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.

Adopting a customer-centric approach in the financial sector

- Entrepreneurship & Innovation Field Lab -

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Field Lab / Business context

The Bank X Living Innovation Lab is a unique program that wants to boost Bank X innovation while fostering the transformation of mind-sets, culture processes and way of working. It consists in creating and accelerating the innovation team composed by Bank X executives and Nova SBE team, and in converting the Nova School of Business and Economics in a living lab where unique research can be done and where these innovations will be co-created and validated in a controlled environment. Due to confidential issues, the company the teams worked with during this Field Lab is going to be called Bank X (BX). Additionally, Bank X executives the team was gathering insights from during the Work Project will stay anonymous, and thus be called Mr. A, Mr. B, Mr. C, Mr. D, Mrs. E, Mrs. F, Mrs. G and Mrs. H.

During the Bank X Living Innovation Lab, a team of five people - Joana, Sebastien and three executives working at Bank X, namely Mr. D, Mrs. G and Mrs. H - was composed to co-create new products, new services and new business models for the company. From the 11th of September until the 13th of December, the team worked together in the Venture Lab to develop, validate and propose a new concept that would be the best possible solution to overcome the challenges retail banks are facing. Furthermore, anonymity will also be applied for the employees of the Nova Venture Lab, Mrs. L, Mrs. M and Mr. N, as well as to the different experts interviewed during the Work Project, namely Mrs. X, Mrs. Y and Mr. Z.

Abstract

In the 21st century, powerful forces are impacting the banking industry. The technological and digital transformation, the entrance of non-traditional and innovative players, new regulations and the adverse economic factors are changing customer expectations. These forces are driving customer-centric innovation to rise, increasing customer requirements in terms of accessibility, ease of use, personalization and convenience. To cope with these changes, retail banks need to generate innovative customer-centric business models and strategies to better respond to the challenges ahead and thrive in the future. The aim of this Work Project is to develop a concept creating value for customers by meeting their changing expectations. A solution is proposed, the creation of kids' first digital bank: Kick Bank.

Keywords: Innovation, Business Model Design, Validation, Entrepreneurship

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1. General Overview

1.1 Introduction & challenges

In the 21st century, technology increased globalization and had a serious impact on banks performance. The rise of the internet finance banking operations has expanded the services retail banks were offering to customers, and made customers habits shift to a world where everything is easier to access, use and perform: i.e. make 1-click transfers. Moreover, as a consequence of the economic situation in Europe, banks started to practice lower spreads[1], which were compensated by an increase in banking fees and commissions to maintain the current APR[2] level (Economia Online 2017). On top of it, the increase in banking fees and commissions led to transparency issues from the point of view of customers, which is apparent in the increasing complaints from customers that do not understand what they pay for anymore. The digitalization of the world has given the opportunity to new players to enter the market, such as online banks and financial technology companies (FinTechs) offering most of the financial services and accounts offered by traditional banks, but often with lower or no fees. In addition, the banking industry has used Artificial Intelligence (AI) to develop internal processes and decrease internal and external costs. All in all, technology and digital businesses are taking away customers from traditional banks by meeting **customer expectations** about accessibility, personalization, ease of use and convenience (BankTech 2014). Furthermore, from January 2018 onwards, financial institutions will be introduced to new banking regulations in Europe - the Revised Payment Service Directive (PSD2). PSD2 is forcing banks to open their infrastructure and provide open application programming interfaces (APIs) that allow authorized account-level access to third parties (Backbase 2017). The exposure of banks customer accounts to third parties can be embraced and seen as an

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[1] **Spread** is the percentage value added by banks over a referential interest rate. It can be considered as the gross profit margin of banks.
[2] **Annual Percentage Rate (APR)** is the total cost paid by the customer on credits (including interest rates and operational fees). Refers to TAEG (Taxa Anual Efectiva Global) in Portuguese.

opportunity, or seen as a threat, depending on the willingness to cooperate between the parties involved.

Bank X is a Portuguese retail bank and belongs to one of the biggest banks in Europe. In addition to their multi-channel base strategy - attracting clients through digital and physical channels - the amount of assets in the bank and their performance have enabled BX to be recognized as one of the best performing banks in Portugal. With the upcoming challenges online banks and financial technology companies are bringing to traditional retail banks, business models have to change and solutions have to be developed to embrace these challenges to survive in the future. The Work Project answers the following challenge: *"How can retail banks create value for customers tailored to their expectations?"*.

Bank X has the resources and capabilities to thrive in the market but its business model might be outdated and not customer-centric enough, which is necessary to cope with the challenges ahead. The increase in digitalization has led to the creation of new pricing strategies, which made customer expectations change. The "Ladies' Night" strategy is an example of pricing strategy that has been increasing and adopted by many innovative companies, such as Google, Microsoft and Adobe. In many two-sided markets, one side of the market is harder to acquire than the other side of the market, i.e. women opposed to men in bars. This strategy is used to acquire the "harder side" of the market by reducing prices to zero. The team depicted an opportunity in applying the "Ladies' Night" strategy to the banking sector. The "hard-to-acquire side" customers, namely customers B, are offered the financial services for free. These customers are the ones that are less likely to understand the value of these services, being thus less willing to or cannot pay for them. Offering free financial services to these customers B implies finding other ways of generating revenues for the bank. Consequently, customers A are paying for the services. These customers are the ones willing to pay for value-adding services proposed in this concept. One way of creating new revenue streams

following this strategy would be to identify value-adding services customers A would be willing to pay for, implicitly leading to a new concept in which some customers pay for other customers. This Work Project is proposing a solution to adapt to the forces mentioned earlier to better meet customer expectations, by exploring the following opportunity: *"What can be a new concept for Bank X in which some customers (customers A) pay for other customers (customers B)?".*

1.2 Aims and objectives

In the next years, retail banks need to change due to the upcoming challenges. The aim of the Work Project is to identify the different forces shaping customer expectations and to create and validate a new concept for BX that is able to create value for customers while adapting to their expectations. Therefore, this Work Project is about validating a concept and searching for a working business model and not validating a business model per se. The three following objectives have been developed: **(1)** to identify the different challenges and opportunities in the retail banking market, and to understand how customers' expectations are changing, **(2)** to develop and validate a new concept that answers to the challenges and opportunities identified earlier, and matches customers' expectations, **(3)** to recommend an action plan for BX to implement the new concept.

1.3 Work Methodology

The Work Project started with a diagnosis of the internal and external situation of the banking industry. A PESTLE analysis has been developed to determine which macro-environmental factors affect the banking industry. This would later help the team to determine how the different factors influence the BX's business performance. Six types of environmental influences are analysed in the PESTLE framework, namely – Political & Economic, Social, Technological, Legal and Environmental. An "Impact/Uncertainty Grid" tool has been used to evaluate the relevant trends and critical uncertainties surrounding retail banks (Wulf, Brands

and Meissner 2011). Additionally, the competitive environment has been analysed through six different attributes. Harvey Balls have been assigned to the five main retail banks for each of the attributes. The methodology used to answer the challenge was divided into three different stages: **(1)** desk and exploratory research for the Diagnosis phase, **(2)** the Design Sprint methodology and the Customer Development process for the Analysis phase (chapters 3 and 4), **(3)** desk research for the Recommendations. The **first stage** was about performing desk and exploratory research. The team built some hypotheses and quantitative and as well as qualitative analyses were made to validate these hypotheses. The quantitative analysis was conducted for a universe of people of both genders, from 18 years old onwards. The data collection method was processed through an online questionnaire sent to the team's Facebook universe and sent directly via email to friends and family, between 6th and 10th October 2017. The team was able to collect 318 answers within this time period. The next stage has been based on the Lean Startup methodology, an approach helping startups create continuous innovation and changing the way companies are built. The **second stage** in this study started with the Design Sprint methodology with the objective to identify the best possible prototype as an answer to the challenge faced by Bank X in five days. Design thinking techniques were used, such as concept boards and mind maps to list the risks, questions, assumptions, obstacles related to the long-term goal of the Sprint. Once the prototype was developed and built, the team tested it by performing individual interviews with five parents and five kids in order to validate or not the different assumptions developed during the Sprint. The number of people is suggested in the Design Sprint Methodology book and based on Jakob Nielsen and Thomas K. Landauer's paper (1993). This paper concluded that 85% of the insights come from the first five interviews, therefore the team used only five people from each of the Customer Segments to draw conclusions. Then, the team followed the Customer Development process, in which initial hypotheses were developed for each of the nine building blocks of

the Business Model Canvas (BMC), using the canvas as a "scorecard" to track the progress in searching for a repeatable and scalable business model. A Validation Board has been built as a tool to track the results obtained in the different cycles in terms of validated and unvalidated hypotheses. Validation experiments, namely individual interviews and online surveys, were performed to test the hypotheses developed in the Validation Board. Quantitative pass/fail tests have been performed to determine whether the product/market fit is valid enough to justify scaling sales and marketing spending, based on interviews with 11 kids and 11 parents. For the last cycle, an online survey showing the mock-up was conducted to validate the features that would be implemented in the Minimum Viable Product (MVP)[3]. The survey was conducted for a universe of people of both genders, from 9 to 16 years old. The data collection method was processed through an online questionnaire sent to the team's friends and family. The team was able to collect 45 answers from kids and 13 answers from parents. The objective of the online survey was not to find statistical relevance, but to collect more insights around the product. The **third stage** presents the final solution to the challenge and how to implement it. A timeline is developed with the recommended 1-year actions following the validation of the Kick Bank project by Bank X. To better understand the impact of Kick Bank, a market analysis was made using TAM, SAM and SOM[4]. Last but not least, financial tools have been used to calculate the Net Present Value. The different work methodologies used during the Work Project are summarized in Table 1.

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[3]**MVP**: "A Minimum Viable Product is a development technique in which a new product or website is developed with sufficient features to satisfy early adopters. The final, complete set of features is only designed and developed after considering feedback from the product's initial users" (Eric Ries 2011, 4)

[4]**TAM**: Total Available Market is the total market demand for a product or service; **SAM**: Serviceable Available Market is the segment of the TAM targeted by a product or service which is within the company's geographical reach; **SOM**: Serviceable Obtainable Market is the portion of SAM that a company can capture (Lean Business Planning 2014).

Table 1. Summary of methodologies followed in the Work Project

Phases	Objective (why?)	Method (how?)	Tools	Components (what?)
Diagnosis	Situation Analysis	Desk research, exploratory research	PESTLE analysis, Impact/Uncertainty Matrix, Online Survey	Analysing Internal and External factors
	Industry players Analysis	Desk research & Insights from Bank X	Harvey Balls rating	Analysing Competitive Environment
Analysis	Part I: Front-End of Innovation	Design Sprint Methodology	Design thinking techniques, Personal Interviews	Designing and testing a prototype
	Part II: Back-End of Innovation	Customer Development	Business Model Canvas, Validation Board, Personal Interviews, Online Survey	Business model Blocks
Recommendations	Proposing a solution to the challenge and how to implement it	Desk research and insights from Bank X	Timeline, TAM/SAM/SOM, Net Present Value (NPV)	Impact assessment, Financials, Key Performance Indicators

Source: Team own analysis

2. Diagnosis

A thorough analysis of BX internal and external situation has been made, to better understand the context in which the bank operates. In addition, an opportunity has been formed after performing exploratory research, which would be later exploited into a product-market fit.

2.1 Situation analysis

2.1.1 Internal analysis: Bank X as it is

To understand the situation in which BX operates, it is important to analyse what the bank is currently doing to create, deliver and capture value for its customers. This internal analysis will help to better understand which factors might influence its performance in the future, as well as the strengths and weaknesses of BX. Furthermore, this analysis will help determine whether BX has the necessary resources to react to industry and market changes.

2.1.1.1 Organization

BX, owned by a world leading financial holding company, is one of the largest private banks and one of the best performing banks in Portugal. Despite the troubled economic context, BX has been able to grow in the last years due to the strategic position it has been conquering. Additionally, BX has been sponsoring major events in the country to raise brand awareness. It has been investing in the University segment, creating partnerships and giving scholarships to students; which proved to be a success looking at the high level of adherence to the program.

Even though attracting students has been successful, Bank X executives have mentioned a problem in retaining these students, since this Customer Segment has generally no loyalty towards banks. Students are simply joining the bank with the best conditions. Furthermore, BX has been building a relationship with its clients on a multichannel base, which enabled them to attract a significant number of digital clients in 2016, as well as improving the personalized and specialized service at the branch, through physical channels.

2.1.1.2 Current Business Model

Currently, BX, as the majority of retail banks in Portugal, is able to respond to all the financial needs of its customers, providing products and services such as saving and checking accounts, debit and credit cards, personal loans, mortgages, insurance and certificates of deposit. Revenues come from commissions and fees related to operations and maintenance in current accounts, overnights[5] and interest rates on risky products, i.e. credits and loans. Nevertheless, banks provide a different service to distinct Customer Segments, such as the mass market, premium clients, the university segment, youngsters and people living abroad (see Appendix 1). Due to the low spreads practised by the entire banking sector, BX has been transferring revenues from interest rates to fees and commissions, which has been causing discontentment within its customers. However, Bank X, as the majority of the players in the Portuguese market, provides a service free of fees and commissions to the University and youngsters' segment. Bank X has the resources and capabilities to thrive in the market but its business model might be outdated and might not be customer-centric enough, which is imperative to cope with the challenges ahead.

2.1.2 External analysis

To better understand the context in which Bank X operates, the team analysed the most powerful forces that impact the banking industry, as well as Bank X's competitive environment.

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[5]**Overnights** are financial applications that are done at night and are rescued in the next day morning. Usually banks do this operations with long-term deposits.

Following the team's analysis of the context and trends that impact the banking sector, five forces have been identified as having a high impact and high uncertainty: the negative Euribor[6] and low spreads, the increase of digitalization, the rise of FinTechs, Artificial Intelligence in the banking industry, and future regulations. A high impact and high uncertainty means that these forces will highly affect the banking industry, and it is not known how exactly it is going to affect it. The increase in fees and commissions by traditional banks as well as the FinTechs offering no fees or commissions, led to customers expecting new pricing models from traditional banks. Moreover, the increase in technology, digitalization and future regulation, led to customers changing their expectations in terms of accessibility, convenience, ease of use and personalization. The external factors affecting Bank X are summarized in Table 2 and the Impact/Uncertainty Matrix can be consulted in Appendix 2.

Table 2. Impact/Uncertainty grid of external factors affecting Bank X

Factors	Political & Economic	I	U
1	Wary regulations at European level	6	5
2	**Negative *Euribor* and low spreads**	**8**	**7**
3	Appreciation of Euro	6	4
	Social	**I**	**U**
4	Increasing consumer expenditures	4	2
5	Increasing propensity to borrow money	5	2
6	Decreasing savings ratio	5	2
7	Portuguese consumers have lower acceptance to digital habits than European average	5	5
8	Distrust of major stakeholders in the banking industry	7	5
	Technological	**I**	**U**
9	**Increase of digitalization**	**10**	**9**
10	**Rise of FinTechs**	**10**	**8**
11	**Artificial Intelligence**	**9**	**8**
	Legal	**I**	**U**
12	Security issues	5	4
13	**PSD2 regulation**	**9**	**8**
	Environmental	**I**	**U**
14	Sustainability and environmental friendliness	3	1

Source: Team own analysis

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[6]**Euro Interbank Offered Rate** (*Euribor*) is a rate based on the interest rates at which a panel of European banks borrow funds from one another

Factor #2. Negative Euribor and low spreads: Europe has been registering a modest growth pace since the end of the crisis, which led the European Central Bank to follow expansionist monetary measures, that were traduced in a negative *Euribor*, and spreads reaching almost zero, making banks charging higher fees to clients to compensate for these losses (Público 2017). This situation led to transparency issues from the point of view of customers, which is apparent in the increasing complaints from customers that do not know and understand what they pay for anymore (Jornal de Negócios 2017).

Factor #9. Increase of digitalization: Internet is an undeniable trend in the world and one of the major drivers of globalization, which has been revolutionizing all industries and markets, including **customer expectations**. The banking industry is not an exception to this trend: banks are competing in an increasingly digital world (Greenwich Associates 2016). The usage of Apps is heavily increasing and consumers usually use them to order, shop and pay online. With these new standards set by technology and retail sites, consumers have been used to the simplicity offered by digital, i.e. make an order in 1-click on Amazon, easily track fulfilment requests from Uber, and others (Accenture 2016). These innovations have changed the banking expectations of customers, now expecting easy, fast and transparent interactions with their banks, which is forcing banks to adapt their current business models (Bain & Company 2015). In addition to customer changing expectations, the digitalization of the world also brought further challenges to the banking industry, namely the quality of the service and matters related with security and privacy issues, consequently leading to high costs in technological infrastructures (Accenture 2015). In fact, according to Greenwich Associates (2016), the changes the banking industry is facing will lead to a new era, in which traditional banks will be operating as "digital financial superstores that blur the line between technology companies and banks".

Factor #10. Rise of FinTechs: According to Donald Raftery, head of the Firm's Commercial and Corporate Banking practice at Greenwich Associates, by 2025, banks will "feel and operate more like tech companies with banking licenses" (Greenwich Associates 2016). The difficulties encountered by banks to cope with the digitalization have provided an opportunity for new players in the market to disrupt the banking industry (Linnenbank 2016). These players, such as Financial Technology (FinTechs) providers, have a very unregulated status since they are new to the market. FinTechs use cutting-edge technology to provide to consumers the same financial services as traditional banks, but with the difference of answering to consumers' digital expectations, and often with no fees or commissions (Vose 2016). This will certainly impact the banking industry as it is and the services it provides. It is important that the banking industry adapts to these new entrants, investing in new technologies and partnering with FinTechs, in order to **take advantage of the opportunities** this cooperation can generate. Recently, Hélio Rosalino, from the Board of Directors of Bank of Portugal, incentivized internal and multidisciplinary reflexion to study the evolution of the banking industry and FinTechs. Mr. Rosalino warned about the upcoming challenges, which are significant in the financial services industry due to transformation in the Information and Technology (IT) field (O Jornal Económico 2017). According to a report by PwC (2016), most bankers see personal loans and finances as two services for which customers would change from a retail bank to a FinTech company. Reasons are related to intuitive product design, accessibility and faster services which make the service much more attractive. According to the same report, bankers are looking for partnerships with these companies and want to buy their services to incorporate them in their own systems (PwC 2016).

Factor #11. Artificial Intelligence (AI): AI is an intelligence said to have the ability to revolutionize the banking sector, in both front-office and back-office processes, by learning how banks learn from and interact with customers. Banks are exploring ways of using the

power of AI to streamline internal processes and improve the customer experience, e.g. offering advices for a client's specific and complex needs and taking simple financial decisions on client's behalf (GlobalData 2017). According to PwC (2016), 30% of large financial institutions are investing or plan to invest in AI within the next 12 months.

Factor #13. PSD2 Regulation: From January 2018 onwards, in Europe, financial institutions will be introduced to new banking regulations - the Revised Payment Service Directive (PSD2). PSD2 is forcing banks to open their infrastructure and "provide open Application Programming Interfaces (APIs) that allow authorized account-level access to third parties" (Raftery 2017). Giving a secure access to customer accounts (with customer's permission) is concerning many banks, feeling exposed and possibly under attack from third-party providers, such as FinTech companies. However, this can also become an opportunity for Bank X, if the bank is able to adapt to it. According to Accenture (2016), banks can develop their APIs to a greater extent than the minima required in the PSD2, working with these third parties to create new products and services, which will benefit the whole sector. The European Union opening the payment market will widen consumer choice, lower transaction fees and improve convenience (Backbase 2017). Thereby, banks will be able to create a much more consumer-centric service by having a deeper customer insight. It is important that BX seizes these challenges as an opportunity, and cooperates with the PSD2 and with the new players that are rising, namely FinTechs, since all parties can benefit from one another.

Others: It is important to mention that other Political, Economic, Social, Technological and Environmental factors have an impact on the banking industry. However, these factors are less determinant for the existence of the banking industry in the future, causing solely minor adjustments, since the level of Impact and Uncertainty is lower. These "other factors" factors are briefly described in Table 2 and explained in more detail in Appendix 3.

To better understand the external situation, it is also important to analyse the competitive environment in which BX operates, to identify possible threats or opportunities within the industry. Competitors are both retail banks, that act as Bank X direct competitors, and FinTechs.

Retail banks. The Portuguese banking industry is composed by 5 major banks that represent around 82% of the market, as shown in Appendix 4. The major players are Caixa Geral de Depósitos (CGD), Banco Santander Totta (BST), Banco Comercial Português (BCP), Banco Popular de Investimento (BPI) and Novo Banco (NB).

In Table 3, the most important characteristics that define the Portuguese banking industry are represented, which were determined based on desk research and customer insights from the online survey conducted for this Work Project in October 2017. The rating attributed to each bank was based on desk research, mainly articles from newspapers, and insights from BX's specialists and executives. The reputation of retail banks has been one of the major issues in the past recent months, due to an overall bad performance in the financial sector that led several banks to go bankrupt. BST is currently the bank with the highest reputation in the sector, along with BPI due to recent increases in their ratings from Standard and Poor's (Público 2017). CGD has been decreasing in reputation (O Jornal Económico 2017) and Novo Banco is still struggling in this field, due to recent scandals related with Grupo Espírito Santo, that led many clients to lose money (Jornal de Notícias 2015). All the retail banks have been closing branches since customers are not spending as much time in branches as before (Banco de Portugal 2016, 63), contrarily to BST due to the recent acquisition of two major Portuguese banks: Banif and Banco Popular (Público 2017). Novo Banco has been investing heavily on innovation, providing new services and attracting new segments with strong marketing campaigns, i.e. NBChatPay, Poupa&Pança. Based on the insights from Mr. A, executive from

BX, CGD and BST, as the biggest banks in the sector, are perceived as more secure banks, but with a low customer service, i.e. quality of the service at the branches, bureaucracies. On the other hand, NB, BPI and BCP that have been investing on their online and offline platforms, provide a service more personalized and of more quality, i.e. better home banking solutions, better store design, more targeted segmentation.

Looking at Table 3, these five banks follow different strategies. BST and CGD are more focused on size and safety; whereas BCP, BPI and Novo Banco provide a better customer service, mainly due to their inability to compete on safety and size (see Appendix 5). Novo Banco has been struggling with reputation issues more intensively and has been investing on innovation, customer service and digital presence (see Appendix 6).

Table 3. Comparison of the most important characteristics in the Portuguese banking industry

Attributes	CGD	BST	BCP	NB	BPI
Reputation	◔	●	◑	○	◕
Distribution (# branches)	◕	●	◑	○	◔
Security	●	●	◕	○	◔
Customer Service	○	◔	●	●	◕
Innovation	○	◑	◑	●	◑
Digital Presence	○	◑	◕	●	◔

Legend:

Worst	1	2	3	4	5	Best
	○	◔	◑	◕	●	

Source: Desk research, insights from Bank X and team own analysis

FinTechs. The main objective of FinTechs is to "make financial services available to more people by lowering costs and barriers to access", and provide consumers with access to the services of a bank branch "in the palm of their hands" (McKinsey&Company 2017). The major players in the market, Revolut, N26 and Monzo, described in Table 4, offer a fully digital financial experience to its customers. Each one is currently acquiring around 2,000 customers per day, being a threat for traditional banks (O Jornal Económico 2017).

Undeniably, financial technology companies are a growing trend nowadays, but banks still possess the regulatory experience and a stronger relationship with customers, which can be a major advantage (Ernst & Young 2010). PwC published a report in 2016 on the influence of FinTechs on Financial Services, concluding that 82% of incumbents want to cope with FinTechs in the future.

Table 4. Description of the biggest FinTechs in the market

FinTech	Description	Revenue Model
Revolut	Revolut is a digital banking alternative that includes a prepaid debit card (MasterCard), currency exchange, and peer-to-peer payments. It currently charges no fees for the majority of its services. The company was launched in July 2015 and is based in London. It was launched in Portugal in October 2017. The company is not financially sustainable, yet, having registered losses of 8 million euros since its existence, however the company has already conquered 850 thousand customers.	**Freemium** 6,99€/month
Monzo	Monzo Bank Ltd, is a digital, mobile-only bank based in the United Kingdom. The company entered the market as a mobile App and a prepaid card, but in April 2017, it acquired a banking license, being able to offer a current account. To determine its revenue model, Monzo is asking its customers, the Monzo Community, to vote in one of the four options available or even provide a new alternative.	**Withdraw fees**
N26	N26 is a direct bank founded in Germany in July 2016. It provides a MasterCard and ensures safe deposits until 100 thousand euros. In December 2016, the Bank of Portugal allowed its activity in Portugal. In the end of August, N26 had 500 thousand customers.	**Freemium** 5,90€/month

Source: Economia Online 2017; Revolut 2017; Monzo 2017; N26 2017

2.2 Opportunity Analysis

Customers' interactions outside of the banking industry are shaping their expectations. All the industries are changing their strategy to meet **customer expectations** about accessibility, personalization, ease of use and convenience. The increase in fees and commissions by traditional banks due to lower spreads, as well as the FinTechs offering no fees or commissions, led to an opportunity in applying new pricing models to the banking sector. Looking at the industries outside the financial sector, the team depicted an opportunity in applying the "Ladies' Night" model to the retail banking sector. The "Ladies' Night" model has seen a very rapid adoption in the last years, including many innovative companies from different industries, i.e. Google, Microsoft and Adobe. This model is adopted in two-sided markets, when one side is identified as a "hard-to-acquire side" of the market because it is less willing or cannot pay for services, but it is willing to use the services. The other side of the market is willing to pay a price to have access to the hard-side of the market. For example,

companies are willing to pay for Google AdWords to reach customers (the hard-side of the market) and customers are not charged to use Google as its main Search Engine. The "Ladies' Night" strategy works for Google because the price the companies are paying compensates for the costs of offering Google as a free Search Engine to customers. Providing a free service to customers increases the adoption rate by giving incentives to try the service. A higher adoption rate leads to a higher number of customers, which makes companies more willing to pay for the service. Looking at it from a back-office perspective, **some customers pay for other customers**. This observation led the team to identify a segment in the market that would be more willing to pay for some services, thus compensating for the hard-side of the market. Following a customer-centric view, the team assumed customers could be segmented by pre-defined lifestyles. After conducting an online survey (see Appendix 7), the team could not validate this segmentation, since no significant correlation was found between lifestyles and banking behaviours. However, the degree of financial responsibilities showed to have some relevance (see Appendix 8). Therefore, the team developed a hypothesis based on segmenting the market by **life stages** instead of lifestyles. Referring to the "Ladies' Night" strategy, this hypothesis implies that a customer from a certain life stage would be willing to pay, compensating for a customer from a different life stage that was not willing or could not pay.

**3. The Front-End of Innovation: broadening up the innovation funnel**

3.1 Theoretical Background & Literature Review

3.1.1 Front-End of Innovation context

The Front-End of Innovation (FEI) is the "ideation" part of the innovation life cycle (see Figure 1); representing the "starting point of any potential innovation, where opportunities are identified and concepts are developed prior to entering the formal product development process" (Medium 2016). The FEI is often referred to as the "Fuzzy Front-End" because of

the complexity of going from different ideas (solutions to the business problem, new product or service opportunities) to a structured plan. The front-end is made up of adaptive interactions between involved participants with varying skills that create, evaluate, analyse and prioritize many new ideas, providing clarity and a common terminology (Ip2Biz 2014). The main activities performed in the front-end of the innovation process are research to minimize risk and optimize potential (Koen 2001). Frequent iterations are essential during the process. The business activities performed are aimed at formulating conceptual ideas to determine whether or not to invest resources in further development of the innovation.

Figure 1. The innovation life cycle
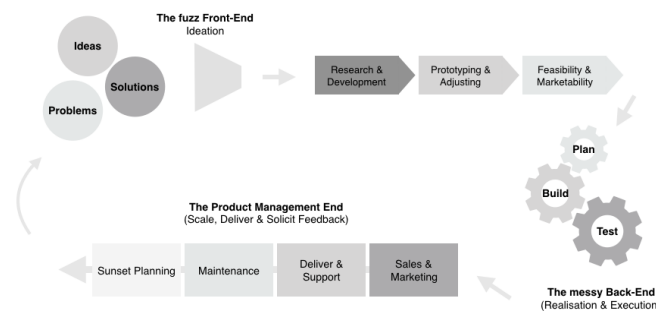
Source: Take for a Change, LLC 2000-2005

3.1.1.1 Lean Startup methodology

The Work Project has been based on **the Lean Startup methodology**, developed by Eric Ries. According to Eric Ries (2011, 1), "a startup is an organization dedicated to creating something new under conditions of extreme uncertainty". The Lean Startup methodology, is a new approach to **creating continuous innovation**, changing the way companies are built and new products are launched. It is inspired by management and product development concepts, including Lean Manufacturing, Design Thinking, Agile Development and Customer Development. This methodology relies on **validated learning** and a combination of **business-hypothesis-driven** experimentation as well as **iterative product releases** to help an individual, a team, or a company shorten product development cycles and learn what customers really want. The **Build-Measure-Learn** feedback loop is at the core of the Lean

Startup methodology, proposing to entrepreneurs to quickly build a Minimum Viable Product (MVP), measure its effectiveness using customer feedback, and learn from that experiment. By applying lean thinking to the process of innovation, the **objective** of the Lean Startup methodology is to **eliminate wasteful practices** and increase value-producing practices during the product development phase to give startups a better chance to succeed without elaborating business plans or requiring large amounts of funding (Ries 2011, 7). All in all, the Lean Startup methodology provides to entrepreneurs a scientific approach to continuously test, adapt and adjust their vision.

3.1.1.2 Design Sprint

Everyday, companies of all sizes face tough problems to solve and do not know where to begin to solve these problems. Incorporating the Lean Startup methodology, the **Design Sprint methodology** is an approach developed by three partners at Google Ventures - namely Jake Knapp, John Zeratsky and Braden Kowitz - offering a **five-day process**, from idea to prototype to decision, for identifying the best solution to any challenges faced in an organization or startup. Following the Lean Startup methodology, the objective of the Design Sprint methodology is to develop a prototype that best fits the **customer needs**, using the processes of learning, validating and iterating.

Preparing for the Sprint starts with "setting the stage", composed of five key elements. The Sprint starts by first selecting the right challenge, assembling the right team, making the time, making the space, and getting Sprint supplies. The ideal team size is seven people, including a decider, a finance expert, a marketing expert, a customer expert, a tech/logistics expert, a design expert and a troublemaker. A team member will also be designed as the facilitator, who will be responsible for managing time, conversations and the overall Sprint process. The team member and functions are summarized in Table 5 whereas the five-day process is summarized in Table 6.

Table 5. Team members and functions of a Sprint

Team Member	Function
Decider	A person that makes the decisions for the team
Finance expert	A person that explains where the money comes from and where it goes
Marketing expert	A person that crafts the company's messages
Customer expert	A person that regularly talks to customers one-on-one
Tech/logistics expert	A person that best understands what the company can build and deliver
Design expert	A person that designs the products the company makes
Troublemaker	A smart person who has strong, contrary opinions, and whom the team might be slightly uncomfortable with including in the Sprint

Source: Knapp, Zeratsky and Kowitz 2016

Table 6. The five-day process of a Sprint

Day	Tasks
Monday: "Mapping Day"	The purpose of Monday is to create a path for the Sprint week. In the morning, the team "starts at the end", and agree to a long-term goal. Then, the team will list all the questions, risks, assumptions and the things that might prevent from achieving the long-term goal. Next, the team makes a "map" of the challenge: make a simple diagram showing how the customer moves through the product/service. In the afternoon, the team "asks the experts" at the company to share what they know and use their knowledge to improve the map. Finally, the team picks up a "target" for the Sprint: a specific, an ambitious but manageable piece of the problem that can be solved in one week.
Tuesday: "Sketching day"	On Tuesday, the team will come up with solutions. The day starts with an exercise called "lightning demos": a review of existing ideas to "remix and improve". Then, in the afternoon, each person will "sketch", following a four-step process that emphasizes critical thinking over artistry. Later in the week, the best of these sketches will form the plan for the prototype and test.
Wednesday: "Decision day"	By Wednesday morning, the team will have a stack of solutions, which can be a problem. In the morning, the Sprint team will critique each solution, and decide which ones have the best chance of achieving the long-term goal. Then, in the afternoon, the team will take the winning scenes from the sketches and weave them into a storyboard: a step-by-step plan for the prototype.
Thursday: "Prototyping day"	On Thursday, the team will adopt a "fake it" philosophy to turn that storyboard into a realistic prototype.
Friday: "Testing day"	On Friday, the team will interview customers and watch them react to the prototype. This test makes the entire Sprint worthwhile. At the end of the day, the Sprint team will know how far they have to go, and they will know what to do next.

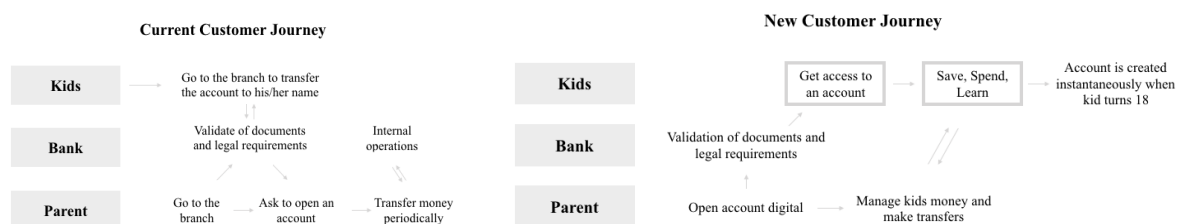*Source*: Knapp, Zeratsky and Kowitz 2016

3.2 Analysis: Designing and testing a prototype

The Design Sprint methodology has been used to identify the best solution to the challenge faced by BX, the latter being developed during the 1st day of the Sprint as *"How can we make kids engaged while parents pay for the services?"*. The team was composed of five people: three Bank X executives, namely Mrs. G being the decider, Mr. D the finance expert and facilitator, and Mrs. H the marketing expert - and two students part of the Nova SBE team -

namely Joana Roquette and Sebastien de Brouchoven. The five-day process took place at the Nova SBE Venture Lab in Lisbon.

Monday - Mapping Day: On Monday, the objective was to set up a path for the Sprint week. The team decided to focus on developing a solution and set a long-term goal for the Sprint: *"having customers A pay for customers B"*. The team used design thinking techniques, such as mind maps, to list the risks, questions, assumptions, obstacles related to the long-term goal. During the morning, an expert in multi-channel platforms at the bank, Mrs. X, explained the current strategy of the bank and the team understood there was a problem for Bank X to attract the younger generation. Using the exploratory research developed in the previous weeks and Mrs. X, expert in market research, expertise, the team decided to focus on kids and mapped the different life stages of a kid, from 0 to 20 years old, as well as map the different stakeholders involved. A map showing the **Customer Journey** has been developed, showing possible interesting touch points between the three stakeholders identified: kids, parents and banks. After drawing the Customer Journey, the team concluded there were no touch points between the bank and kids, since there is no relevant solution in the market for this segment. Therefore, a Customer Journey after the new solution was built to understand how the bank could be more present for kids (see Figure 2).

Figure 2. Customer Journey of kids and parents with banks

During the afternoon, two experts - Mrs. Y and Mr. Z - came to the Venture Lab to share their know-how about segmentation, the importance of user experience in designing a platform and the challenges of data usage; and for the team to use the expert's knowledge to improve the

map. An important insight received from Mrs. Y was that despite the University campaigns being successful in attracting customers, the bank had troubles in retaining these customers. One reason for this retention problem is the entrance of new players providing financial services with no fees and commissions for all customers, namely ActivoBank and Banco CTT. A second reason is the lack of loyalty in the banking industry, especially among youngsters, making customers to change to the bank with the best conditions when they no longer are offered free fees and commissions. This insight made the team think about a way to create a valuable relationship earlier in the stage of customers, which would in turn lead to better customer retention. Based on the insights received during the day and on the conclusions from the desk and exploratory research the team decided to develop a solution for the following target: ***"how to create a solution to attract and keep children by having their parents pay for the services".*** The three phases that were part of the construction for the final Sprint challenge are described in Table 7 below.

Table 7. Three phases of the challenge

Phase 1	Phase 2	Phase 3
Some customers pay for other customers	The market is segmented by life stages where some segments are more willing to pay than others	Parents are willing to pay for a service (customers). Kids want to use the service but are not able to pay (users).

Source: Team own analysis

Tuesday - Sketching Day: The objective of Tuesday was to come up with ideas and solutions. After reviewing, remixing and improving the ideas that were discussed on Monday, the team understood that it was very difficult to offer a solution that would suit all children from 0-20 years old. Therefore, the team defined the characteristics about each age range (see Appendix 9) and developed three hypotheses, assuming kids would be segmented by the following age groups (see Table 8).

Table 8. Segmenting customers by life stages.

Hypotheses	Description
H1	To create a bank for kids from birth until 10 years old, which would be complemented by an educational platform about financial management.
H2	To create a bank for teens aged 10 to 20 years old, which would be aspirational for the younger generation, educational (learning about saving and spending) and social.
H3	To create a bank following kids from 0 to 20 years old.

Source: Team own analysis

Since different life stages imply different needs, developing a solution following kids from birth to the age of 20 years old (hypothesis 3) would be too complex. Our objective being to develop a solution to attract and keep kids, the team decided to focus on the second group: the teens. The next step was to individually read all the ideas, post-its and notes developed on Monday and start thinking about different concepts and features that could be relevant to add to a product or service for this target. As explained in the literature review, time is key in the Design Sprint methodology. During every step, the facilitator, Mr. D, was carefully managing time to make sure the work was performed as efficiently as possible. The objective of the afternoon was to sketch ideas. Every team member shared different concepts and features they think would fit the teens' needs and the team voted unanimously for the best options to work on. Later, building on these best options, each of the team members sketched a concept board, composed of 8 scenes related to the possible options (see Appendix 10). By the end of the day, ideas were organized in each concept board to be presented on Wednesday.

Wednesday - Deciding Day: The objective on the third day was to decide which of the solutions would have the best chance to achieve the long-term goal. In the morning, each team member presented its sketches to be able to decide on one solution to work on by the end of the day. The winning scenes from the sketches represented concepts related to financial education, gamification and the importance of teens performing daily tasks. Out of these concept boards, two concepts have been chosen and are described in Table 9.

Table 9. Concepts developed during the 'Deciding Day' of the Sprint.

Concepts	Description
C1	An App offering a Digital Wallet and a Digital Piggy Bank with the basic services offered by a bank, in which parents and kids would have access to their balance, make transactions and save money.
C2	Concept 1 based on gamification including a Points, Badges, Leaderboards (PBL) system to keep kids engaged.

Source: Team own analysis

Furthermore, based on our research, feedback and insights from the bank, the team added the possibility to develop these concepts by applying one of the following alternatives: either **(1)** create a bank for kids that would offer more financial services, but it would add complexity to the process (i.e. bureaucracy), or **(2)** provide only a prepaid card, which would make the process simpler but would restrain the services provided by our solution. The two concepts and alternatives were presented to the whole group to be voted on. Concept 2 with alternative 1 got the majority of the votes: a bank that provides to its customers **(1)** a current and savings account for kids, **(2)** a debit and/or prepaid card for kids, **(3)** an App for kids based on gamification and **(4)** an App for parents to manage their kids' account.

After further discussions about the concept voted on, the team concluded that a solution based on gamification would only fit children aged between 10 and 15 years old. This decision was based on the insights of some of the team members that had kids of this age, so the solution would be developed only for this target group. The rest of the afternoon was dedicated to designing a plan for the prototype and detailing the features of the solution.

Thursday - Prototyping Day: On Thursday, the objective was to turn the storyboard into a realistic prototype in order to validate our assumptions with customers on day 5. In the morning, the team brainstormed about different names for the bank. The name had to sound good, had to have a meaning and had to convey a benefit. After several hours, the team finally agreed on a name: **Kick Bank**. The word "kick" refers to the "kick off" of a game and to the "kick off" of kids' financial lives with their first bank. The next step was to meet with the designer of the Venture Lab, Mrs. L, to explain to her what the value proposition of Kick Bank was and what services the bank was offering. In the afternoon, the team worked together

with Mrs. L to develop the logo, a mock-up of the app, as well as a first version of the Landing Page[7] with the main features. This mock-up would be used later to receive feedback about Kick Bank. At the end of day 4, the prototype was built (see Appendix 11) and the team was ready to interview parents and their kids. For kids, the prototype included a mock-up of the Digital Wallet and Digital Piggy Bank where they could save their money; the possibility to play games, watch videos and do quizzes to earn points; receive points from their parents for doing chores at home; and a Store where they could spend those points in things they like. For parents the main features included in the prototype were the possibility to control and manage their kids' financials through the app; buy points to give them if they do chores pre-defined by parents, as well as rechargeable cards; make direct transfers and set definitions to each kid.

Friday - Testing Day: On Friday, the objective was to test the prototype with parents and kids, as well as to analyse their reactions to the prototype to validate, or not, the assumptions made regarding the solution. Therefore, the team interviewed 5 parents and 5 kids aged between 10 and 12 years old to understand and observe the reactions of the different Customer Segments while exploring the prototype. The interviews were divided into three parts**: (1)** A questionnaire was built (see Appendix 12) to understand the opinions of parents with regards to their kids' financial management, education and habits; **(2)** The team showed the first version of the Landing Page (see Appendix 13) to the parents and explained them the services and the benefits Kick Bank was offering, as well as to analyse parents' and kids' reactions to Kick Bank to see if the concept was attractive and valued by both parents and kids; **(3)** The team showed the App mock-up to both parents and kids to see if it was meeting the interviewees expectations and receive feedback about the features and design of the app. The team also asked about parents' opinion on different pricing strategies that could

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[7] **A Landing Page** is a standalone web page distinct from the main website that has been designed for a single focused objective, i.e. present a new business to customers (Unbounce 2015).

potentially be implemented for the service: freemium model[8], membership, etc. This last day of the Sprint gave us an overview of what to do next during the Customer Development stage in order to turn the prototype into a business opportunity.

3.3 Internal conclusions

The Sprint gave us the tools to explore the area of opportunity by analysing different avenues to come up with a prototype in only five days. The result of the Sprint was Kick Bank, a bank that provides to its customers **(1)** a current and savings account for kids, **(2)** a debit and/or prepaid card for kids, **(3)** an App for kids based on gamification and **(4)** an App for parents to manage their kids' account. The prototype was tested during interviews with 5 parents and 5 kids aged between 10 and 12 years old[9]. The overall feedback collected from potential customers and users interviewed was positive.

Kick Bank was perceived as an innovative product by the majority of the interviewees as it offers an easier and more convenient way to manage their money. Additionally, the majority of interviewees from both Customer Segments were interested in the engaging features in the app, i.e. to earn points and have access to the store, and also with the possibility to talk and share their needs, goals and accomplishments with each other. Based on these interviews and on the positive feedback received, the team saw a potential in the solution proposed and decided to use this new prototype as a starting point for the Customer Development process.

4. Back-End of Innovation: narrowing down the innovation funnel

4.1 Theoretical Background & Literature Review

4.1.1 Back-End of Innovation context

The Back-End of Innovation (BEI) is the "realization & execution" phase of the Innovation Life Cycle (see Figure 1). During the BEI, sometimes referred as the "Messy Back-End" of innovation, the innovation process comes to life and starts to take shape. In this phase, the

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[8]The **freemium model** is a pricing strategy by which a product or service is free of charged but typically, customers are charged for premium features (Harvard Business Review 2014).
[9]The team decided to focus on the age range in which the bank could make the biggest difference: when kids usually receive a smartphone, buy their lunch at school and start to make their own decisions. Later the team would try to understand until what age the solution would fit.

best ideas developed in the Front-End of Innovation are transformed and executed using different processes: testing, development and implementation. The BEI needs careful planning to ensure innovations are developed and delivered in a timely and cost-efficient manner (Medium 2016). The objective of the BEI is to decrease risk and optimize the innovation-market fit before launching the innovation. To help reach the objective of the BEI, the Lean Startup methodology can be used.

To build a Lean Startup, after having a tested prototype developed during the Sprint, the next step was the search for a scalable, sustainable and viable business model. A business model describes the rationale of how a company creates, delivers and captures value (Osterwalder and Pigneur 2010). Several tools can be used to search for a successful model, namely the Business Model Canvas and the Customer Development.

4.1.1.1 Business Model Canvas

In 2010, Alexander Osterwalder and Yves Pigneur developed the **Business Model Canvas**, a strategic management tool for **describing, analysing, designing and developing** business models. The Business Model Canvas is a visual chart composed of nine building blocks describing the logic behind how a company is going to make money, covering the main areas of a business: its customers, its offer, its infrastructure and its financial viability. Companies can use the canvas as a base for aligning their different activities while having a look at potential trade-offs (Osterwalder and Pigneur 2010). The nine building blocks represented in the Business Canvas are described in Table 10.

Table 10. Building blocks of the Business Model Canvas

Key Partners	Key Activities	Value Proposition	Customer Relationship	Customer Segment
It describes the network of suppliers and partners that make the business model work.	It describes the most important things a company must do to make its business model work.	It describes the bundle of products and services that create value for a specific Customer Segment.	It describes the types of relationships a company establishes with specific Customer Segments.	It defines the different groups of people or organizations an enterprise aims to reach and serve.
	Key Resources It describes the most important assets required to make a business model work.		**Channels** It describes how a company communicates with and reaches its Customer Segments to deliver a value proposition.	
Cost Structure It describes all costs incurred to operate a business model.			**Revenue Streams** It represents the cash a company generates from each Customer Segment (costs must be subtracted from revenues to create earnings).	

Source: Osterwalder and Pigneur 2010

Many companies build new product and services for customers, but 72% fail to deliver on expectations, which means that customers do not care about 7 out of 10 products that are introduced to the market (Simon-Kucher & Partners 2014). The most important building blocks of the Business Model Canvas are the Customer Segment and the Value Proposition, since all the others depend on them. In 2014, Alexander Oswald and his team released the book "Value Proposition Design", giving a closer look on these two building blocks. The **Value Proposition Canvas** is a tool that helps to **visualize, test and design** how a company can **create value for its customers**. It is composed by Customer Profile, that describes the jobs, the pains and the gains of the customers, and the Value Map, that describes how a company creates gains, relieves pains and delivers a valuable product or service. In Figure 3 below, the different components of the Value Proposition Canvas are described.

Figure 3. Value Proposition Canvas
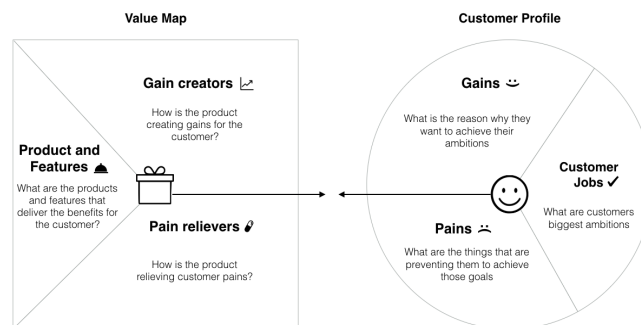
Source: Osterwalder, Pigneur, Smith, Bernarda and Papadakas 2014

According to Alexander Osterwalder and Yves Pigneur (2010), **multi-sided platforms**, also known as multi-sided markets, are platforms that bring together two distinct but interdependent groups of customers. Multi-sided platforms can imply multiple value propositions and multiple Customer Segments. By attracting and serving the different Customer Segments simultaneously, the platform creates value. In this type of platform, the value created for a particular Customer Segment will depend on the number of users on the "other side" of the platform.

4.1.1.2 Customer Development

In 1990, the entrepreneur Steve Blank developed a systemized approach to guide entrepreneurs' search for "repeatable and scalable business models" in any startup, which can be a new venture or a new division or business unit of an existing company. The **Customer Development model** is a process used to organize and implement the search for a business model, dividing all the customer-related activities into four steps. Step 1 and 2 describe the "search" for the business model. Steps 3 and 4 "execute" the business model that has been developed, tested, and proven in steps 1 and 2. The four steps have been summarized in Table 11.

Table 11. Steps of the Customer Development process

Phase	Steps	Explanation
Search	**1. Customer Discovery** Objective: Problem/Solution fit	The founders' vision is captured and turned it into a series of business model hypotheses. Then, a plan is developed to test customer reactions to those hypotheses and turn them into facts. The Customer Discovery phase is divided into four phases: **a. State the hypothesis** about the nine blocks of the business canvas and list the experiments/tests to perform, as well as the "pass/fail" goals to validate or not each one. This can all be summarized in a Validation Board. **b. Test the problem** by conducting the experiments listed in phase 1 and update your results on the canvas. **c. Test the solution** by presenting the value proposition and a MVP to customers, and compare their responses to the "pass/fail" goals developed in phase 1. **d. Pivot or proceed** based on the results of the experiments conducted earlier.
	2. Customer Validation Objective: Product/Market fit & business model fit	The resulting business model is tested to see whether it is repeatable and scalable. If not, you return to the Customer Discovery phase. In this step, it is imperative to run quantitative pass/fail tests to determine whether the product/market fit is valid enough to justify scaling sales and marketing spending. The Customer Validation is divided into four phases: a. Prepare six **get ready to sell** activities to be prepared to hit the streets. b. **Get out of the building** to see whether customer will validate the business model by buying the product. c. Develop and refine the product and company **positioning**. a. **Verify** that Customer Validation is complete and the company knows how to scale.

Phase	Steps	Explanation
Execution	3. Customer creation	This step is the start of execution. It builds end-user demand and drives it into the sales channel to scale the business.
	4. Company building	The organization transitions from a startup to a company focused on executing a validated model.

Source: Osterwalder and Pigneur 2010

More precisely, the first task of a startup is to validate its business model hypotheses; and to do so, it needs to iterate and pivot until it is validated. According to Steve Blank and Bob Dorf (2012), most of the startups conducting the Customer Development process cycle through discovery and validation multiple times. The faster these "learn, build, pivot" or "iterate, build" **cycles** happen, the better. After having validated its business model hypotheses, the startup can move to the execution phase.

4.2 Analysis

4.2.1 Validation of business model blocks

The team used the Customer Development process to organize and implement the search for the new business model of BX. The Customer Development process lasted for three weeks and was divided into two different phases: **Customer Discovery** (phase 1) and **Customer Validation** (phase 2). During the Customer Discovery phase, the objective was to explore the market and get deeper insights from it to validate the **problem/solution fit**. The goal during the Customer Validation phase was to test the market and validate the **product/market fit**. A Validation Board (see Appendix 14) has been used during the Customer Development process as a tool to track the results obtained in the two cycles performed during the Customer Discovery phase in terms of validated and unvalidated hypotheses. The Validation Board summarizes the initial hypotheses developed, the experiments performed to test these hypotheses, and the Minimum Success Criteria (MSC)[10] to validate each one of the hypotheses.

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[10]**Minimum Success Criteria (MSC)** is the smallest outcome that would validate the success of a hypothesis

The Customer Discovery phase was divided into two cycles. During **cycle 1**, interviews with 11 parents and 11 kids were performed. During **cycle 2**, an online survey was made to explicitly test the problem/solution fit.

a. Cycle 1: Interviews

State the hypotheses. The team developed a series of business model hypotheses based on the results and feedbacks of the Sprint, including desk research, expert opinions, and interviews with parents and kids. The initial hypotheses (see Figure 4) were developed for each of the nine building blocks of the Business Model Canvas (BMC), using the canvas as a "scorecard" to track the progress in searching for a repeatable and scalable business model. Nevertheless, the team decided to **prioritize** to test the hypotheses in the five front-office blocks of the Business Model Canvas - Customer Segments, Value Proposition, Channels, Customer Relationships and Revenue Streams. In the Validation Board, 40 hypotheses have been developed, in which 26 hypotheses about the front-office have been tested for both kids and parents.

Figure 4. Initial Business Canvas hypotheses
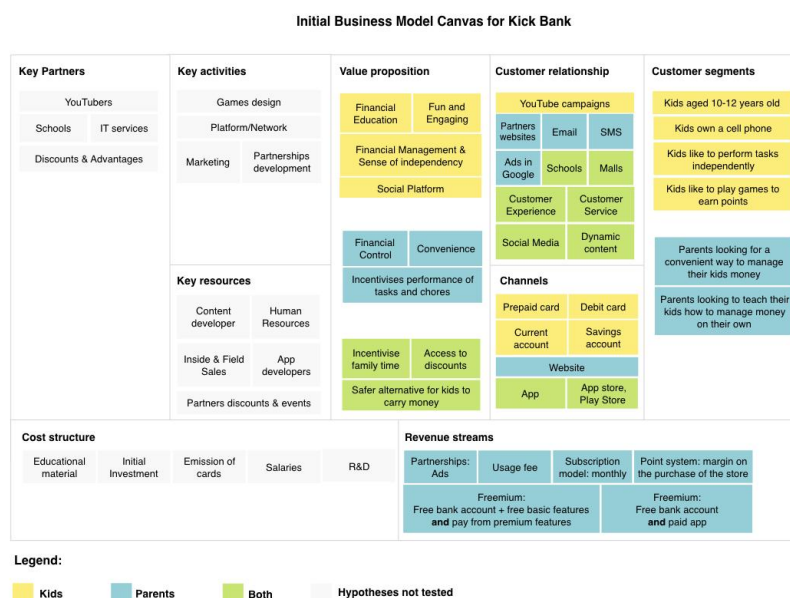
Source: Team own analysis

Test the problem. The team asked parents and kids questions regarding their habits, lifestyles and behaviours, to better understand the jobs, pains and gains of both Customer Segments, consequently leading to the development of a more valuable solution. First, the team understood that kids had three main jobs: to be seen as "grown-ups", to follow the digital trend, and to have fun. These jobs give kids a sense of independence and 'feeling cool'. Nevertheless, kids feel their parents do not trust them enough to give them more responsibilities and of course, their age is legally restricting them from performing certain activities. Second, parents value family time and are favorising the education of their kids. Sometimes, the work/life balance of certain parents makes it difficult to spend time with their kids to educate them and teach them the important values in life. Moreover, from the interviews, the team could understand that having kids perform chores at home is a real pain parents face everyday. In Table 12, insights related to the pains of parents and kids are mentioned. These insights helped to define the features and benefits of the final solution.

Table 12. Statements of Kids and Parents related with their Pains

Kids	Parents
"I would like to buy things with my own money but my parents don't let me"	"I would be relieved if my son was more aware about the value of money. I would be willing to give him more responsibilities if he was more responsible."
"I save money in my Piggy Bank, but when it gets full I have to put it in my parents' bank. I always have to ask them how much I have."	"I feel I taught them how to spend and save wisely but I'm not comfortable about giving them full autonomy"
"I don't like to do chores at home. Sometimes I say I'm tired so I don't have to do them."	"I have to manage my kids' accounts one at a time"

Source: Team own analysis

Test the solution. The hypotheses developed for the building blocks 1 to 5 have been tested during individual interviews, observing parents and kids using the prototype of the App built during the Sprint, as well as incorporating the insights collected during "Test the problem". The objective was to analyse their reaction, how they behaved manipulating the App, if the features developed were valued by them and answered to their needs, learn from them to improve the customer experience, understand what the best approach would be to get/keep/grow customers and what pricing strategies would be the most suited for them.

During the interviews, the team tried to understand what are the things kids would value and would be eager to achieve and accomplish, as well as which features would help to solve their jobs or relieve their pains. The revenue streams were tested presenting different options to parents. The objective was to understand if parents would be willing to pay for the service, how much they would be willing to pay, as well as how they prefer to pay.

Pivot or proceed. The hypotheses validated and unvalidated in cycle 1 are represented in Appendix 15, and the major observations are explained in this step. A significant share of parents frequently looks at their kids' transactions on the school cards[11] or give them money for a specific purpose only. This validates the fact that parents value to have control over their kids' financial activities. The majority of parents showed interest in having a better alternative for managing their kids' money. A significant share of parents mentioned that kids sometimes lose money or forget to charge their school card, which concerns them. This validates the hypothesis that parents would value a solution that would offer them a more convenient way to transfer money to their kids' accounts, as well as a safer way for kids to carry money. Moreover, a significant share of parents feel that kids do not have enough knowledge about the value of money or financial management, so they would value an easy and simple way for kids to learn about it. In addition, all parents mentioned the pain of asking kids to do chores at home and showed interest in the feature of incentivizing kids to do them. With regards to kids, the majority of them were having troubles with managing their money, i.e. to save for a specific purpose. This validates the importance of providing a tool to make the management of money easier and more accessible. A significant share of kids usually spend time on their smartphone playing diverse games mentioning it was fun and entertaining. This validates the hypothesis of including a gamification component in the Kick Bank App. However, a major **pivot** during the cycle 1 was to drop the point system as a revenue model, because the point

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[11]A significant share of the interviewees mentioned a school card as a way to pay for things at school. It is a rechargeable card that allows kids to pay for things inside the school, i.e. buy lunch at the cafeteria. However, the card can only be charged at school. Usually parents give physical money to kids for them to charge the card at school.

system involved hypotheses that were not validated and because of the complexity of implementing it in the App. Additionally, after conducting the different interviews with kids, the team decided games and point system was a nice feature to have but not a "must-have" feature, at least for the development and validation of the MVP. Based on insights from parents, the subscription model would be the best model to implement, with the condition of first testing the App for free. After cycle 1, the mock-ups of the App were adapted according to the feedback received.

b. Cycle 2: online survey

Test the solution. The MVP developed in cycle 1 was used to test the new features of the Kick Bank App. The team tested the solution through an online survey conducted to parents and kids (see Appendix 16), showing different screens of the App referring to benefits of Kick Bank. In addition, questions regarding the willingness to pay for and pricing of the service were asked specifically to parents. The survey was done to kids aged between 10-16 years old to understand until what age Kick Bank would fit. Minimum Success Criteria have been developed to decide which features would be "must-have features" to present during the Customer Validation process, and which ones were only "nice-to-have features" that could be implemented after the validation of the MVP.

Proceed. The hypotheses validated and unvalidated in cycle 2 are represented in Appendix 17, and the major observations are explained in this step. The team decided to implement features in the MVP if they received an overall rating of at least 4 out of 5, grouping kids aged between 10-12 (the age range previously validated) and kids aged between 13-16 years old. The average rating given by kids to the Kick Bank App was 4.6. The average rating given by parents to the Kick Bank App was 4.6. There was no significant difference between the answers from both age ranges, meaning that Kick Bank would fit all these ages (see Appendix 18). Therefore, the MVP was built including the Home Page, the Digital Wallet and Digital

Piggy Bank, the objectives and tasks, the levels and trophies, and messages. The videos and quizzes about financial education had an overall of 3.9 from kids, but this feature showed to be valued by parents. Therefore, the team decided to incorporate it in the MVP. The results of the online survey are presented in Appendix 19. With regards to the pricing of the App, 64% of the parents were willing to pay for the service. After updating the Business Model Canvas to reflect the pivots and iterations encountered during this cycle, the team finally reached a problem/solution fit, and turned some hypotheses of the front-office building blocks into facts.

4.2.1.2 Phase 2: Customer Validation

During the Customer Validation phase, only step 1 and step 2 were performed, since step 3 and step 4 were out of scope for this Work Project.

Get ready to sell. The team decided to focus on three activities to better prepare before going on the streets and present the final product to customers. First, the final MVP of the App (see Appendix 20) was developed incorporating all the feedback from the Customer Discovery phase. Second, an online campaign was conducted on Facebook to measure people's activity around Kick Bank, i.e. conversion rate, click-through-rate (CTR), number of shares and number of likes on Facebook. Third, the team built a strategy to present the Minimum Viable Product to parents and kids at the Wonderland Christmas market in Lisbon to create awareness around Kick Bank, to see if interest was shown in the product, and to test the MVP and get feedback about it. A MSC defined by the team was to receive an overall of 4 out of 5 stars from the kids and by receiving at least two contact information from parents. Flyers have also been printed to increase the credibility of the product (see Appendix 21).

Get out of the building. In step 2, the team decided to "go public" with Kick Bank and test the different hypotheses through different channels. Through the social media Facebook, the team "got out of the building" virtually. An online campaign on Facebook was made (see

Appendix 22 for analysis). The campaign lasted for 5 days with a budget of 10€. The target was parents aged between 35 and 45 years old, living in Lisbon or Porto, and having kids aged between 8 and 12 years old and 13 to 18 years[12] to cover our Customer Segment. The online campaign resulted in 623 people reached, and 12 likes on the page (out of a total of 32 likes). According to Facebook, 10 likes per day would be the maximum amount the team could reach during the five-day campaign. Taking into account all the limitations, the biggest one not being able to mention that Bank X is behind Kick Bank, the team assumed 20% out of the 100% of likes would validate the concept. With an average of 2.4 likes (24%) per day resulting from the campaign, we believe that the Facebook online campaign was successful. Additionally, the team sent the Facebook page and the final Landing Page (see Appendix 23) to some friends and family to receive further insights, even though these are not "real customers". The overall feedback was positive. However, a significant number of people asked if there were any financial institutions behind Kick Bank, which demonstrated the importance of presenting to customers Kick Bank as a spin-off of Bank X. Not having the possibility to state that Bank X was behind Kick Bank due to confidential issues highly affected the credibility of Kick Bank and the results of the Customer Validation phase. Through interviews performed at the Wonderland Christmas market in December 2017, a large audience of parents and kids was available. The team "got out of the building" and approached 21 families, out of which 10 families agreed to have the project Kick Bank presented to them. Since kids are the users (and not the customers), the team was looking for validations regarding their experience on the App. Therefore, kids would try it and rate their overall experience from 1 to 5 (see Appendix 24). The kids were aged between 11 and 14 years old, and showed a lot of enthusiasm and interest in the App. An overall of five stars were given by the eleven kids interviewed, but none of the parents provided their contact for more information about the product launch (the MSC was at least two emails). Nevertheless,

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[12] Age ranges pre-defined by Facebook, and thus 13-18 years old was set, instead of 13-16 years old.

the team believes this does not mean the concept of Kick Bank is not validated, since not having the possibility to mention that Bank X was behind the project was a major limitation. Moreover, a Christmas market is not the best place to approach potential customers of Kick Bank, since money and banks are two very sensitive topics. For **further research** and to validate the product/market fit, we believe that a valid experiment during Customer Validation would be to present Kick Bank in different branches of Bank X, thereby already being in a financial environment and having the necessary credibility.

4.3 Business Canvas of Kick Bank

The final Business Canvas is presented in Figure 5. The hypotheses about the front-office - Customer Segments, Value Proposition, Channels, Customer Relationships and Revenue Streams - have all been tested; the validated hypotheses are listed as facts in Figure 5. The hypotheses about the back-office - Key Resources, Key Activities, Key Partners and Cost Structure - still remain assumptions.

Figure 5. Final Business Canvas of Kick Bank
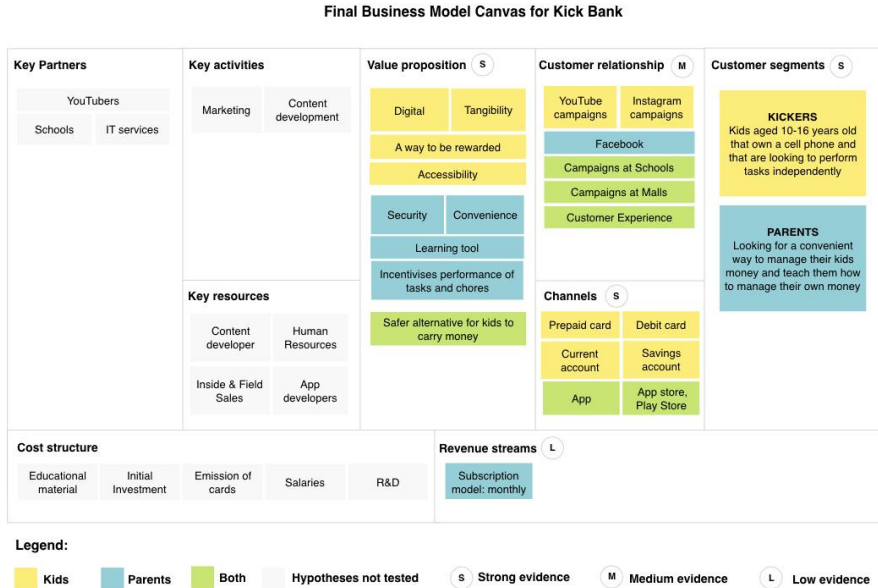
Customer Segments and Value Proposition. Two Customer Segments will be targeted. Kickers are kids aged 10-16 years old that own a cell phone and that are looking to perform

tasks on their own. Parents, on the other hand, are looking for a convenient way to manage their kids' money and teach them how to manage it on their own. A Value Proposition Canvas has been built for kickers and parents (see Figure 6) to better understand the relationship between Customer Segments and Value Proposition.

Figure 6. Value Proposition Canvas for kids and parents
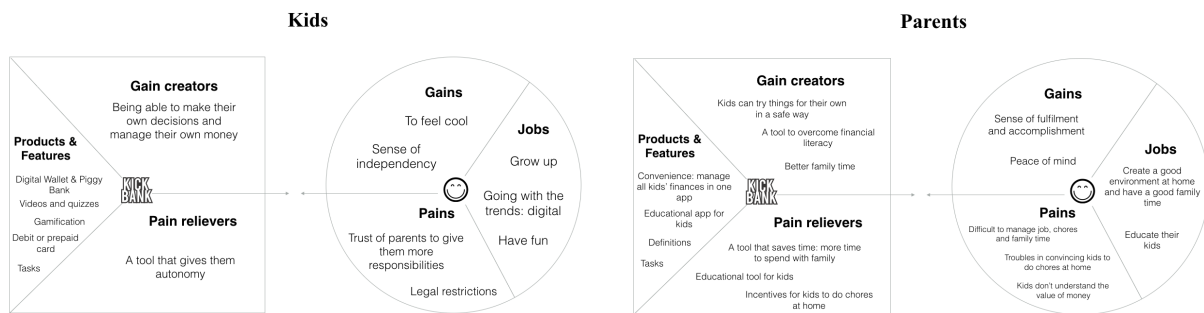
Source: Team own analysis

Channels. Value will be delivered to both Customer Segments through two Kick Bank Apps, one for each side of the platform. Kickers can on their App manage their money and learn about financial management. Parents can on their App control their kids' financial transactions. The App can be downloaded from the App Store or Play Store. The opening of the account, the debit card and prepaid card are all accessed from the App.

Customer Relationships. Kick Bank **gets** customers through Social Media campaigns, campaigns at schools and campaigns at malls. Kick Bank **grows** and **keeps** customers by providing a unique customer experience to both Customer Segments.

Revenue Streams. Parents will be paying 3€ per months per child to use the debit or prepaid card and to have access to the Kick Bank App. The service will be free for kickers.

5. Recommendations

5.1. Answer to the challenge of Bank X - Kick Bank: "It's up to you!"

Bank X has the resources and capabilities to thrive in the market but its business model is outdated and not customer-centric enough, which can become a challenge in the future. The objective of this Work Project was **to better meet customer expectations** by answering the

following challenge: "How can retail banks create value for customers tailored to their expectations" by creating a new concept for Bank X in which some customers (parents) pay for other customers (kids).

Kids, the users, are the "hard-to-acquire side" of the market, thus are offered the product/service for free because they cannot afford it. Offering free financial services to kids imply finding other ways of generating revenues for the bank. Therefore, parents, the customers, are paying for the product/service, since they perceive the value-added of this new concept. The Living Innovation Lab team created Kick Bank by using methodologies that are usually followed by entrepreneurs to build valuable customer-centric products. The objective of using such methodologies was to better meet customer expectations in terms of accessibility, ease-of-use, personalization and convenience and to better cope with the challenges and opportunities identified during the Diagnosis phase.

Kick Bank is kids' - between 10 and 16 years old - first bank, totally digital. Kick Bank offers to its Customer Segments a bank account, debit card or prepaid card and two versions of the mobile App, one version for each Customer Segment. The version of the App for kids gives them the opportunity to manage their own money, their savings and define financial objectives. Kick Bank has been created because the team validated that there is a lack of financial tools proposed to kids, tools that help them manage their money and make financial decisions autonomously, to better prepare them for the real world. Kick Bank offers this solution in a digital and interactive way. The version of the App for parents permits them to be always connected to their kids, incorporating features such as transferring money, sharing goals and objectives, and writing messages. Kick Bank represents a new concept for Bank X, built on **customer expectations**, giving to the bank the possibility to cope with the digital trend and entrance of new players. By exploring the opportunity in which customers A

(parents) pay for customers B (kids), the team developed a customer-centric approach in the financial sector.

As mentioned earlier, customer's interactions outside of the banking industry are shaping their expectations, forcing the industries to change their strategy to meet customer expectations. Kick Bank has been created to answer these changing expectations in terms of accessibility, personalization, ease of use and convenience, as shown in Table 13. By attracting customers at an early stage and offering a product/service tailored to them by adopting a more customer-centric approach, the team believes that Kick Bank will increase customer retention and customer loyalty for Bank X.

Table 13. Kick Bank is meeting customer changing expectation

Customer expectations	Description
Accessibility	Kick Bank gives to kids access to a service that currently is provided only to adults in Portugal. Kick Bank offers a current and savings account where kids can choose whether they want to spend or save money; their own debit or prepaid card and an App in which they can manage their money and see all their financial activities.
Ease of use	Kick Bank answers to customer needs in terms of digital expectations, by providing the financial service through the App. Parents just have to download the App on the App store or Play Store, and open the account directly on the Kick Bank App, after inserting all the legal information necessary. A version of the App for parents and kids is created to enjoy all the services on their smartphones. The Kick Bank App is a digital and intuitive tool to learn and manage money, with very simple but valuable services. The shortcut menu allows kids and parents to access all features easily and quickly. On the Home Page, the Kick Bank App also gives tips for an easier management.
Personalization	Kick Bank is a solution tailored specifically to kids aged between 10-16 years old and parents having kids in this age range. Kids can set their own saving goals, choose the colour of the app and even choose a picture to put on their cards. Parents can manage all kids' financial activity through the Kick Bank App and define limitations for each kid, based on their personalities and behaviours, i.e. set daily limits for spending, receive notifications about every transaction or block the card if the kids lose it.
Convenience	The Kick Bank App offers to parents a simple tool to manage their kids' account, and offers to kids an easy way to check how much money they have in their current and savings account instantaneously. The debit and prepaid card permit kids to carry money through an easier and safer way.

Source: Team own analysis

5.2 Action Plan for Bank X

The purpose of this chapter is to present the recommended 1-year actions following the validation of the Kick Bank project by Bank X, starting in March 2018 (see Figure 7). From March until May, Bank X should focus on **planning** the development of the Kick Bank App,

as well as creating and designing the **UI/UX**[13] **mock-ups**. In addition, the team believes it is important to start marketing the App as soon as possible before the launch date. A visual **Landing Page** should be built, showing screenshots from UI and UX mock-ups, as well as a promotion video. Moreover, the Landing Page should include a **call-to-action** to capture the email addresses of as many people as possible, in order to start building an email list of potential clients of Kick Bank. The team recommends that the content of the videos about financial education should be chosen by employees inside the bank in partnership with a university, i.e. Nova School of Business and Economics. Bank X should also make sure to settle all the **legal** documents related to Kick Bank. From June until August, Bank X should start coding and developing the front-end and back-end of the App. During these three months, a real **prototype** of the App should be created for users to interact and experience the app. To organize a **testing focus group** would be a good way to really understand what features or experience users are looking for. Furthermore, quality user feedback should be collected in order to iterate and improve the App to reach the best product/market fit possible. Last but not least, Bank X should prepare all the **content** related to the launch of Kick Bank, i.e. develop the full website of Kick Bank, press releases promoting Kick Bank, and other announcement-related content. During the month of September, Bank X should focus on **testing** the app: functional testing, integration testing, user testing, device and unit testing. The testing phase should include the launch of the 1st version of the Kick Bank app. This 1st version should only be sent to **beta testers**, which could become Kick Bank's biggest supporters and word-of-mouth marketers. It is important to encourage reviews and get quality feedback from these beta testers to improve the App and fix the potential bugs to build the final version. In October, the **final version** of Kick Bank App should be ready and launched. Once again, encouraging reviews and feedback from users will be very important.

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[13]**UI refers to User Interface** (transference of a product's development, research, content and layout into an attractive, guiding and responsive experience for users) and **UX refers to User Experience** (the process of enhancing customer satisfaction and loyalty by improving the usability, ease of use, and pleasure provided in the interaction between the customer and the product) (CareerFoundry 2017).

Figure 7. Kick Bank timeline 2018

Phase	Activities	March	April	May	June	July	August	September	October
1	Planning								
	UX/UI Design								
2	Front-End Development								
	Back-End Development								
3	Testing								
	Maintenance and support								
	Market Evaluation								
4	Final Launch								
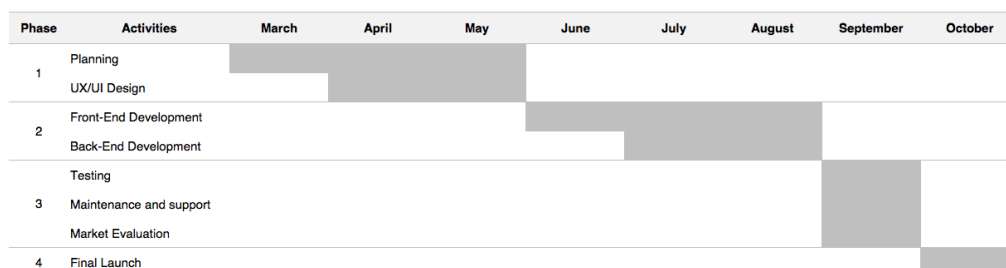
Source: Team own analysis

5.3 Impact for Bank X

During the 21st century, the banking industry was marked by a rise of technology, internet and thus digitalization of financial services offered to customers. These changes came as an opportunity, but also a challenge for retail banks such as Bank X, since new technology-centred players were entering the banking industry, forcing banks to rethink and adapt their strategy and business model in order to better respond to this technology and digital trend. The impact Kick Bank has on Bank X is summarized in Table 14.

Table 14. Kick Bank impact on Bank X

Challenges	Solution
Difficult to keep kids in the bank	Targeted solution that increases customer base (kids are more likely to grow with the bank if it is a relationship is created earlier).
Transparency issues related with fees and commissions	New revenue model that provides a full service for a fixed price. Relevant Value Proposition that makes customers more willing to pay and understand the price.
External challenges: FinTechs, digitalization and technological trends	First mover advantage for this CS. Fully digital solution. Brand awareness. Enables to predict future trends based on the behaviour of this CS.

Source: Team own analysis

Kick Bank is creating value for Bank X by providing a Value Proposition for a completely new Customer Segment, having a first-mover advantage on the market, which will allow BX to increase its customer base. As a fully digital solution, Bank X will be able to predict future trends more easily, due to the wider database it will gather from this Spin-off. Kick Bank provides the first solution targeted for kids in Portugal based on their needs, and has been created with the goal to develop an early relationship with these kids to retain them in the future. The revenue model proposed charges customers through a subscription model, on a monthly basis. Thus, Kick Bank provides a transparent way to charge its customers; a way in

which customers do not need to worry about having to pay for unexpected fees and commissions.

5.3.1 Market size

To better understand the impact of Kick Bank, a market analysis was made using TAM, SAM and SOM. According to Instituto Nacional de Estatística (INE) and Pordata (2016), the number of residents in Portugal that are in the age range 10-14 years old is 426,965 and in the age range 15-19 years old is 559,264. Assuming the population is equitably distributed within the age range, people between 15 and 16 years old represent 40% of this age range (223,706 approximately). Therefore, an estimation of the number of residents in Portugal between 10 and 16 years old is 750,617. According to a study made from Net Children Go Mobile conducted in 2014, around 35% of children own a smartphone. According to Statista, there was an increase of 32% in the number of smartphone users worldwide from 2014 to 2017 (Statista 2017). Assuming the same increase for Portugal, the percentage of kids owning a smartphone between 10 and 14 years old is 46.2%. Assuming that all kids that own a smartphone have parents that own a smartphone, and that the approximate market share of Bank X is 15%, the Serviceable Obtainable Market (SOM) of Kick Bank is a universe of **52,018 kids**. The assumptions to estimate the SOM of Kick Bank are represented in Table 15.

Table 15. Assumptions for the estimation of Kick Bank's SOM

Assumptions	Gross	Total
TAM: Total residents in Portugal 10-16 years old in 2016	750,617	750,617
SAM: % of kids that own a smartphone in 2016	46.2%	346,785
SOM: Approximate market share of Bank X in Portugal	15%	**52,018**

Source: Team own analysis

5.3.2 Financials

According to a Central Agency Report (2017), in 2017, the average number of children that were born per woman in Portugal is 1.53 kids. By combining this information with Bank X

internal bank financials and data, the team assumed the following number of bank accounts would be opened after the launch of Kick Bank (see Table 16).

Table 16. Number of Kick Bank accounts from in each year for 5 years

Year	1	2	3	4	5
Nº. customers (parents)	15,000	20,000	25,000	30,000	40,000
N°. users (kids) per customer	1.5	1.5	1.5	1.5	1.5
N°. Kick Bank accounts	22,500	30,000	37,500	45,000	60,000

Source: Team own analysis

In year 1, the 15,000 customers represent approximately 30% of our estimated market size (SOM) of 52,018 people. A price of 3€ per month will be paid by parents per child, and will account for 100% of Kick Bank revenues. The revenues are represented in Table 17.

Table 17. Revenue forecast

Year	1	2	3	4	5
Revenues	810,000€	1,080,000 €	1,350,000 €	1,620,000 €	2,160,000 €

Source: Team own analysis

Kick Bank will reach its break-even after 3.1 years and profits of 1,022,000€ are expected 5 years after the launch date of Kick Bank (see Appendix 25).

5.3.2.1 Cost drivers

Emission of cards. These costs include the cost of making the bank cards and delivering it to the customers.

Team. The core team will be composed of five people outside of the bank, namely one Team Leader, two UX/Front-End Developers, one UI Developer and one Business Developer. On top of that, three employees from the bank will be working/supervising the development and implementation of the Kick Bank App, namely one IT Project Manager, one Design Authority Manager and one Business Analyst.

Servers. The server costs mainly include the cost of hardware, the cost of server operating system and applications and the cost to administer.

Education material. Every week will have a special topic and a 5 minutes video created to support the weekly topic. In addition, one video per month will be made by a relevant YouTuber to have a bigger impact on kids.

Initial investment. The initial investment for Bank X includes the CAPEX[14] and OPEX[15].

R&D. The R&D costs will be mostly associated with the launch of marketing campaigns.

5.2.3 Key Performance Indicators

User acquisition. Learn how existing customers heard about Kick Bank, i.e. organic search, word-of-mouth, paid advertisements to know the best channel to acquire.

Repeat usage/Engagement. The goal is for the Kick Bank App to be used by kids two times per week. It is important to understand who is using the App and how it is being used. By analysing different engagement metrics, it is possible to depict the different weak points and features that would need improvement to drive better engagement and revenues.

Active users. Measure frequency of use to determine if users are finding value in using the App and if they grow with it. Bank X has to learn everything about them to convert non-active users and get as many active users as possible.

Retention rate. Since Kick Bank works on a subscription model, retention rate is important because it means Kick Bank is engaging and ads real value to customers.

6. Limitations

In this section, we identified several limitations in our research that could have had a potential impact on the quality of the findings, the validity of the hypotheses, as well as on the ability to effectively answer the challenge. The identified limitations could offer opportunities for future research.

Testing/Experiments. Due to confidential issues, the team was not allowed to mention the bank behind Kick Bank, which is why it was called Bank X. This had negative repercussions

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[14]**Capital Expenditures** are funds used by a company to physical assets, such as equipment and building (Investopedia 2017)
[15]**Operating Expenses** are the costs the company incurs from running its business (Investopedia 2017)

during the whole project, especially during the Customer Development Process. Not having the possibility to state that name of the bank that was behind Kick Bank highly affected the credibility of Kick Bank and the results of the Customer Validation phase.

Time. Three months to propose an answer to the challenge has led to time constraints, since all the steps followed had to be performed in a short time period. First, the answers to the online survey were collected in only 4 days. Second, only two cycles have been done in the Customer Discovery, which led to hypotheses not tested, thus not validated. Most importantly, three weeks were not long enough to validate the back-office of the Business Canvas: Key Activities, Key Partners, Key Resources and Cost Structure. Furthermore, time limitations can be seen in the different schedule availabilities of each member in the Kick Bank team. Half of the members (Bank X innovation team) were available only one day and a half per week, leaving two full-time members (Nova SBE students) for 80% of the time. A consideration for the future is to examine this particular challenge within a longer period of time and a full-time team working on the project.

Sample. Another limitation we encountered was concerning the sample. First, there was a limitation with regards to the **sample size**, because the team made a generalisation of the population. During the online survey, 318 answers were collected which cannot be considered as a representative sample size of the population. Second, there was a limitation with regards to **sample quality**. The hypotheses developed along the project were mainly validated with friends and family, which, undoubtedly, are potential representatives of our real Customer Segments, but they might be biased in some way.

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APPENDIX

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Appendices

Appendix 1: Current Business Model Canvas of Bank X

Business Model Canvas of Bank X

Source: Team own analysis

Appendix 2: Impact/Uncertainty Matrix

Source: Team own analysis

Appendix 3: Extended External Analysis

Political/Economic factors: The financial crisis was one of the major pitfalls of the banking industry around Europe and especially in Southern countries, including Portugal, which was traduced in more wary regulations at an European level. The so-called *Doom Loop* between sovereign governments and banks led vulnerable countries to be in the threshold of bankruptcy, which was later spread to all Eurozone countries (Bloomberg View 2017). Therefore, the European Union (EU) proposed a plan including the supervision of major banks by the European Central Bank (ECB), and complementing the local-level administration. Right after the crisis, this initiative had a positive impact, but it was uncertain if the initiative would become a constraint to the growth of the banking industry (Jornal Económico 2016). In fact, the Portuguese government already increased the contributions of the banking sector, resulting in extra taxes to vary between 0,01% and 0,110% (against the maximum of 0,085% registered previously) to respond to the ECB directives (Diário de Notícias 2016) (**Factor #1**).

The crisis also led to an overall concern and distrust of major stakeholders of the economy that, along with the austerity measures followed by the government - such as cuts on the salaries of public sector workers, cuts in subsidies in the public and private sector and increases in taxes of several goods and services (Expresso 2012) - led to a decrease of the purchasing power of consumers and to the slowdown of the economy (Público 2017). In 2012, with the exit of the International Monetary Fund (IMF), the economy started to recover, showing improvements in the level of Gross Domestic Product (GDP) and unemployment rates (Euromonitor International 2017). However, the growth pace of the economy is still very modest, which has been making investors highly sceptical about Portugal's ability to achieve budget targets and debt obligations (Euromonitor International 2017). The modest growth pace is general to all Europe, which led the ECB to follow expansionist monetary measures, that were traduced in a negative *Euribor,* and spreads reaching almost zero, making banks charging higher fees to clients to compensate for these losses (Público 2017). Furthermore, the negative *Euribor* led to the appreciation of the Euro,

potentially resulting in negative consequences on the growth of the European economy (Público 2017) (**Factor #3**).

Social factors: Portugal's population reached 10.3 million people in 2016. After the crisis, consumers expenditures increased by 9,3% from 2013 to 2016 and disposable income is expected to increase by 2,2% in 2017 (Factor #4). In addition, savings have decreased from 8% to 4,1% in the savings ratio, from 2013 to 2016. The low savings ratio is lower than the European average, which can be explained by the low level of income and education in Portugal (**Factor #6**). Regarding expenditure habits, after the financial crisis, consumer expenditures increased by 9,3% from 2013 to 2016, which also happened with disposable income that grew 5% in the same period (**Factor #5**).

Portuguese consumers have a lower acceptance rate to online and digital habits than the European average. However, improvements have been made with an increase in online shopping and digital payments habits, mainly due to a better access to the internet (Euromonitor International 2017). The preferred payment method in Portugal is still cash, with a growing trend in card payments (Euromonitor International 2017) (**Factor #7**).

After the financial crisis, customers have become sceptical regarding the banking industry, due to scandals related with CEO's of major banks and the bad performance of the industry in the past recent years, which is is one of the most important things to recover after the crisis (Llorento & Cuenca 2016). This is in line with the survey conducted in September 2017 with a sample of 318 Portuguese people that showed discontentment with the sector, where 25% stated words with a negative connotation when asked: "Write the first word that comes to your mind when you think about 'banks'", i.e. 'thieves', 'boring', 'commissions' (**Factor #8**).

During the Bank Customer Experience Summit organized in September 2017, interesting outlines about what customer are expecting from the industry were discussed (Euromonitor International 2017). Despite what most of the people would think, the rise of the internet is not making in-person banking irrelevant. In-person banking is still an important part of the banking experience, but it is what customers expect from it that is changing. It is essential to align digital and physical channels,

letting customers interact with the bank technologies and the branch employees, making them feel safe and comfortable. Moreover, customers are expecting a solution that will allow them not only to withdraw and pour money (as the ATM's), but also will let them have face-to-face advices when needed through, i.e. video calls, without having to go to the branch. Banks have to focus on developing and adapting their technology, while at the same time maintaining a human connection with their clients.

*Legal factors***:** Security issues are also important to mention, especially with regards to the new payment methods available and the new regulations regarding customers data. In fact, the European Commission increased the rules to increase security in the payment methods provided by the market. The objective is to protect consumers and to increase online shopping, guiding FinTechs and banks to offer better payment methods that will ensure security. (**Factor #12**).

Environmental factors: The last decades have known various changes in the regulations related to environmental protection in the corporate world. Just like in most of the businesses, sustainability and environmental friendliness have become important factors to take into account in the banking industry. In the last years, most of the traditional banks have decided to measure and monitor their environmental footprint, e.g. energy efficiency and saving plan; consumption, emissions and waste produced by the infrastructures; energy automation and monitoring in branches; and purchasing green energy. As a result, banks can be aware of the impact they have on the environment and minimize this impact to become a more environmentally-friendly institution. Banks such as HDFC - an Indian banking and financial services company - has taken important steps to address environmental challenges, such as investing in Energy Management and paperless solar ATMs reducing the bank carbon footprint (**Factor #14**).

Appendix 4: Market share of the five major banks in Portugal

Market share of the Portuguese banking industry
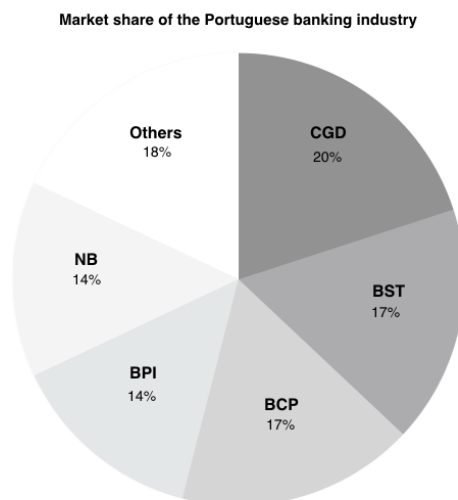
Source: Associação Portuguesa de Bancos 2016

Appendix 5: Positioning Matrix of the five major banks in Portugal

Positioning Matrix
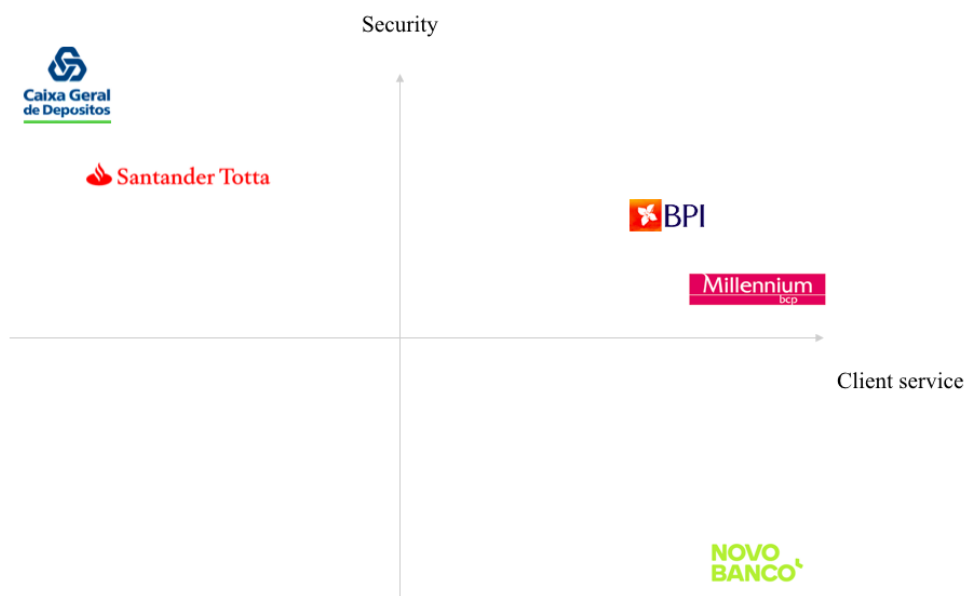
Source: Insights from Bank X and team own analysis

Appendix 6: Innovation Matrix of the five major banks in Portugal

Innovation Matrix

Source: Insights from Bank X and team own analysis

Appendix 7: Online survey conducted for the exploratory research

Is there a link between lifestyle and banking activities?

PART I: LIFESTYLE

1. If you had one free afternoon this week what would you do?
 a. Grab a drink and hang out with friends
 b. Try to find those shoes I've been looking for
 c. Go parachuting/Bungee jumping
 d. Grab my sports equipment and go!
 e. Watch a movie/read a book and chill
 f. Leave my house and discover new places
 g. I would help someone that needed it

2. What have you done in your last vacations?
 a. I went to some place with friends/family
 b. I need adventure in my life, so I went camping/hiking/climbing a mountain
 c. I travelled to another country/city
 d. I did some volunteering for more than a week

3. If you had 1 month holiday and money was not an issue, what would you do?
 a. Travel to Mozambique and work in an orphanage
 b. Climb the Mount Everest
 c. Go to some festivals with my friends
 d. Go to a paradisiac island to relax
 e. I would go to my favourite shops in the world and by everything I want

4. What is/are the brand/s that you <u>LOVE</u> the most and why?

5. What do you do with most of your available income (what you have at then end of the month after everyday expenses)?
 a. I save most of it for a rainy day
 b. I spend most of it, life has to be lived
 c. I don't have available income to spend or to save

5. a. Why would you save it for?

        i. Retirement

        ii. Education

        iii. To buy a house

        iv. For a big trip/car/computer…

        v. Unexpected events (health issues, accidents,...)

5. b. Where do you spend it?

        i. Everyday experiences (go to a restaurant, go to a concert, go for a drink, etc)

        ii. Travelling and discovering new places

        iii. Doing adventurous things that make my adrenaline run high

        iv. On things I like (clothes, gadgets,...)

6. Imagine you are on 'Who wants to be a Millionaire?' and you have 10.000€. You have to decide if you want to continue, with the possibility to double your money or lose everything. What would you do?

    a.   I would try to answer the question

    b.   I would quit and take the 10.000€ home

PART II: BANK SERVICES

7. Type the first word that comes to your mind when you see the word 'BANK'.

8. Do you feel your bank meets your requirements?

    a.   Yes

    b.   No

9. Why or why not?

10. Did you ever change your main bank?

    a.   Yes

    b.   No

10. a. Why?

        i. My previous bank started to charge me higher fees

        ii. There were better interest rates in other bank

        iii. The quality of the service on the branch was bad

        iv. The bank couldn't meet my needs regarding options for financial products

        v. The quality of the online platform was very bad/It didn't have an online platform

        vi. The branch next to my house/workplace closed and it was very useful to me

        vii. Other bank had an interesting campaign with no entering costs

        v. There was a new Financial Entity that offered me better conditions

10. b. What would make you change to another Bank? (3 max)

        i. If my previous bank started to charge me higher fees

        ii. If other banks had more interesting rates

        iii. If the quality of the service on the branch was bad

        iv. If I consider that my bank couldn't meet my needs regarding options for financial products

        v. If the quality of the online platform was very bad/If I didn't have an online platform

        vi. If the branch next to my house/workplace closed and it was very useful to me

        vii. If other bank had an interesting campaign with no entering costs

        viii. If there was a new financial entity (even if it was not a Bank) that offered me better conditions

11. What do you value most in your bank?

    a. The quality of the online platform that saves me a lot of time and trouble

    b. The open hours of the branches

    c. The people from the branch that help me with my problems

    d. The wide range of financial products

    e. The location of the branches

    f. The reputation

12. Do you use more than one bank?

    a. Yes

    b. No

12. a. Why?

    i. To avoid having all my money in the same bank, it's a risk

    ii. I am constantly comparing deposits/credit interest rates so i can always have the best rates regardless of the Bank

    iii. To have access to more advantages (special campaign or services)

12. b. Why not?

    i. To maintain my Mortgage's spread I can't change all my products to a different Bank

    ii. I never felt the need to do it

    iii. Because it will be confuse to manage

13. How do you feel about the banking industry?

    a. I don't trust it

    b. I don't have a particular opinion about this industry

    c. I think they are important for the economy

    d. I believe they want the best for me, so I trust them

14. What is your main bank?

    a. BPI

    b. Millennium BCP

    c. Montepio

    d. Novo Banco

    e. Caixa Geral Depósitos

    f. Santander Totta

    g. CTT

    h. ActivoBank

    i. I don't want to answer this question

15. Do you use your online banking?

    a. Yes

    b. No

15. b. Why not?

    i. Because I don't know how to use it

    ii. Because I don't trust internet services

    iii. Because I don't need it

    iv. Because I am used to go to branch/ATM

16. How would you rank your financial literacy on 1 to 10?

PART III: GENERAL QUESTIONS

17. What is your age?
    a.   Under 21
    b.   22 - 37
    c.   38 - 52
    d.   53 - 65
    e.   65 and more

18. What is your gender?
    a.   Female
    b.   Male

19. What is your nationality?
    a.   Portuguese
    b.   Other

20. What is your level of education?
    a.   Elementary school
    b.   High-school
    c.   Undergraduate degree
    d.   Master's degree
    e.   Higher degree

21. What is your relationship status?
    a.   I'm married/Live in couple
    b.   I'm single/Divorced/Widowed
    c.   I'm in a relationship but I don't live in couple

22. Regarding your financial decisions, do you make them…
    a.   Autonomously
    b.   With someone

23. How many people are financially dependent on you?
    a.   0
    b.   1
    c.   2
    d.   3 or more

24. What is your employment status?
    a.   Employed for wages
    b.   Self-employed
    c.   Out of work and looking for work
    d.   Out of work but not currently looking for work
    e.   Homemaker
    f.   Student
    g.   Military
    h.   Retired
    i.   Unable to work

25. What is your level of annual income?
 a. < 10.000€
 b. 10.000€ - 20.000€
 c. 20.000€ - 40.000€
 d. > 40.000€

Source: Team own analysis

Appendix 8: Results of the online survey conducted for the exploratory research

I.   Interpretation based answers from the first question: *the different profiles don't show significant behavioural differences or the segmentation is not relevant*

Total of answers			315		Total of answers			315		Total of answers			315		Total of answers			315
Q1	*I would do sports*	37	11,7%		Q1	*Different place*	25	7,9%		Q1	*Help someone*	12	3,8%		Q1	*Hang out with friends*	124	39,4%
	Paradisiac island	27	73,0%			Paradisiac island	25	100,0%			Paradisiac island	6	50,0%			Paradisiac island	37	29,8%
	Mount Everest	2	5,4%			Mount Everest	0	0,0%			Mount Everest	0	0,0%			Mount Everest	7	5,6%
Q2	Festivals	2	5,4%		Q2	Festivals	0	0,0%		Q2	Festivals	0	0,0%		Q2	Festivals	8	6,5%
	Shopping	1	2,7%			Shopping	0	0,0%			Shopping	0	0,0%			Shopping	7	5,6%
	NGO	5	13,5%			NGO	0	0,0%			NGO	5	41,7%			NGO	15	12,1%
	Friends & Family	16	43,2%			Friends & Family	16	64,0%			Friends & Family	3	25,0%			Friends & Family	45	36,3%
Q3	Find new places	11	29,7%		Q3	Find new places	11	44,0%		Q3	Find new places		0,0%		Q3	Find new places	25	20,2%
	Adventure	3	8,1%			Adventure	1	4,0%			Adventure		0,0%			Adventure	10	8,1%
	Volunteering	0	0,0%			Volunteering	1	4,0%			Volunteering		0,0%			Volunteering	9	7,3%
	Spend	4	10,8%			Spend	4	16,0%			Spend		0,0%			Spend	21	16,9%
Q4	Save	21	56,8%		Q4	Save	11	44,0%		Q4	Save	1	8,3%		Q4	Save	40	32,3%
	I don't have it	2	5,4%			I don't have it	1	4,0%			I don't have it	3	25,0%			I don't have it	13	10,5%
Q6	Risk	5	13,5%		Q6	Risk	4	16,0%		Q6	Risk		0,0%		Q6	Risk	50	40,3%
	Give up	19	51,4%			Give up	21	84,0%			Give up		0,0%			Give up	74	59,7%

Total of answers			315		Total of answers			315
Q1	*Bungee Jumping*	4	1,3%		Q1	*Relax*	83	26,3%
	Paradisiac island	1	25,0%			Paradisiac island	54	65,1%
	Mount Everest	2	50,0%			Mount Everest	7	8,4%
Q2	Festivals	0	0,0%		Q2	Festivals	4	4,8%
	Shopping	0	0,0%			Shopping	6	7,2%
	NGO	1	25,0%			NGO	10	12,0%
	Friends & Family	2	50,0%			Friends & Family	57	68,7%
Q3	Find new places	2	50,0%		Q3	Find new places	28	33,7%
	Adventure	1	25,0%			Adventure	9	10,8%
	Volunteering	1	25,0%			Volunteering	5	6,0%
	Spend	2	50,0%			Spend	25	30,1%
Q4	Save	2	50,0%		Q4	Save	47	56,6%
	I don't have it	0	0,0%			I don't have it	10	12,0%
Q6	Risk	3	75,0%		Q6	Risk	29	34,9%
	Give up	1	25,0%			Give up	54	65,1%

II. Interpretations based on age range: *age range 38-52 shows a different behaviour.*

Age range	< 21	30			Age range	22 - 37	204			Age range	38 - 52	51	
Q1	I would do sports	3	10,0%		Q1	I would do sports	21	10,3%		Q1	I would do sports	7	13,7%
	Different place	1	3,3%			Different place	37	18,1%			Different place	10	19,6%
	Hang our with friends	22	73,3%			Hang our with friends	87	42,6%			Hang our with friends	8	15,7%
	Bungee Jumping	1	3,3%			Bungee Jumping	3	1,5%			Bungee Jumping	0	0,0%
	Relax	3	10,0%			Relax	53	26,0%			Relax	22	43,1%
	Help someons	0	0,0%			Help someons	2	1,0%			Help someons	0	0,0%
Q2	Everest	1	3,3%		Q2	Everest	25	12,3%		Q2	Everest	5	9,8%
	Festivals	7	23,3%			Festivals	21	10,3%			Festivals	3	5,9%
	Shopping	2	6,7%			Shopping	16	7,8%			Shopping	4	7,8%
	NGO	10	33,3%			NGO	34	16,7%			NGO	6	11,8%
	Paradisiac island	10	33,3%			Paradisiac island	107	52,5%			Paradisiac island	32	62,7%
Q5	Spend	6	20,0%		Q5	Spend	60	29,4%		Q5	Spend	12	23,5%
	Save	14	46,7%			Save	123	60,3%			Save	27	52,9%
	I don't have	9	30,0%			I don't have	21	10,3%			I don't have	11	21,6%
Q6	Risk it	10	33,3%		Q6	Risk it	71	34,8%		Q6	Risk it	21	41,2%
	Give up	20	66,7%			Give up	132	64,7%			Give up	30	58,8%

Source: Team own analysis

Age range	53 - 64	23			Age range	> 65	7	
Q1	I would do sports	4	17,4%		Q1	I would do sports	2	28,6%
	Different place	5	21,7%			Different place	1	14,3%
	Hang our with friends	5	21,7%			Hang our with friend	2	28,6%
	Bungee Jumping	0	0,0%			Bungee Jumping	0	0,0%
	Relax	4	17,4%			Relax	1	14,3%
	Help someons	5	21,7%			Help someons	1	14,3%
Q2	Everest	0	0,0%		Q2	Everest	0	0,0%
	Festivals	0	0,0%			Festivals	0	0,0%
	Shopping	1	4,3%			Shopping	0	0,0%
	NGO	4	17,4%			NGO	1	14,3%
	Paradisiac island	16	69,6%			Paradisiac island	5	71,4%
Q5	Spend	5	21,7%		Q5	Spend	0	0,0%
	Save	11	47,8%			Save	3	42,9%
	I don't have	6	26,1%			I don't have	4	57,1%
Q6	Risk it	7	30,4%		Q6	Risk it	1	14,3%
	Give up	16	69,6%			Give up	6	85,7%

Source: Team own analysis

III. **Interpretations based on number people financially dependent:** *people with one or more people financially dependent on them prefer to relax.*

Dependents		0	194
Q1	Do sports	28	14,4%
	Different place	42	21,6%
	Hang out with friends	108	55,7%
	Bungee Jumping	4	2,1%
	Relax	52	26,8%
	Help someons	6	3,1%
Q2	Everest	26	13,4%
	Festivals	28	14,4%
	Shopping	17	8,8%
	NGO	44	22,7%
	Paradisiac Island	123	63,4%
Q5	Spend	65	33,5%
	Save	143	73,7%
	I don't have it	31	16,0%
Q6	Risk it	85	43,8%
	Give up	156	80,4%

No dependents		1 or more	72
Q1	Do sports	9	12,5%
	Different place	11	15,3%
	Hang out with friends	15	20,8%
	Bungee Jumping	0	0,0%
	Relax	31	43,1%
	Help someons	6	8,3%
Q2	Everest	5	6,9%
	Festivals	3	4,2%
	Shopping	6	8,3%
	NGO	9	12,5%
	Paradisiac Island	47	65,3%
Q5	Spend	18	25,0%
	Save	35	48,6%
	I don't have it	18	25,0%
Q6	Risk it	26	36,1%
	Give up	46	63,9%

Source: Team own analysis

IV. Interpretations based on propensity to save or spend: *people with a higher propensity to save have a more risk-averse profile. However, the majority of people is risk averse.*

Spend	83		Save	178		I don't have	51	
Risk it	37	44,6%	Risk it	55	30,9%	Risk it	17	33,3%
Give up	46	55,4%	Give up	123	69,1%	Give up	34	66,7%

Source: Team own analysis

Appendix 9: The different life stages from 0 to 20 years old
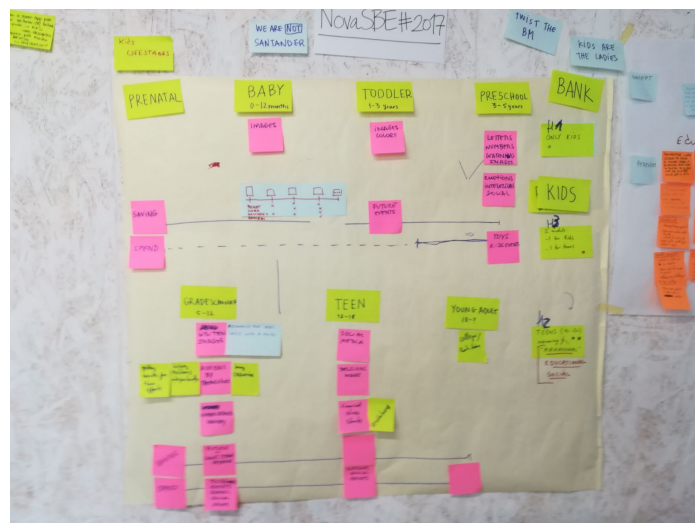
Appendix 10: Sprint Concept Sketches

Appendix 11: Prototype of the App developed during the Sprint

I. First mock-up of the app: *version of the kids*
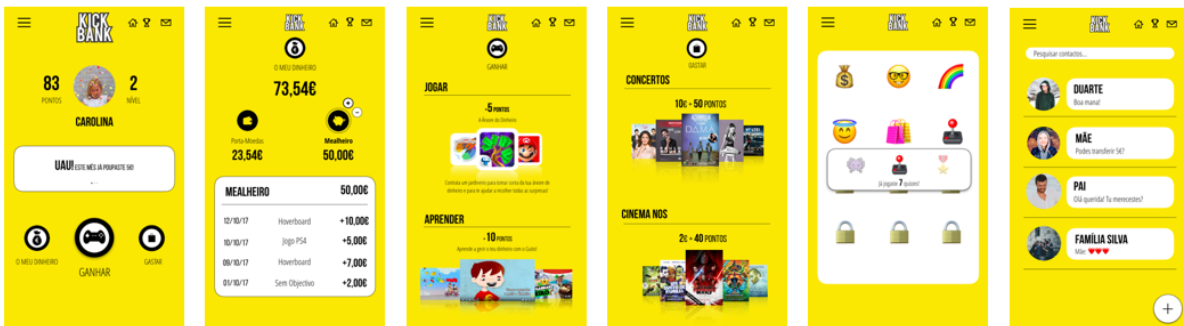
II. First mock-up of the app: *version of the parents*
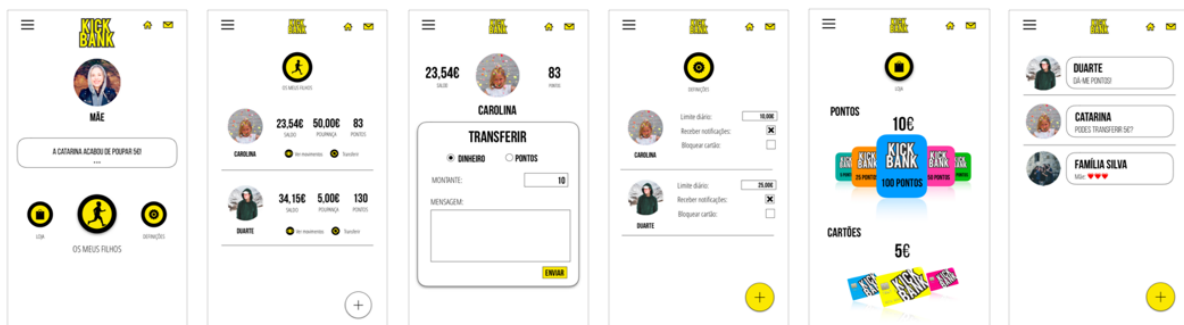
Appendix 12: Interview guide to test the prototype

PART I: Understanding behaviours

1. What is your name?
2. How old are you?
3. What is your gender?
4. Do you have a cell phone?
5. What do you do with your cell phone?
6. What app do you use the most?
7. Do you have a Facebook or na Instagram account?
8. Why?
9. What do you like most in these apps?
10. Do you like to see what your friends are doing?
11. Do you like to see photos of your friends?
12. Do you like to share your photos with yours friends?
13. Do you play online games with your friends?
14. Do you usually talk to your friends at school about the games that you play?
15. Do you usually go to concerts/movies/theatre?
16. Who are your favourite artists/bands?
17. What do you usually watch on TV?
18. Do you do volunteering? How often? With whom?
19. If you don't do it, would you like to?
20. What do you do when you get home?
21. Do you receive money from your parents?
22. Do you usually save money? How?
23. Do you have lunch at school? Do you buy your own lunch every day?
24. Usually do you buy the things you like with your own money?
25. What chores or tasks do you do at home?
26. What motivates you to do them?

PART II: OBSERVATIONS

1. What is the reaction when they open the app?
2. What is the first button in which they click on?

Wallet

3. Do they understand all the features?

4. Do they ask a lot of questions about how it works?

5. How long do they stay in this page?

Games

6. Did they like the games?

7. Do they search along the page?

8. What are the games that they are more interested about?

9. Did they try to play any game?

Shop

10. What is the first reaction when they open the app?

11. Do they like the options that are in the app?

12. What is the category that they show more interest about?

13. What is the reaction when they understand that they have to ask permission to their parents to buy something?

Trophies

14. What was the first reaction when they opened this page?

15. Did they try to click on the emoji's?

16. Did they understand what were the emoji's about?

17. Did they like the fact that emoji's are about the usage of the app?

18. They showed interest about having trophies about the points as well?

Chat

19. What was the reaction when they opened the app?

20. Did they show interest about the page?

Other

21. What did you like the most?

22. Do you have any suggestion to include in the app?

Appendix 13: First version of the Landing Page

Appendix 14: Validation Board developed during the Customer Development process

Appendix 15: Validation Board - Hypotheses for cycle 1

	Description	Minimum Success Criterion	Cycle 1	Go or No Go
1	Kids start to become independent and make their own decisions at 10-12 years old	50%	60%	**GO**
2	Kids have a smartphone on the 5th grade (10 years old)	80%	80%	**GO**
3	Kids will more likely use an app than a platform on the computer	80%	100%	**GO**
4	Kids are more likely to download the app if it has a gamification component	50%	82%	**GO**
5	Kids are more likely do download the app if it has a social component	50%	100%	**GO**
6	Kids are more likely to download the app if it allows them to buy discounts in cinema or concerts	50%	10%	**NO GO**
7	Kids are more likely to download the app if the brand appears in channels they are in, such as YouTube	50%	100%	**GO**
8	Kids are more likely to download the app if they it allows them to do volunteering	50%	0%	**NO GO**
9	Kids are more likely to download the app if it enables them to buy their own things	50%	100%	**GO**
10	Parents own a smartphone	100%	100%	**GO**
11	Parents are daily users of apps	70%	80%	**GO**
12	Parents are more likely to pay for Kick Bank if they have access to discounts and promotions	50%	80%	**GO**
13	Parents are more likely to pay for Kick Bank if it incentivises their kids to do chores at home	50%	55%	**GO**
14	Safer and easier way to transfer money would make parents more willing to give money for their kids to manage	50%	100%	**GO**
15	Parents are more likely to pay for Kick Bank if they perceive it as a safer alternative	50%	100%	**GO**
16	Parents are more likely to pay for Kick Bank if they can have control over their kids financial activities	50%	64%	**GO**
17	Parents are more likely to pay for Kick Bank if kids learn the value of money	50%	100%	**GO**
18	Parents are more likely to pay for Kick Bank if they can manage all their kids' financials through the app	50%	90%	**GO**
19	Parents feel like sharing goals, send messages and perform tasks incentivises family time and feeling of being connected	50%	55%	**GO**
20	Parents are more likely to pay for Kick Bank if they are impacted by a campaign in malls	10%	14%	**GO**
21	Parents are more likely to pay for Kick Bank if they are impacted by a campaign in schools	30%	100%	**GO**
22	Parents are more likely to pay for Kick Bank if they are impacted by a campaign on Social Media	10%	20%	**GO**

	Description	Minimum Success Criterion	Cycle 1	Go or No Go
23	Parents are more likely to pay for Kick Bank if they are charged through a freemium model	70%	0%	**NO GO**
24	Parents are more likely to pay for Kick Bank if they are charged through a periodic subscription	70%	100%	**GO**
25	Parents are more likely to pay for Kick Bank if they are charged through point system	70%	0%	**NO GO**
26	Parents are willing to reward kids with money to do chores	50%	18%	**NO GO**

Source: Team own analysis

Appendix 16: Online survey about the features of Kick Bank

I. Questions for kids: *10-16 years old from both genders*

Kick Bank is a fully digital bank. It works through an app that help you to manage your money! In this survey we show you some of the things you can do through the app. Tell us what you think, giving a score from 0 to 5 to each feature.

This survey is anonymous.

Thank you!

1. This is the Homepage of Kick Bank. It will give you hints and tips and will tell how much did you save already. Do you find this useful?
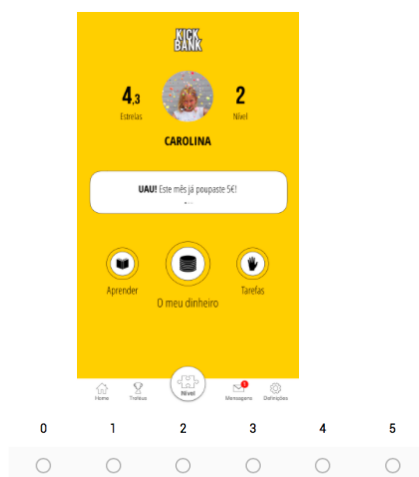
2. In the Digital Wallet you can see your activity and in the Digital Piggy Bank you can save for your own objectives. Do you find this useful?

0	1	2	3	4	5
○	○	○	○	○	○
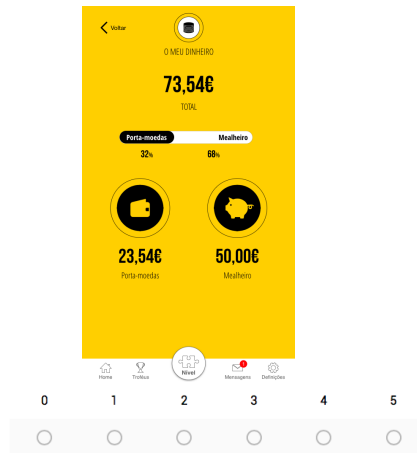
3. This is the Digital Piggy Bank. You can set your own objectives and save for each one of them. Do you find this useful?

0	1	2	3	4	5
○	○	○	○	○	○
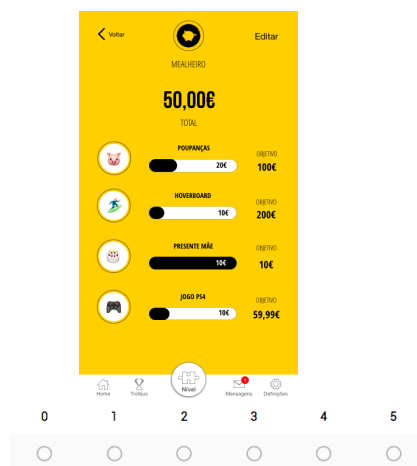
4. In the Learning part, you can watch videos and do quizzes that will help you manage your money. The purpose of this feature is to help you to save faster for your objectives. Do you find this useful?

0	1	2	3	4	5
○	○	○	○	○	○
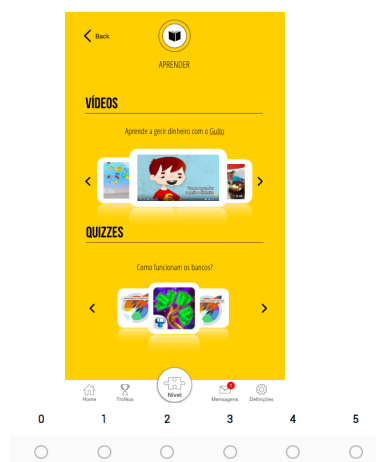
5. Your parents will be able to send you tasks through the app and to rate them after you perform them. If you them well your parents can even give you an extra reward, like money. This way, you can save faster for your objectives. Do you find this useful?

0	1	2	3	4	5
○	○	○	○	○	○
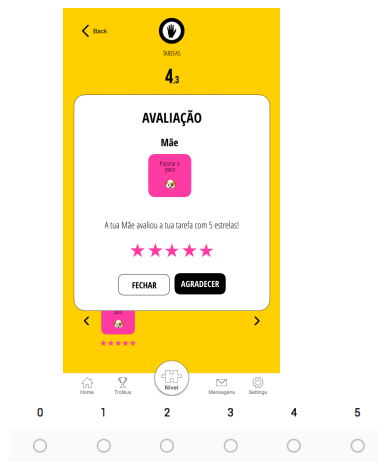
6. The more you know and the more you practise, the highest will be you level. If you have a high level your parents will know that you are able to manage your money properly. Do you find this useful?
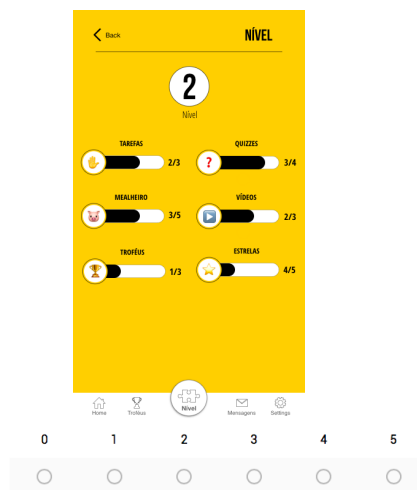
0	1	2	3	4	5
○	○	○	○	○	○

7. And you can win trophies, too! As you use the app you will acquire them! Does this motivates you?
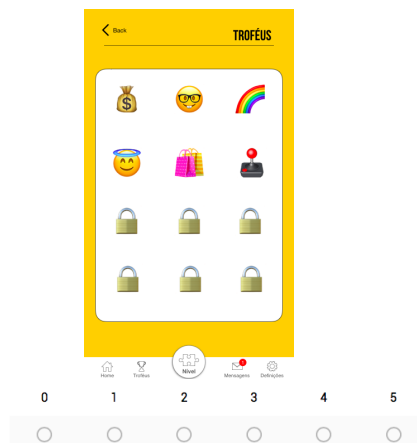
0	1	2	3	4	5
○	○	○	○	○	○

8. You can also send messages to your family. You can ask your parents to transfer you money or share your savings with them! Do you find this useful?
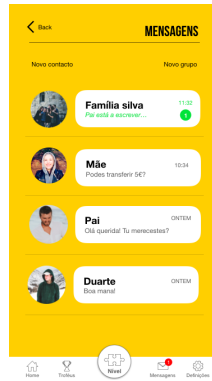
0	1	2	3	4	5
○	○	○	○	○	○

9. Finally, you can choose the colour of your app or even choose an image. Would you use it?
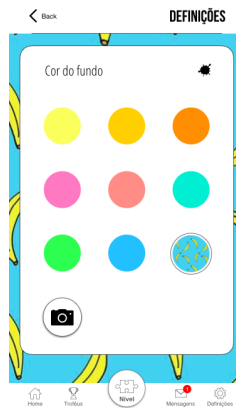
    a.   Yes
    b.   No

10. How do you rate the overall idea?

0	1	2	3	4	5
○	○	○	○	○	○

11. Do you think the image suits the products?

0	1	2	3	4	5
○	○	○	○	○	○

12. Would you use the app?

13. What did you like the most?

14. What did you like the less?

15. Do you have a smartphone?

16. What is you gender?

17. How old are you?

II. Questions for parents: *parents with kids between 10-16 years old from both genders*

Kick Bank is a digital bank for youngsters between 9 and 16 years old, that works through an app. There is a version for parents and a version for kids, with features suited for each one. Youngsters will have a Digital Wallet and Piggy Bank where they can manage their own money, in a safe way!

In the survey, we present some of the available features in parents' app. Please rate each feature with a score from 0 to 5.

The survey is anonymous. Thank you!

1. This is the Homepage of Kick Bank. We can check you children's activities and send them tasks. Do you find this useful?
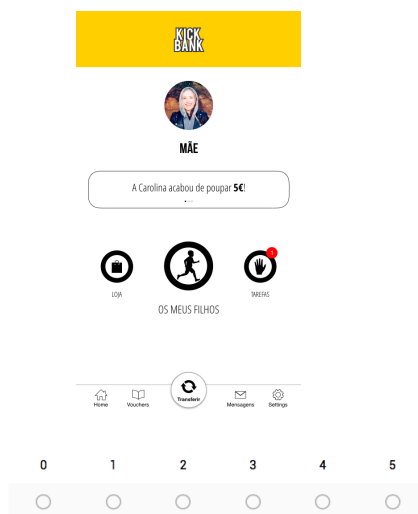
2. In the profile of each child, you can set an allowance, check the activity in their accounts and the goals they defined in the Digital Piggy Bank. Do you find this useful?
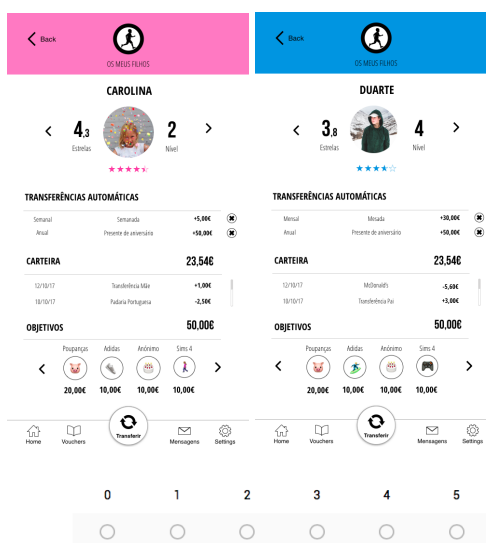
3. You can set and send tasks that will show in the kids' app automatically. After they perform the tasks you can rate them and even give them an extra reward (money for example - optional). Each children will have an average rating, based on these ratings. Do you find this useful?

	0	1	2	3	4	5
	○	○	○	○	○	○
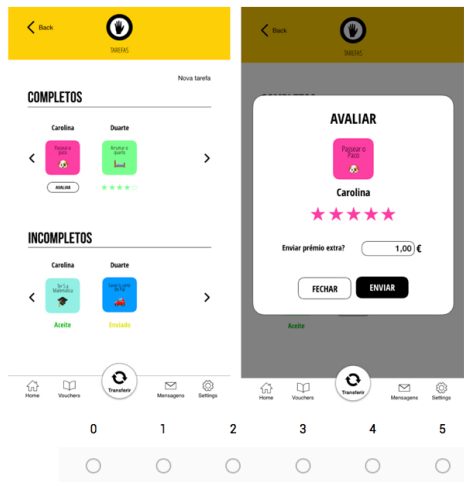
4. You will also have access to discounts in experiences for the whole family. Do you find this useful?

	0	1	2	3	4	5
	○	○	○	○	○	○
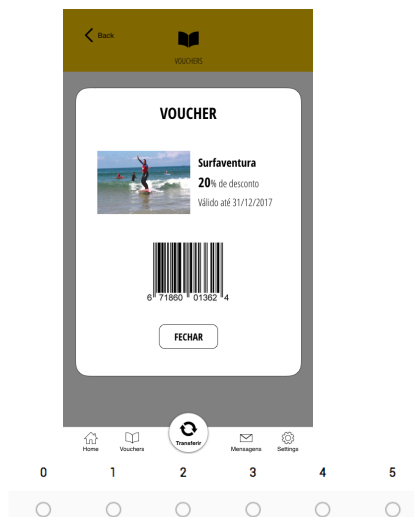
5. You will be able to send messages directly through the app, where your children can ask for money in case they need it or you can remind them if they need to buy something. Do you find this useful?
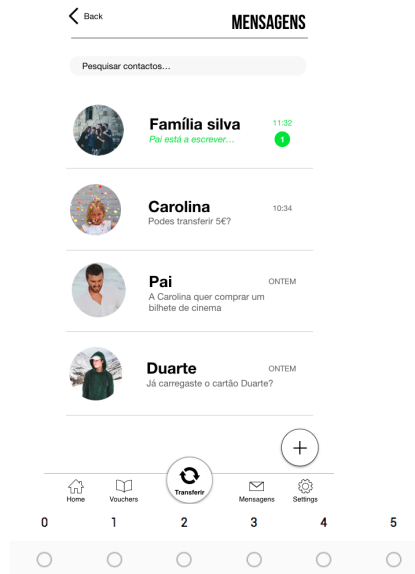
6. Finally, you can set a daily limit to each child or block their card immediately in case they lose it. Do you find this useful?
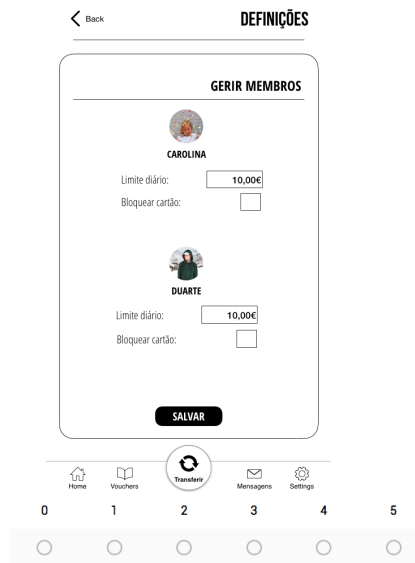
6. How would you rate the overall idea?

0	1	2	3	4	5
○	○	○	○	○	○

7. Do you think the image suits the product?

0	1	2	3	4	5
○	○	○	○	○	○

8. Would you use this app?
    a.   Yes
    b.   No

9. Would you recommend the app to a friend?
    a.   Yes
    b.   No

10. Would you be willing to pay for the service?
    c.   Yes
    d.   No

11. What did you like the most?

12. What did you like the less?

13. How many children do you have?

14. What is the age of your children?

15. What is your gender?

Source: Team own analysis

Appendix 17: Validation Board - Hypotheses for cycle 2

	Description	Minimum Success Criterion	Cycle 2	Go or No Go
27	Kids: Digital Wallet and Piggy Bank	Average of 4.0	Average of 4.6	**GO**
28	Kids: Set savings objectives	Average of 4.0	Average of 4.6	**GO**
29	Kids: Videos and quizzes	Average of 4.0	Average of 3.9	**NO GO**
30	Kids: Tasks	Average of 4.0	Average of 4.3	**GO**
31	Kids: Levels	Average of 4.0	Average of 4.1	**GO**
32	Kids: Trophies	Average of 4.0	Average of 4.0	**GO**
33	Kids: Messages	Average of 4.0	Average of 4.3	**GO**
34	Kids: Customization	50%	80%	**GO**
35	Parents: Manage all their kids' money	Average of 4.0	Average of 4.7	**GO**
36	Parents: Send tasks	Average of 4.0	Average of 4.1	**GO**
37	Parents: Vouchers	Average of 4.0	Average of 4.1	**GO**
38	Parents: Messages	Average of 4.0	Average of 4.2	**GO**
39	Parents: Set daily limits and block card	Average of 4.0	Average of 4.7	**GO**
40	Monthly subscription	50%	64%	**GO**

Source: Team own analysis

Appendix 18: Results of the online survey: Average rating about the features of Kick Bank's App

I.   I. Answers of kids

Home Page	Wallet and Piggy Bank	Objectives	Videos and quizzes	Tasks	Level	Trophies	Messages	Image	Overall
4,4	4,6	4,6	3,9	4,3	4,1	4,0	4,3	4,1	4,6

II.   II. Answers of kids by age range

	Home Page	Wallet and Piggy Bank	Objectives	Videos and quizzes	Tasks	Level	Trophies	Messages	Image	Overall
10-12	4,6	4,7	4,7	3,9	4,4	4,3	4,2	4,4	4,3	4,7
13-16	4,5	4,6	4,6	3,9	4,3	4,2	4,0	4,3	4,1	4,6

III. Answers of parents

Home Page	Manage all kids	Tasks	Vouchers	Messages	Definitions	Image of the product	Overall
4,2	4,7	4,1	4,1	4,2	4,7	4,4	4,6

Source: Team own analysis

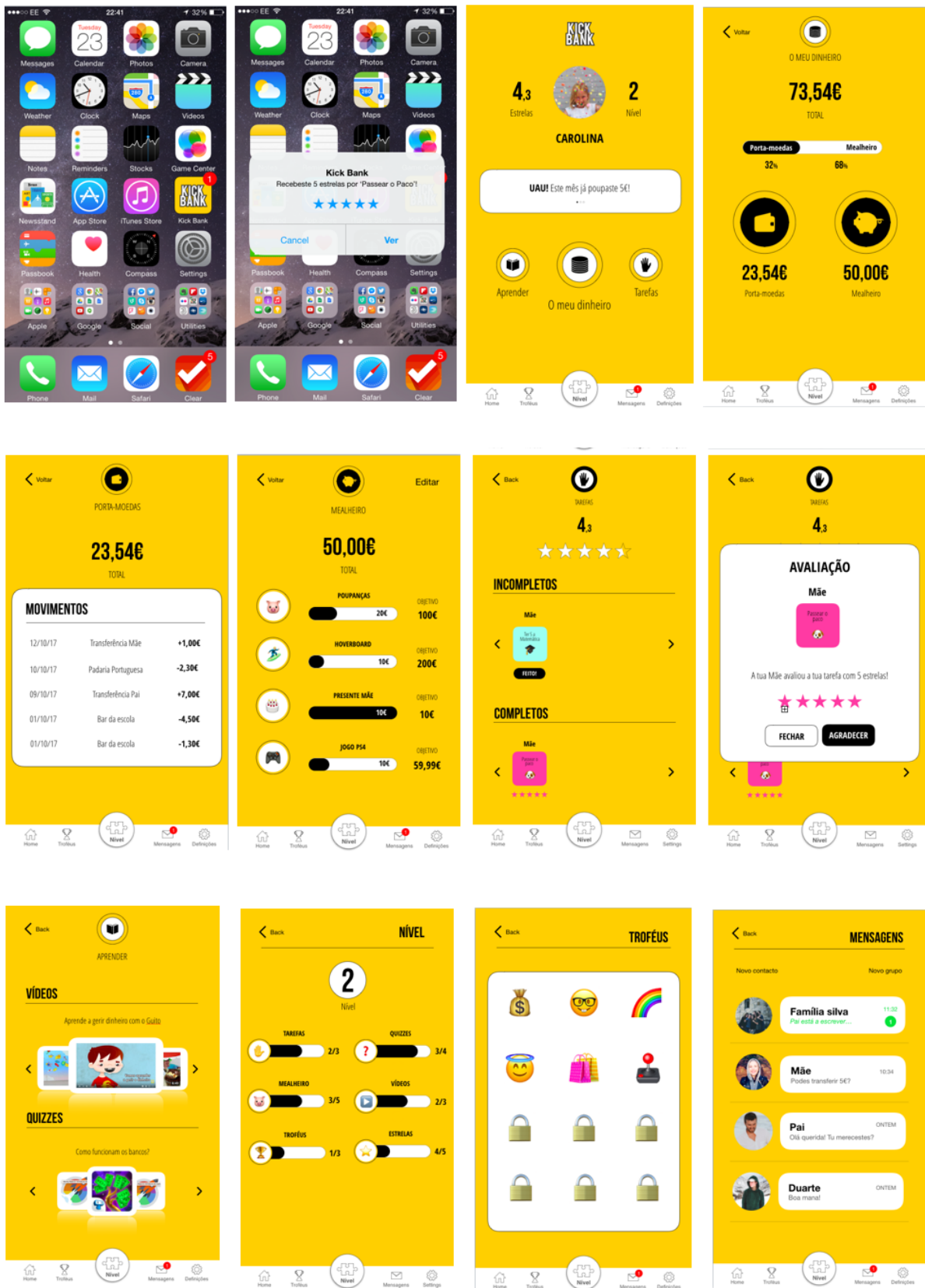**Appendix 19**: Results of the online survey - Detailed answers
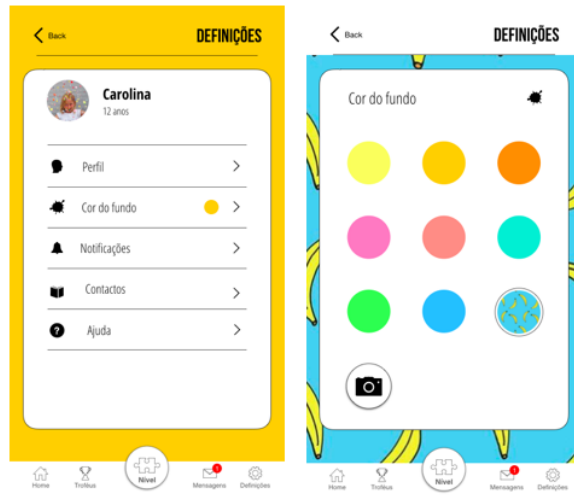
I. Kids survey
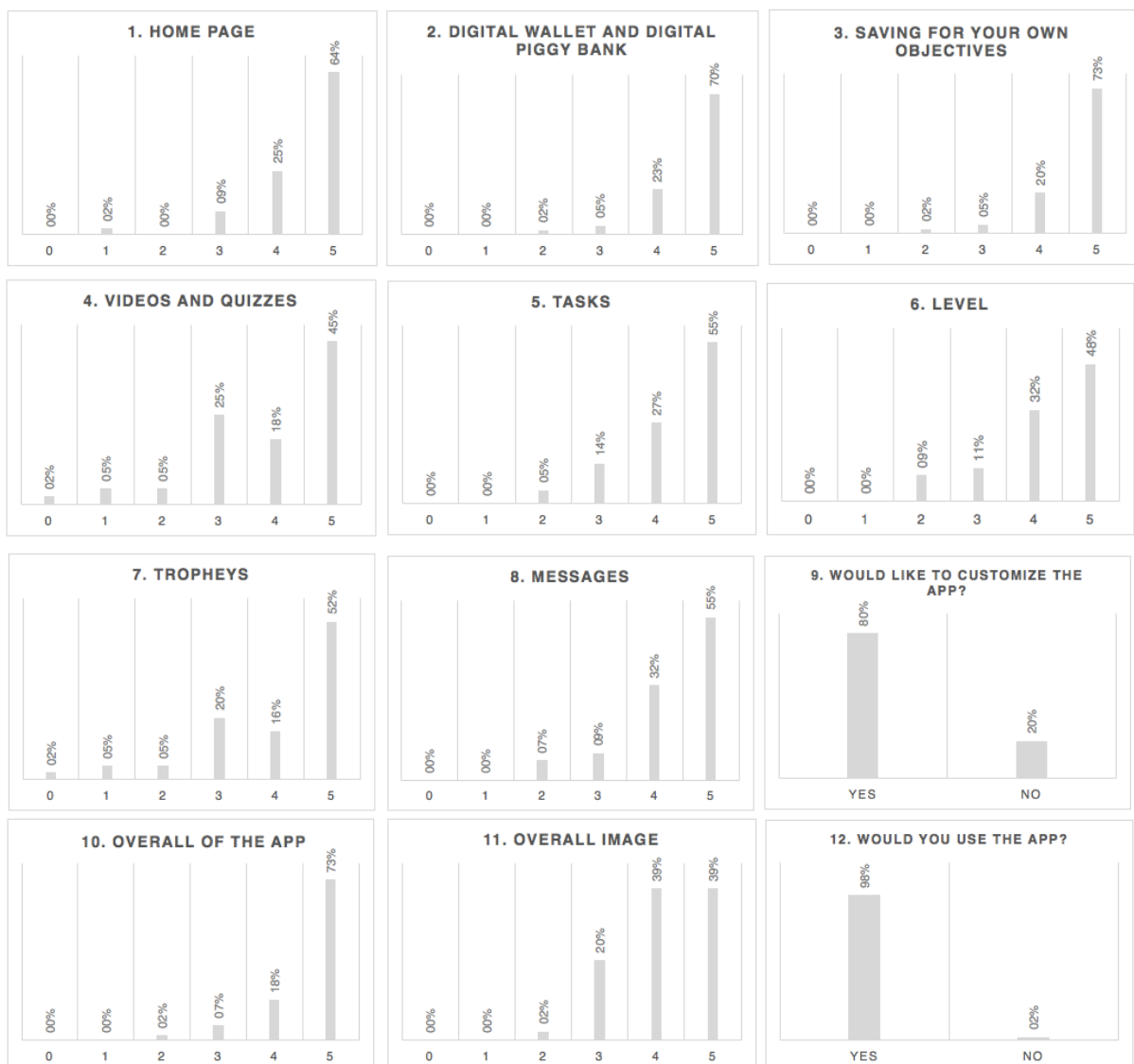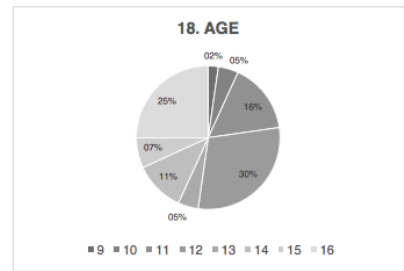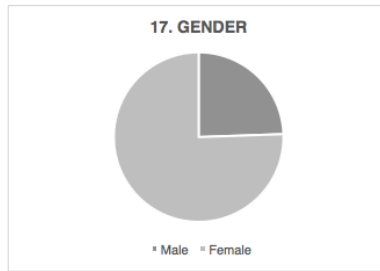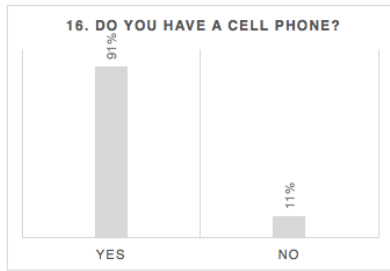
Source: Team own analysis

II. Parents survey
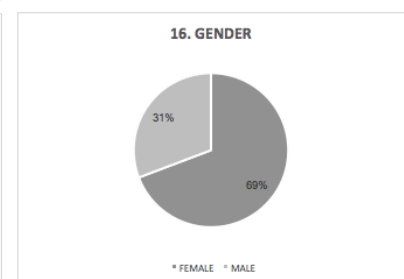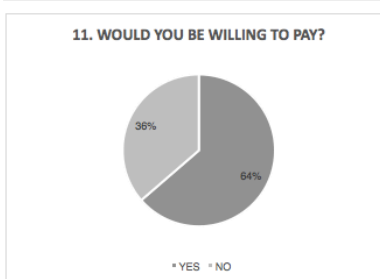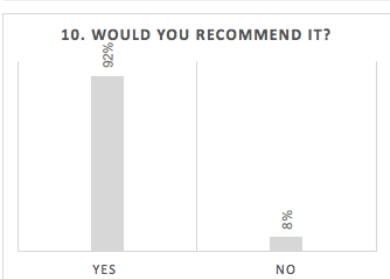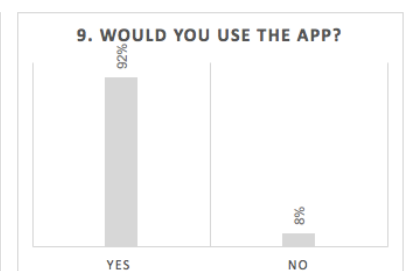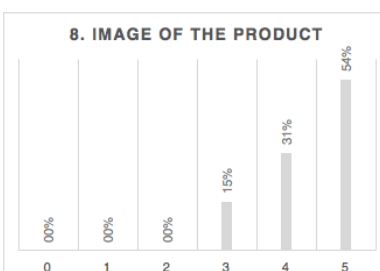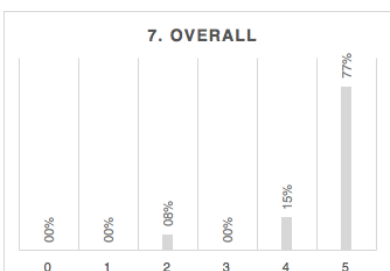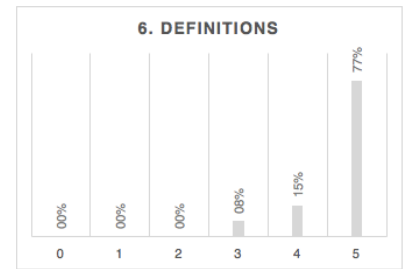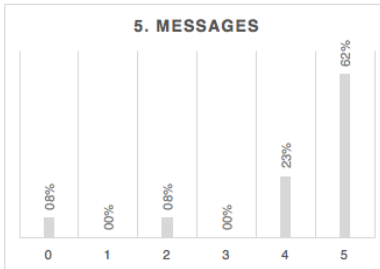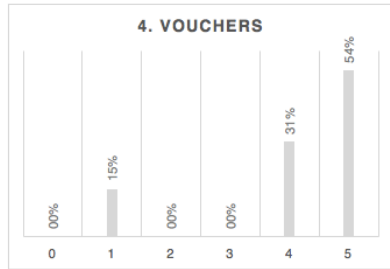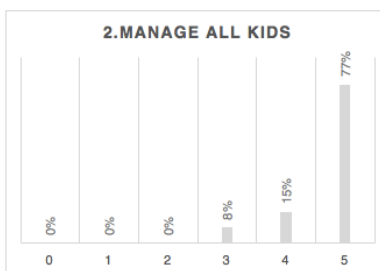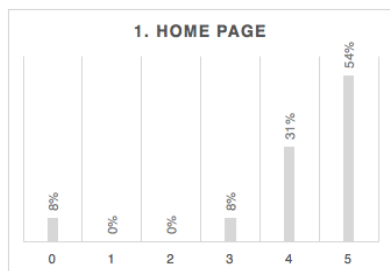
Source: Team own analysis

Appendix 20: Final Minimum Viable Product (MVP)

I.   **Final MVP**: *version of the kids*

II. Final MVP: *version of the parents*
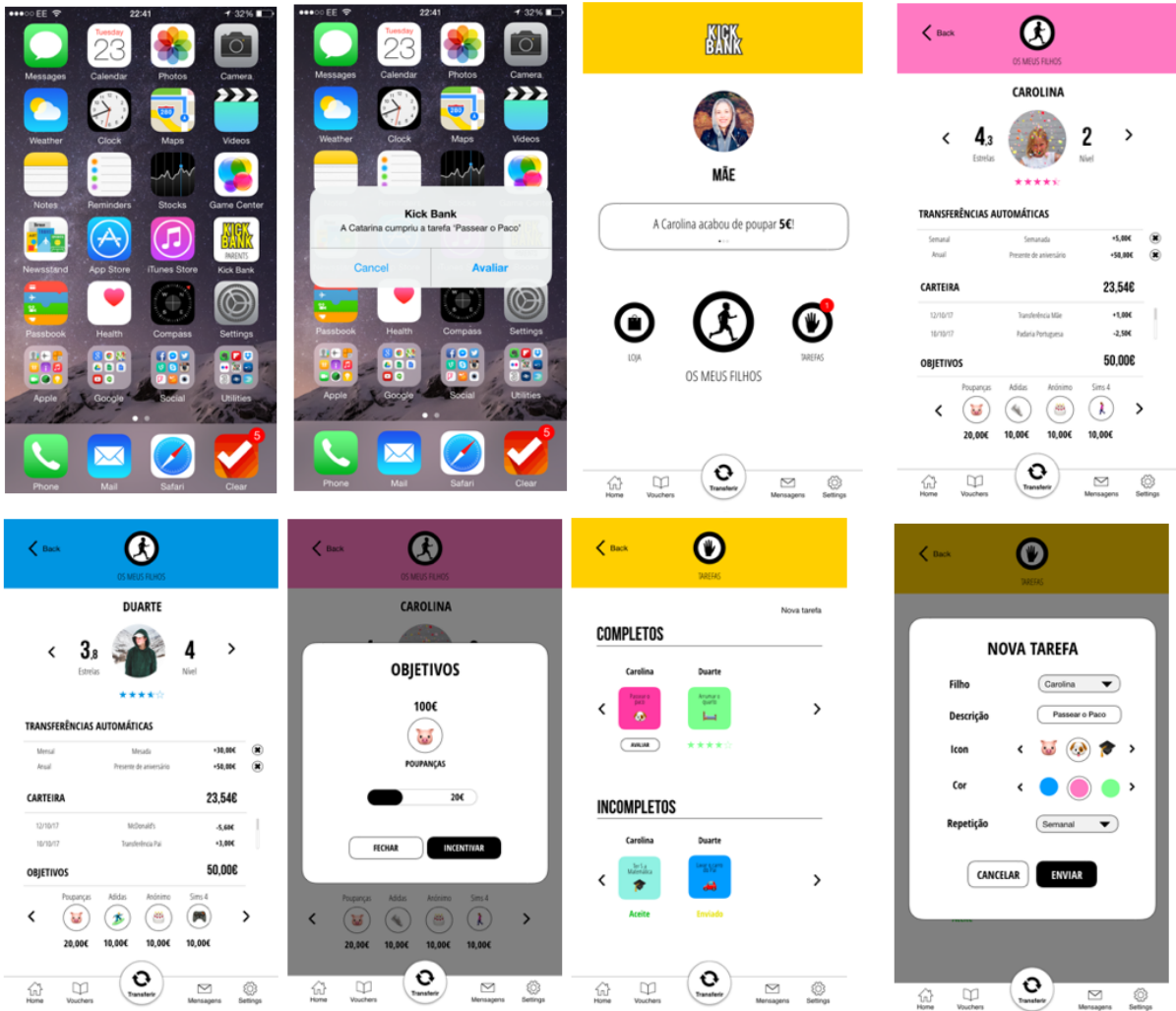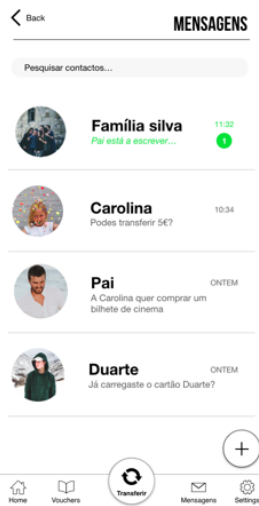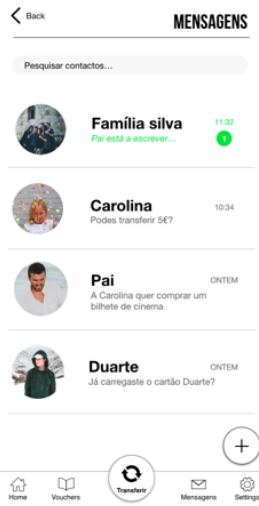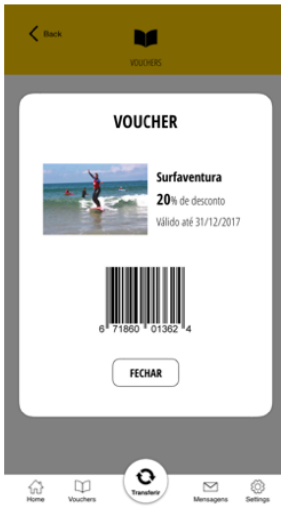
Appendix 21: Flyers of Kick Bank distributed in the Wonderland Christmas market

Appendix 22: Feedback from the online Facebook campaign

> ### I.   Reaction on Facebook
>
> *Promotion on Facebook*
>
> **Value:** 10,00€
>
> **Period:** 5 days
>
> **Target:**
>
> 1. Age: 35 - 45 years old
>
> 2. Location: Porto and Lisbon
>
> 3. Filters: parents with teenagers from 8-12 and 13-18 years old (ranges defined by Facebook)
>
> **People reached:** 623
>
> **Number of likes from promotion:** 12

Total number of likes on Facebook Page: 21
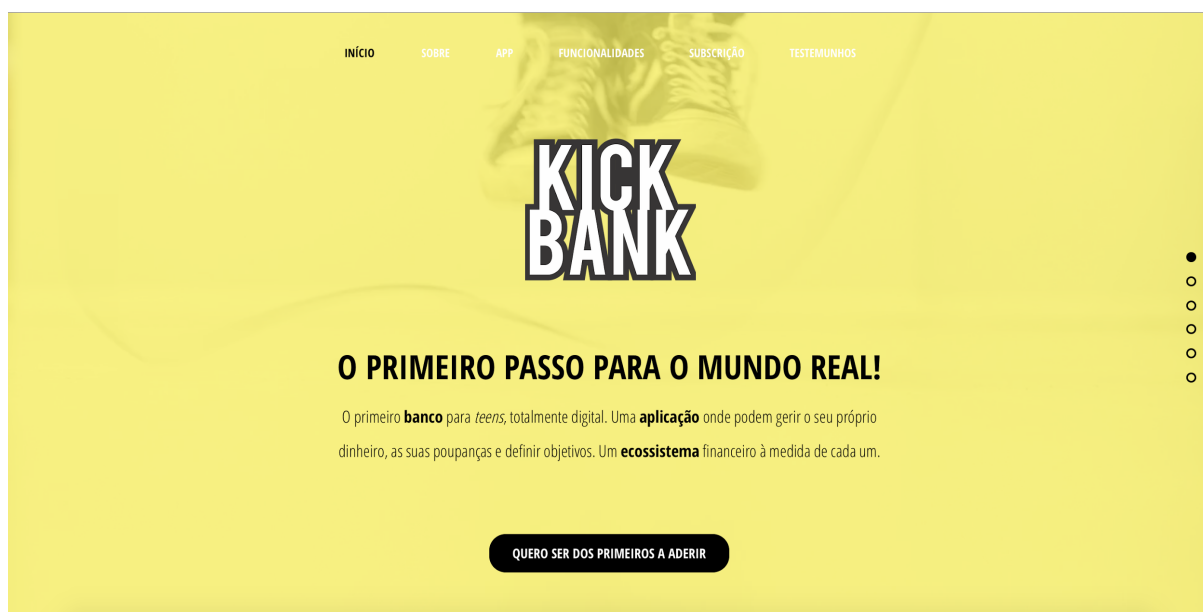
Limitations from the campaign: content of the concept was just in broad terms, omitting more specific features. Content of the posts was made by us (and not professionals from design or communications), making it seem less professional.

Source: Team own analysis

Appendix 23: Final Version of Kick Bank's Landing Page

Link: https://kickbank1.wixsite.com/kickbank

INÍCIO   SOBRE   APP   FUNCIONALIDADES   SUBSCRIÇÃO   TESTEMUNHOS

KICK BANK

O PRIMEIRO PASSO PARA O MUNDO REAL!

O primeiro **banco** para *teens*, totalmente digital. Uma **aplicação** onde podem gerir o seu próprio dinheiro, as suas poupanças e definir objetivos. Um **ecossistema** financeiro à medida de cada um.
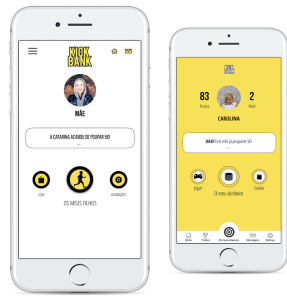
QUERO SER DOS PRIMEIROS A ADERIR

DÁ O SALTO!

Criámos uma conta, um cartão e uma app especialmente para *teens*, porque acreditamos que ao dar as ferramentas necessárias para gerir dinheiro e tomar decisões autonomamente, os capacita para o mundo real.

**Mais liberdade,
mais responsabilidade.**

SEMPRE CONECTADOS!

Uma aplicação que liga pais e filhos, para que estejam sempre em contacto e possam transferir dinheiro, partilhar objetivos e escrever mensagens.

#SharingIsCaring!

FUNCIONALIDADES

Uma app totalmente **personalizada**

Uma ajuda na **gestão financeira** e uma **ferramenta de aprendizagem**

Uma app digital onde podem **jogar** e **partilhar as suas conquistas**

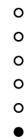Um ambiente **seguro**, onde têm **acesso ao que mais gostam**

TESTEMUNHOS
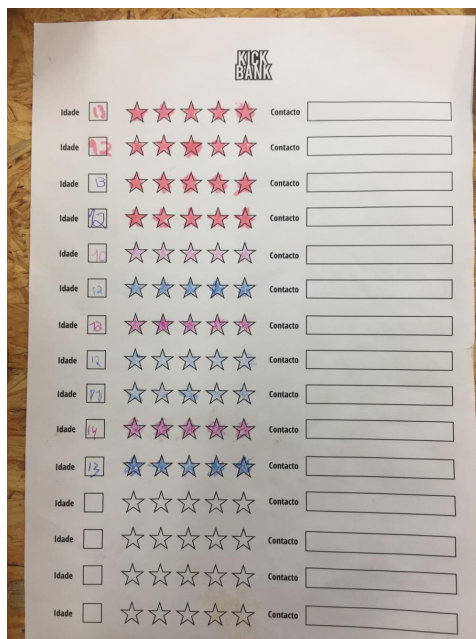

CAROLINA
10 anos

SUSANA
Mãe

JOÃO
12 anos

Appendix 24: Stars rating at Wonderland Christmas market

Appendix 25: Financials - Conservative scenario

Conservative scenario			33%	25%	20%	33%
Year	0	1	2	3	4	5
N° Client (customer)	-	15 000	20 000	25 000	30 000	40 000
N° kids / client (user)	-	1,5	1,5	1,5	1,5	1,5
% Kick Bank accounts	-	100,00%	100,00%	100,00%	100,00%	100,00%
Price of Kick Bank per months	-	3 €	3 €	3 €	3 €	3 €
Bank card (cost of production)	-	4 €	4 €	4 €	4 €	4 €

Revenues

Year	0	1	2	3	4	5
Kick Bank accounts	-	810 000 €	1 080 000 €	1 350 000 €	1 620 000 €	2 160 000 €

Costs

Year	0	1	2	3	4	5
Emission of cards/structure	-	90 000 €	120 000 €	150 000 €	180 000 €	240 000 €
Team	-	319 200 €	393 400 €	525 000 €	638 400 €	800 800 €
Servers	-	42 000 €	44 400 €	46 800 €	48 000 €	49 200 €
- Kick Bank	20 000 €	48 000 €	48 000 €	48 000 €	48 000 €	48 000 €
Initial investment (CAPEX + OPEX)	150 000 €	-	-	-	-	-
R&D (Campaign launch)	100 000 €	-	-	-	-	-
Total	270 000 €	499 200 €	605 800 €	769 800 €	914 400 €	1 138 000 €

Profit

Year	0	1	2	3	4	5
Profit/year	-270 000 €	310 800 €	474 200 €	580 200 €	705 600 €	1 022 000 €
Accumulated profit	-270 000 €	40 800 €	515 000 €	1 095 200 €	1 800 800 €	2 822 800 €

Discount Rate

Year	0	1	2	3	4	5	
5,00%	-270 000 €	296 000 €	430 113 €	501 199 €	580 499 €	800 764 €	2 338 575 €
Accumulated	-270 000 €	26 000	456 113	957 312	1 537 811	2 338 575	136,19%

Net present Value

NPV (M)	TIR	Payback
1,32	37%%	3,10

Source: Insights from Bank X and team own analysis

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