary advantage	
Capacity to raise equity	No				Disadvantage	
Innovativeness	Yes	Yes	No		Temporary Advantage	

As we can see from the table above, There App’s main sustained advantage lies on the copyright that prevents any competitor from imitating lines of code of the app or its design architecture. Logically, its innovativeness and the innovators behind the app are only an advantage until a powerful competitor enters the market. The goal is to succeed before it happens.

The work project conducted empowered me to take another look at all the processes and

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<sup>28</sup> Since the target customer is in the University, the three founders understand the context and customer behaviors by being themselves at the University. The other one is an experienced designer and web&mobile developer, which is perfect for such an app.

information gathering in the development of There App since day 1.

It is with joy that, in the end, I can state that some features will have to be introduced in the final mockups, in order for the app to truly address to the customer needs and suggestions. No features would be taken off, although the spot for places will from now on be dedicated to events.

The features that are now joining the final version are:

- Offline mode when at home or work – User can select in the map the place in which they work and live, in order not to be bothered.
- Identify Facebook friends in the map – As a successful introduction in the beta version, the same would be done in the final version.
- Advertisement in app.

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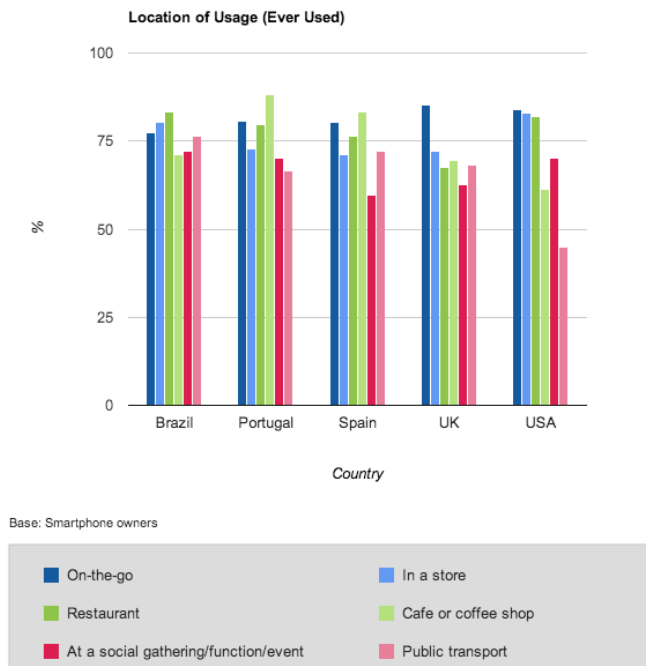
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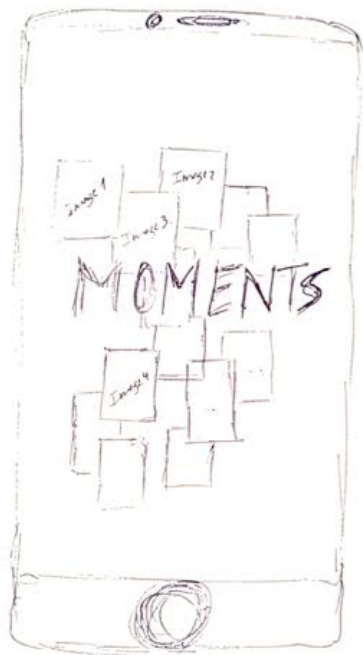
## 8 APPENDIX

### Appendix 1 – Location of Mobile Usage

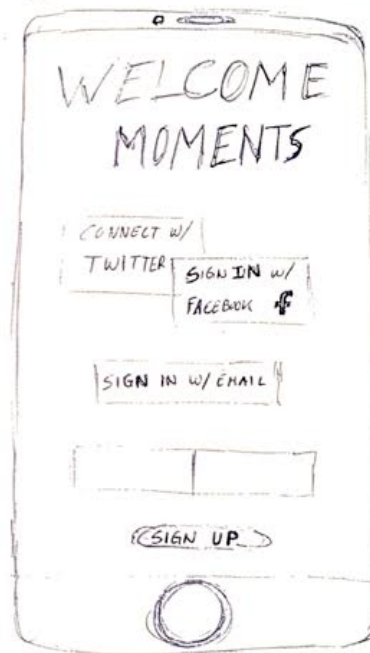


### Appendix 2 – Initial There App Sketches

1-LOADING SCREEN



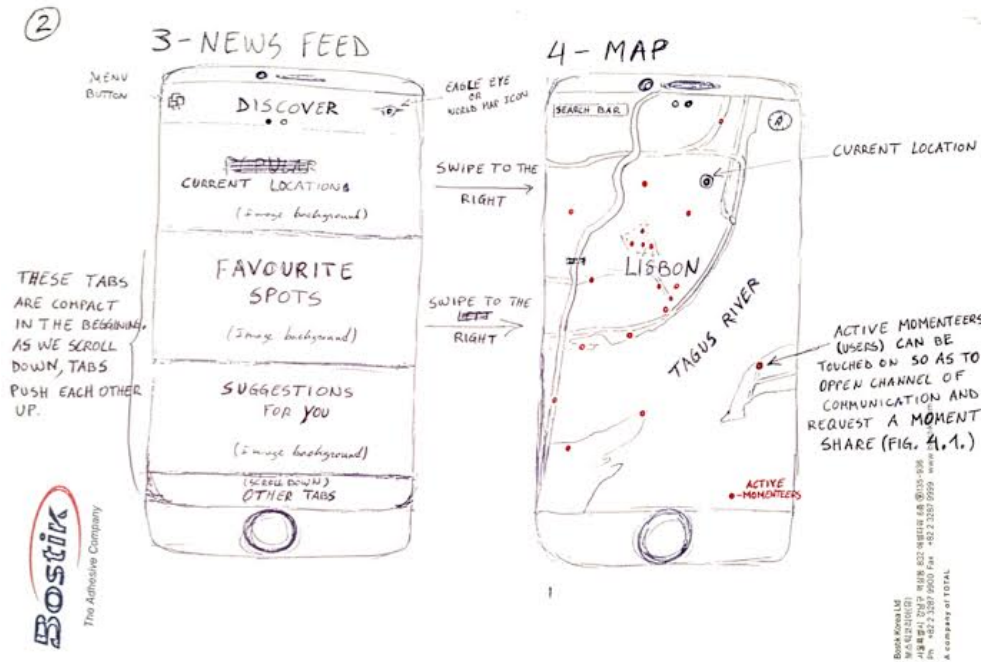
2- FIRST-TIME USER SC



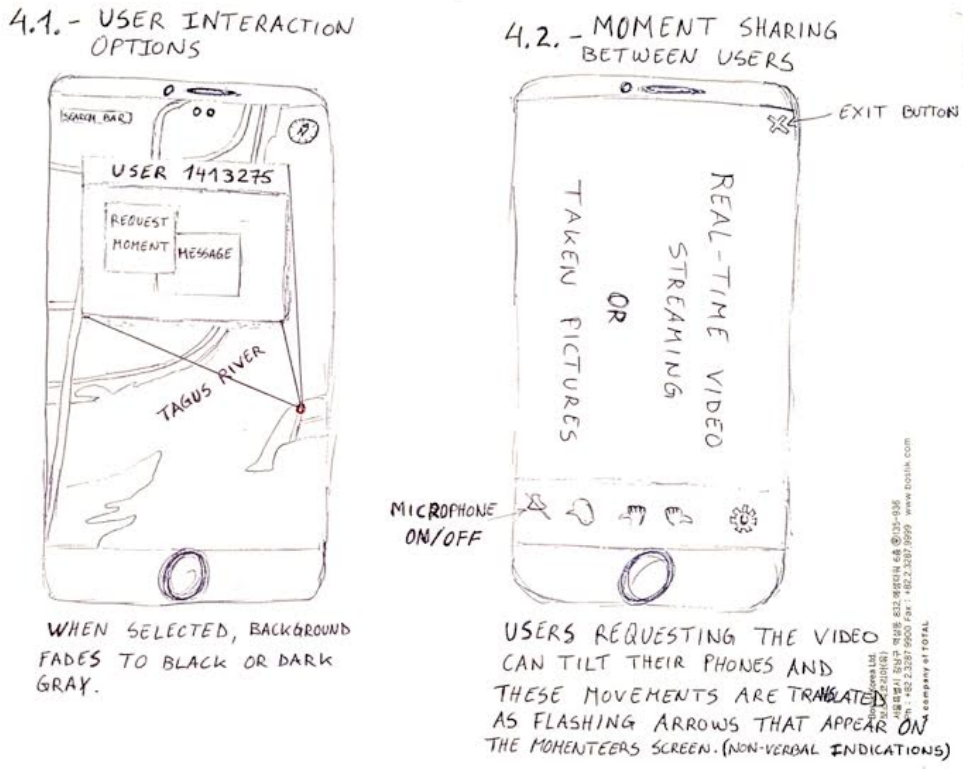
(MAYBE CHOOSE A CLEANER LOOK FOR THE WELCOME PAGE?)



Appendix 3 – Initial There App Sketches



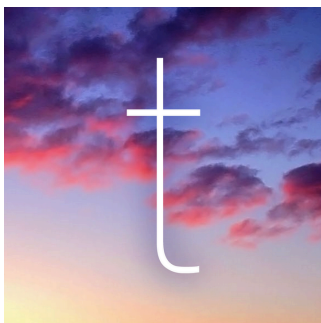
Appendix 4 – Initial There App Sketches



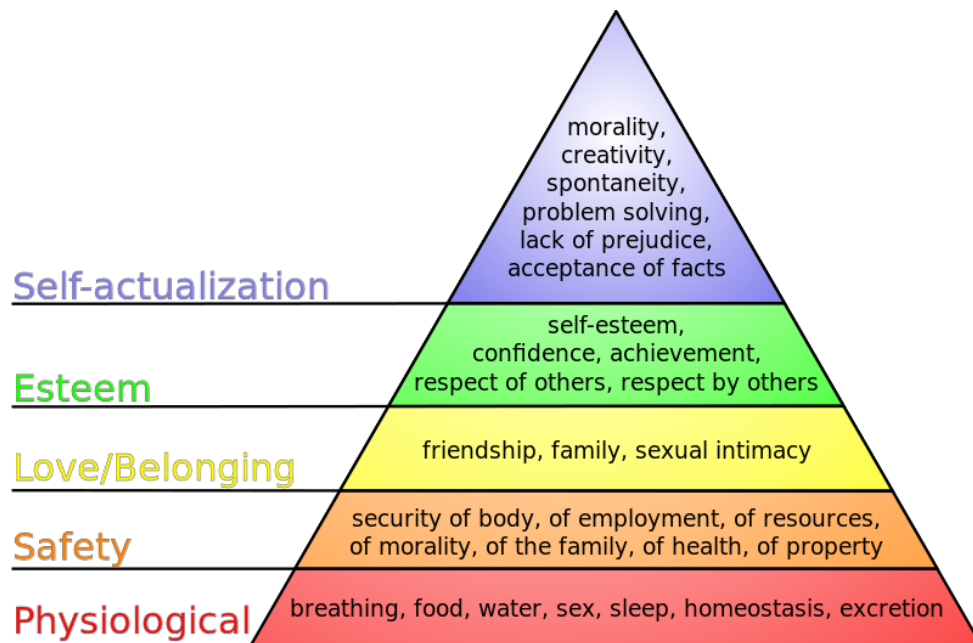
Appendix 5 – First prototype with the name “There App”



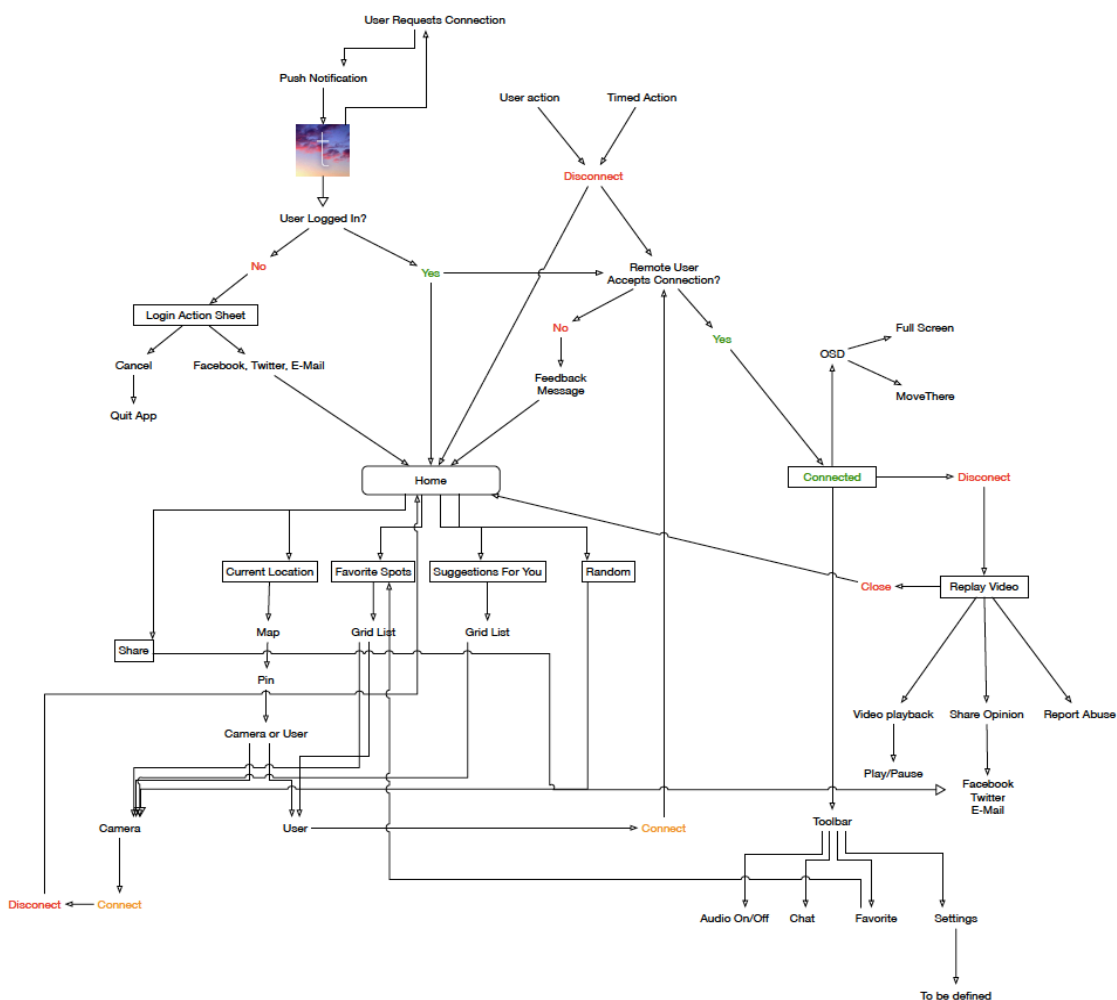
Appendix 6 – There App’s logo



## Appendix 7 – Maslow’s Hierarchy of Needs



## Appendix 8 –There App Beta Workflow



Appendix 9 – Survey

**A brief warm-up.**

1. What is your age?

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2. What is your gender?

Male		Female	
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3. What is your nationality?

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4. What is your degree of studies?

Primary School		High School		Undergraduate Degree		MSc. Degree		PhD	
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**Now, for the interesting part.**

5. How many times a day do you access a social network, on average? (Select only one option).

More than 10 times a day		5-10 times a day		1-5 times a day		I don't	
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6. Do you have a smartphone?

Yes.		No.	
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**Please ignore questions 7 to 12 if you answered “No” to the previous question.**

7. Please select the main uses you give to your smartphone:

Social networks	Games	Messaging apps	Entertainment (e.g. watching videos)	Watching live events	Searching the internet	News

8. How often do you share media content (e.g. videos, photos) to another person from your smartphone, on average? (Select only one option).

Several times a day		Once or twice a day		Once a week		Once every few weeks		I never share any content	
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9. Of the following locations, select those where you normally use your smartphone:

On-the-go	In a store	Restaurant or cafe	Bar or nightclub	Event (e.g. concert)

10. What are the main reasons for you to download an app?

Curiosity	Service Provided	My friends use it	Online reviews	Other

11. How do you usually hear about an app?

Websites/blogs	Social Networks	App Store, Google Play or equivalent	Friends	TV	Magazines

12. What is the largest amount you have ever paid for a mobile app (\$ or €)? (Select only one option).

> 20		5 - 20		1 - 5		< 1		Never paid.	
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13. For which of the following situations would you use a specific mobile app?

Knowing how a venue is before going there (e.g. a bar)	Showing someone else how a certain place looks like	Checking the weather at a remote place	Sharing what you're doing with friends	Seeing new places from around the world	Watching remote live events (e.g. concerts)

14. How often do you think you would use an app for the situations you chose in Q10? (Select only one option).

Several times a day.		Once a day.		2-3 times a week.		2-3 times a month.		2-3 times a year.	
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15. Would you be willing to pay for such a mobile app?

Yes		No	
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16. Would you be willing to watch a video advertisement (10-20 seconds) instead?

Yes		No	
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17. In which situation are you most frequently faced with advertisement when using your smartphone?

While using a search engine	While on a website	While watching a video on a website	While in an app	While watching a video in an app

18. What is your opinion on in-app ads that rely on your profile information to suggest you items you might want?

I welcome it		I'm against it		I'm indifferent	
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**Thank you for your collaboration!**

Appendix 10 – House of Quality for There App, in comparison with Snapchat, Mobli and Sup, three of There App’s competitors.

House of Quality

