

A Work Project, presented as a part of the requirement for the Award of a Master's degree in  
Management from Nova School of Business and Economics



Assessing a startup opportunity in Colombia's payment gateway sector

Jose Ignacio Caballero Morales

#40675

Work project carried out under the supervision of:

Prof. Euclides Major

4 of January. 2021

## **Abstract**

This research was done in order to develop strategies for assessing an opportunity in the payment gateway sector. Developing it, different trends were found and a problem big enough about the displeasure of customer when queuing to pay in the retail sector, creating a mix of problems addressed with strategies and technology development, based on an international benchmark in the sector, that would allow us to enter this profitable industry in Colombia.

Business Plan \* Payment Gateway \* Financial Technology \* Strategy

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

## Table of Contents

Abstract .....	I
Table of Contents .....	II
1. Executive Summary .....	1
2. Methodology .....	1
3. Problem and Background.....	2
4. Business Concept .....	4
5. Industry Analysis .....	6
6. Market Analysis .....	9
7. App Technology Development .....	15
8. Marketing & Growth Strategy .....	18
9. Financial Plan.....	22
10. Conclusion and Limitations .....	24
11. References .....	26
12. Appendix .....	28

## **1. Executive Summary**

In order to assess an opportunity in the payment gateway sector, a benchmark of different solutions at an international level had to be conducted as it has not been done in Colombia yet. The goal of the survey was to fully understand the local market as the fundament to evaluate the opportunity in the Colombian market. Through the investigation, the industry was found to be highly profitable with trends that support the future growth potential. Nevertheless, with high infrastructure cost that make it an economy of scale business. Additionally, the market is open to be disrupted with new ideas in a legal and political way. However, the payment gateway sector is very concentrated due to the small number of players in the market. Moreover, it was necessary to understand what the market was asking to be disrupt and to understand comprehensively what the customers want. That is why in order to exploit the opportunity in the payment industry, three different payment solutions were developed for different Colombian retail sectors, that will open us a whole world to disrupt the payment sector in Colombia

## **2. Methodology**

The investigation was based on the Lean Model Canvas methodology, to find out if the problem was big enough to develop a solution. 288 people were interviewed which led us to fully explore the problem of payment queues and what customers and retailers value the most in terms of customer experience and payment experience. Furthermore, to fully understand the industry, 6 industry members were interviewed, among them are, one advisor of the Special Administrative Unit, Unit for Normative Projection and Financial Regulation Studies (URF), a national organization attached to the Ministry of Finance and Public Credit. Likewise, a former worker in the transactions area of one of the main banks in Colombia, as well as academic person in economics to have a more global perspective of the financial industry in Colombia. Further, workers of the competition to fully understand how the pricing works. Moreover, a worker of one of the transactional networks that exist in Colombia was interviewed. After this, the Porter's five

forces were used as framework to analyze the industry. For the further analysis the SWOT framework was used and 4-P literature was reviewed to build the marketing strategy. Also, additional data and market research were accomplished.

Furthermore, four retailers were interviewed, one in the grocery sector, the other one in the education service sector, one in the retail construction sector and one of the political leaders of neighborhood stores.

In order to understand the technology part of the project two international tech companies were interviewed and asked for quotations for the project as well as two technology experts to build a proper technology team. Also, a second survey was done to 177 people in order to have a more precise data of our potential customer fit in terms of number of transactions and purchase ticket.

### **3. Problem and Background**

#### **3.1. Background**

Colombia has been achieving milestones and international recognition in financial inclusion matters. The Economist Intelligence Unit's Global Microscope conducted a survey that assesses the "enabling environment" for financial inclusion in 55 countries with ranking Colombia first for showing greatest improvement in the realms of stability and integrity of products and points of sale in the national financial sector. Moreover, an important inclusion milestone has been achieved, 82,5% of adult population being able to carry out transactions.

Furthermore, in 2017, the Financial Superintendence of Colombia created InnovaSFC, a Financial and Technological Innovation Working Group with the aim of facilitating innovation in the financial sector. Due to InnovaSFC Hub, Colombia has created a reliable and innovative scenario for the financial sector. This is demonstrated by the operational launch of four electronics payment processing companies, the first crowdfunding platform and access by more than 100 ventures. (BANCA DE LAS OPORTUNIDADES & SFC, 2019)

Nevertheless, the job is not over, as Colombian's entrepreneurs must continue developing and improving the use of transactional products. Due to this, we are in the momentum to assess a startup opportunity in the payment gateway sector

### **3.2. Problem**

Covid-19 has changed the way people consume in the retail sector and financial product services are not an exception. Due to the pandemic, customers rather pay in-store with electronic methods since cash is a way of Covid-19 transmission. Often customers can be seen paying with their credit and debit cards. Experts expect that people will use more electronic payment, because this will make them feel safer. The actual situation in numbers is observable in *Figure 1: What payment method do you use most frequently in a physical store?* 63% of customers surveyed answered that Electronic payment method (credit, debit card, bank transaction, etc.) are their most frequent method. Furthermore, during the investigation most surveyed people responded to the question "Why they frequently use electronic payments?" with that they feel safer as cash is a way of Covid-19 transmission.

Nevertheless, in Estudio de la demanda 2018, when Banca de las Oportunidades asked why they do not have electronic deposits 39% of the people surveyed answered that they do not need it. Nevertheless, Covid-19 has given them a motive to create and continue using electronic deposits. However, it continues a lack of motivation for electronic deposits.

Market research made by Ayden said in their 2019 Retail Report that the impact of long lines in-store cost around \$370bn worldwide. Long queues in the retail sector have a negative effect in people's propensity to consume due long lines. 7 out of 10 shoppers opted to leave store and abandon their purchase due to long queues. (Adyen, 2019)

As you can see in the appendix in *Figure 2: What factor negatively affects your shopping experience in a physical store? In case of "Other", write which one.* Long queues have bigger negative effect in customers than high prices, bad customer service and variety of items in a

store. Further, loyalty is also affected by long queuing, as you can see in the appendix *Figure 3: How important is the waiting time to pay for your loyalty?* in the Likert scale 58% of the customers answered very important and important for them. Moreover, queuing lines affect customer decision regarding in what store to choose, 54% of the surveyed customers answered definitely not and probably will not chose a store with queuing lines to pay. But what is the tolerance regarding waiting time to pay? 53% of the customers surveyed consider 1-5 minutes' the ideal time to pay, as you can see in the appendix *Figure 4 What waiting time to pay do you consider, which is the ideal?*

Long queues are not only damaging customer's satisfaction but are also negatively affecting sales. Nevertheless, this problem is an opportunity to increase loyalty and customer experience in a store because the market is willing to pay more for not to queue as you can see in the appendix in *Figure 5: Would you be willing to pay more to avoid queuing at a store?* Meaning it is a problem big enough worthwhile to assess

#### **4. Business Concept**

TrikiPay is a payment platform app, with the slogan “Paga Fácil, Seguro y Rápido” giving a solution to the problem of long queues and payment friction in retail market through a Scan & Pay Technology. Moreover, it will be an electronic wallet, where individual customers will store their credit and debit card information and can-do budgeting by the administration of their expenses. TrikiPay will facilitate retailer companies' data collection from their customers in the same way helping them to materialize the data through impacting sales and operation efficiency. Therefore, TrikiPay follows the vision to *be the leading in-store purchase platform app in Colombia, following to be the leading payment platform in Latin America*

#### **4.1. Purpose, Vision, Mission & Values**

Purpose: Be an easy, save and frictionless payment platform

Mission: We innovate the way you pay.

Vision: Be the leading in-store purchase platform app in Colombia, following to be the leading payment platform in Latin America.

Values: Customers time is gold, and we believe they should pay in seconds.

#### **4.2. Value Proposition**

##### Individual customers

For people who do not like waiting lines at the register it is an easy solution to have a payment platform that allows them to scan and pay in just few seconds, Moreover, in the app customers can see an instant display of item prices and total price of the purchase while they are doing it. Therefore, this will let them have the receipts and budgeting within the app. Further, quitting the work of loading goods on the conveyor belt increases the convenience of the shopping experience.

Moreover, this will function as an electronic wallet, that individual customer can use with their credit cards, giving an easy, safer and frictionless experience wherever they want to go.

##### Retailers

Retailers will have a positive impact using our payment app. The app will improve customer experience, as explained before. Through TrikiPay, retailers can reduce the waiting time in queues which is a significant driver for customer satisfaction.

Furthermore, the implementation of the app will reduce personnel time behind the register and will boost operational efficiency, reduce labor cost or increase time available for customer service and time available for store grooming for example. Footfall conversion will be significantly faster and mean that traditional tills will be significantly reduced, giving retailers more floor space to utilize.



Nevertheless, retailer will have the data from e-commerce in-store allowing them to benefit from combining the best of both worlds through having cross-selling and upselling in the app. With the partnership that we will develop with our strategic partners to develop indoor mapping as you can see in the appendix *Indoor Mapping Overview* we can offer indoor GPS promotion, helping the customers make a decision by suggesting which product to pick at just the right moment. Imagine you receive an offer delivered to your phone for any product as you enter a store or even in the moment you are in front of the product. With this we will offer mapping inside the store.

This will let the retailer monitor visitor traffic, dwell time, repeat visits, flow maps, heat maps, TOP 10 product bought by categories leading to a deep understanding of in-store conversion and behavior. The utilization of this data will support retailers measure and optimize the ROI of marketing campaigns.

As service retailers show other characteristics there will be a different way to pay. With TrikiPay they will not need a payment machine to accept their credit cards payment of their customers. The only thing they need will be a computer to the receipt and generates QR codes and the customer in order to make the payment transaction, as you can see the payment transactional process in the Appendix in the *Operational Plan Overview*.

## **5. Industry Analysis**

### **5.1. Porter's Five Forces**

Porter's five forces framework was created with aim that an organizational strategy should assess organization's opportunities and threats in their external environment with understanding the way how industry structure changes. Porter argues that the aim of the strategist is to recognize and handle a competitive environment by directly looking at competitors, or to contemplate a broader perspective that competes against the organization (Porter, 1979). Due to this we use Porter's five forces framework to analyze the payment gateway industry.

The analysis itself with all the five forces is quite comprehensive. Therefore, the detailed analysis can be found in the Appendix *Industry Analysis Overview* and only the key results and implications will be discussed in the following. As derived in the analysis, the five forces have different manifestations ranging from low to high. With a low bargaining power of the suppliers and a moderate bargaining power of the customers, the downstream and upstream value chain cannot significantly drive down the industry profitability to their side. The good availability of skilled IT resources in Colombia and the meaningfulness of payment gateway solutions for the credit card brands lead to this low manifestation of the suppliers' bargaining power. Although solution like the ones TrikiPay is aiming to develop are easy and not costly to implement, larger retailers will be able to leverage their market position in the beginning before critical mass on the consumer side is achieved. Therefore, a moderate power of the buyers can be concluded with the power being unevenly divided between larger and smaller retailers. Based on high entry barriers set by high fixed costs and legal regulations reducing the risk of new market entrants significantly and the low threat of substitutes as only cash is a substitute, the industry with its players shows low external risk. Further information on the legal regulations can be found in the Appendix *Legal Overview*. However, this creates a concentrated market with an intense rivalry. Nevertheless, after overcoming the entry barriers and building a first customer base, the industry shows good potential to be profitable as the financial plan shows.

## **5.2. Trends**

### Digital transformation

Globally consumers are accelerating their adoption of digital channels, a trend seen across global regions. As an example, when analyzing US adoption of digital channels by industry, it is observable that 21% of digital access in banking are first-time users and a 51% of regular users, in entertainment 24% are first-time users and 40% are regular users, in Grocery 31% are first-time users and 30% are regular users, Apparel 13% are first-time users and 31 % regular

users, Utilities 9% are first-time users, 30% are regular users, telecom carriers 11% are first-time users and 27% regular users, travel 6 % are first-time users, 31 % regular users and Insurance 8% are first-time users and 27 % are regular users. Moreover, Banking, Entertainment and Grocery are the sectors that have the most accelerating adoption of digital channels. (McKinsey, Apr 25-28, 2020)

Therefore, in Colombia in the grocery sector before the pandemic, we can see digital transformation as one pillar of their strategy a common factor in the annual reports of the main players in the market. This digital transformation includes the implementation of data analyzing and a frictionless purchase process. Moreover, retailers are accelerating the implementation of digital channels faster due to COVID-19.

### COVID-19

Retail is one of the sectors most affected by COVID-19 in both, positive and negative way. They recognize that the virus will have a huge impact in their business. Industry structures are changing, and those with the most resilient and agile business models are likely to come out as winners regardless of their situation before the pandemic.

Hygiene has become one of the most important issues in this time of crisis. Before Covid, customers tend to queue in line to order and to pay. Now, customers are worried about crowding of humans as it bears the risk of contagion and consequently try to avoid such crowds. Therefore, this will increase popularity of contactless payment which people might prefer even more after Covid-19 as a faster and safer way of payment compared to cash.

Covid-19 has made that theft and shrink are no longer the concerns they once were. Since the pandemic started every store has to control entries and exits in order to control the maximum amount of people in the store. In the past conditions, this was not that necessary to make architectural adjustments to force every customer through controlled entry and exit points, Covid-

19 has made things change fast enough that its necessary to make these changes inside a retailer store.

Now, Covid-19 opens the door for the implementation of this technology. Checks and theft monitoring can be done by contactless electronic payments through a controlled exit.

Therefore, customers and employees will feel safer and contact between each other will be reduced it in a big way. Nevertheless, customers over time will get into the model since it means less risk of getting sick, moreover no line, it's a Win-Win for employees and customers.

## **6. Market Analysis**

### **6.1. Target Customers**

#### Individual Customers

Colombia is a country that has a total population of 48,258,494 (DANE, 2018) but to define exactly which customers the company is serving, it requires specificity. So the investigation divided the population by demographics characteristics as generation, income level and gender. Based on those parameters a survey as illustrated in the appendix in *Figure 6: How often would you use a skip-the-line tool?* Generation Z and Millennials are the ones showing the higher propensity of using the app with 70,37 % of them answering either “Always” or “Often” and 40% of the answers “always”. Good for us, the majority of the people in Colombia is between 18-39 years old. Further, Colombia is a country composed by millennials and generation z as our target group. Generation Z and Millennials are around 13,830,281 people in Colombia capitals as shown in the Appendix in *Figure 7: Capital Population* (DANE, 2018)

Moreover, analyzing data in a deeper way, men have a high propensity to use the app, in appendix in *Figure 6: How often would you use a skip-the-line tool?* Filtering data by gender 50 % of the male respondents answer “Always”. Nevertheless, culturally the women are the ones that are in charge of groceries shopping in the families. From 2005 to 2018, the percentage

of women heading households has increased from 32,8% to 43%, (BBVA Research, 2019) concluding that target customers should be both men and women.

Therefore, filtering *Figure 6* by income level, customers with an income level more than 2,500,000 COP have a high propensity of using the app. Minimum wage in Colombia is 877,802 COP. Even though, 21% of households have a total income less than a monthly minimum salary. Compared with the figures ten years ago, they have decreased by about 11% with a proportion of 32% in 2009. (BBVA Research, 2019)

In *Figure 8: Financial Services Access* 52% of our target customer have financial services access. Moreover, 80% of the people that have a monthly income of more than 2,500,000 COP have access to financial formal services deposits. (BANCA DE LAS OPORTUNIDADES, 2018), Therefore, to do an approx. calculation of how many people between the ages of 18-39 years old, that have an income level of more than 2,500,000 COP, the survey answers were filter as you can see in *Figure 9: Age vs Income level*, having 49% of our target population with this characteristic. Nevertheless, as only 80% of our target customer have financial service access, our total potential customers are around 5,421,470 people, as these potential customers show a high propensity to use the app due their characteristics. In terms of decision-making customers with these characteristics have more propensity to use the app.

### Retailers

As the different players in the grocery sector in Colombia that are shown in the *Groceries Overview* in the appendix have had an exponential growth in the last years due to a good economy stability, different international players identified Colombia as significant growth opportunity.

Nevertheless, Colombia is divided in socio-economics levels, that go from 1 to 6 with 1 lowest income levels, 1 being the minimum wage and 6 being the highest income level families. Since the payment platform is targeting individual customers with more than minimum wage, it has

to target retailers that target the same individual customers. Usually, these retailers are between 4 to 6 socioeconomics level locations. Moreover, where these families are located.

In terms of decision-making process, it depends on the size of the retailer, for big players in the sector, it depends on the CFO as well as the person in charge of the procurement department.

Therefore, in small players this decision is faster since, culturally in Colombia, CEOs are the ones that takes all decision in small and medium companies, esp. in family business.

The investigation confirms it, when asking Andres Ballestero, CEO of DistriMax, a supermarket targeting the socioeconomic level 4, the question “Who is in charge of the decision-making process when you plan to implement and / or contract a service to improve customer service and the consumer experience?”, he said, that he is the one in charge of it. But since it is a family business and the family majority shareholder, he has the moral obligation to communicate his decision to them.

In terms of needs assessments, the most relevant KPIs for them are product rotation, product profitability and purchase ticket per customer. This data will be easy to get from the payment platform fulfilling the needs of the retailers. Furthermore, when we asked Andres, how much would DistriMax be willing to pay for the payment gateway, he responded 5% more of what he is paying right now, due to the convenience and the efficiency increase in their stores. Knowing this it gives us an estimation on how much retailers value our proposition.

## **6.2. Market Size**

The following payment gateway market size contains three different perspectives: Total Available Market (TAM), Serviceable Available Market (SAM) and Serviceable Obtainable Market (SOM). The estimation of each perspectives is calculated by the number of people times the total amount of transaction per year multiplied by the average payment gateway cost.

### Total Available Market

The TAM indicates the potential market value if every transaction in Colombia is processed by the payment gateway based on the total amount of transactions per year multiplied by the average payment gateway cost. As you can see in the Appendix in *Figure 10: Purchase Transactions*, Colombia has around 70 million transactions per month and the cost per transaction varies from 200 to 900 COP, with an average of 300 COP cost per transaction. Consequently, the TAM is around 252,000,000,000 COP annually.

### Serviceable Available Market

The SAM indicates the segment of TAM targeted by our total potential customers fit that around 5,421,470 people times the average amount of transactions per year of potential customers based on what surveyed people in the appendix in *Figure 11: How many payments per month do you make in a physical store and / or online with a credit or debit card?* Answer 7 transactions per month, that is around 84 transactions per year multiplied with an average of 300 COP per transaction. In consequence the SAM is 136,621,044,000 COP annually

### Serviceable Obtainable Market

SOM reflects what the payment gateway can realistically serve in the first year. Our goal is to win 1% of all transaction of our potential customer fit within the first year, which is our SAM times 1%, that is 1,366,210,440 COP annually.

## **6.3. Market Competition Analysis**

“SWOT Analysis is a tool used for strategic planning and strategic management in organizations. It can be used effectively to build organizational strategy and competitive strategy “ (Gürel, 2017) We define as competition any service or product that a customer can use to fulfill the same payment gateways needs as the company fulfills. For this reason and the importance of the analysis in the competitive strategy of an organization, SWOT framework will help us to

know organizational strength and weakness, further, environmental opportunities and threats against competition.

### SWOT Analysis

Our main strength is that TrikiPay is not just a payment gateway. As an organization we are going forward to product and service differentiation as we plan to integrate customers ERP system with our app. In this way we add value to our customers' business by being able to connect sales entry and payment with their ERP system. With this integration they can quit queuing in their stores by implementing the "Scan & Go" system. Moreover, our strategy is built on using the first mover advantage in Colombia. However, the risk of imitation and fast followers through international competition that have no presence in Colombia is not irrelevant. We follow what Mishi Pay is doing mainly in US and Denmark as an example and innovate the way payment gateway works in Colombia. This should let us take market share quickly as we are innovating and learning of what is happening outside of Colombia with our international competitors. Moreover, as you can see in the Appendix in the Competition Overview and in the Table 1: *Pricing TrikiPay Scan & Pay for Retailers*, TrikiPay have competitive pricing comparing it with the market.

Nevertheless, the concept is easy scalable because the moment you finish the payment gateway infrastructure, the payment gateway can process the amount of payment it wants.

Our main weakness against our competitions is market shares, companies as Redeban and Credibanco have around 20 years of experience in the market, as payment gateway industry rely on economy of scale, they are more efficient in cost in their cost structure. Furthermore, our competitors have a bigger budget, since this sector is profitable, and they have been in the business longer than us as well having the experience and knowledge of the industry. Moreover, competition have been implementing QR codes for payment. Nevertheless, the implementation is different with a different purpose. They are the owners of the credit cards transactional network,



they have strong sales departments with very close relationship with the two main financial groups, Grupo Bancolombia and Grupo Aval. Additionally, the creation of the security layer requirement for processing payment process is a high entry barrier. Nevertheless, we can see in our competitors that new ventures were able to enter in the past, with innovative ideas like ours. In terms of sources of possible environmental opportunities business concept have a strong social force supporting it as we can see in the survey. It is clear that retailers' customers do not like to queue to pay. Different as our competitors, the business concept provides a solution to this problem. Moreover, Covid-19 pandemic change customer's way of act. Nowadays social distancing is important. Customers are worried and avoid crowds of humans which could be a reason of contagious. Therefore, this will increase popularity of contactless payment which people might prefer even more after Covid-19 as they adopted to it throughout the pandemic. Also, this is a cashless solution that will follows the trend of using digital money, that tends to increase in the future in an accelerating way as cash is a way of Covid-19 transmission. Covid-19 takes out retailers from their comfort zone. Nowadays every retailer has "enter and exits" control. Talking about this in the past, was seen with no good eyes but now every retailer has implemented it.

Furthermore, reading main players financial reports in the retail sector like Grupo Exito, as we can see in the grocery sector overview in the appendix, a trend of digital transformations is observable, thinking in a way to have a frictionless solution to the payment process.

Last but not least political and legal forces are playing in our favor as we see different governments institution in favor of fintech industry like Financial Regulation Department creating talk spaces and reports to innovate payment gateway industry or InnovaSFC, a program created by the Financial Superintendence of Colombia to disrupt Colombia's financial market.

A source of possible environmental threats is that technological innovation has proven to move in a fast way. So, the company will be exposed to significant threats by technological forces

which will require the company to continue the innovating process continuously to survive competitors' innovation developments.

Moreover, there is a possibility that retailers do not accept the concept due to the cultural fear of shrinkage. Nevertheless, we develop integrations solution as RFID, that will prevent this type of circumstances. RFID tags can be integrated into the product packaging and are used as theft protection. In order to leave the store with the goods without activating the burglar alarm, the RFID tag needs to be deactivated during the checkout and payment process.

Also due to the pandemic, economy is not in the best moment. We are experiencing a recession, one of the sectors that faced loses has been the fashion retail. Nevertheless, groceries sales increased. Something that we must consider with RFID solution for example having a high implementation cost is the possibility that not all retailers will have the money to implement such a solution. However, the integration with ERP system into the IT landscape of our solution does not require high costs for the retailers. Consequently, this will help us to enter in the market since retailers will not have implementation cost or a switching cost.

Also, internationalization is something to consider since we have strong competition outside that do the same as us.

## **7. App Technology Development**

### **7.1. Solutions**

#### *TrikiPay Scan & Pay for retailers*

This solution is specialized for service retailers like restaurants, bars, cinemas, public and private services nevertheless should be also attractive to any retailers that want to offer a different payment method. Moreover, in terms of users this solution will have budgeting of expenses. Furthermore, as you can see in the Appendix *Solution Overview*, is an easy, save and frictionless solution. Therefore, you can see a more explained process in how the transactional process occurs in the Appendix in the *Operational Plan Overview*

### *TrikiPay Scan & Pay for retailers with ERP Integration*

Scan & Pay with ERP integration is a solution create specially for groceries or stores with low pricing articles or items, retailers using this solution will receive all the benefits mentioned before in the value proposition part of this paper, like customer data not obtained before as which products put first in the shopping cart. Moreover, you can see how it will work step-by step in the Appendix *Solution Overview* with also having further explanations on the recommendation engine in the Appendix *Solution Overview*.

### *TrikiPay Scan & Pay for retailers with RFID*

With RFID security verification, shrinkage is not a problem anymore. Further, this solution is targeting big retailers, since the implementation have a high cost. Nevertheless, some retailers already have RFID technology without the integration of TrikiPay. Last but not least you can see how will work in the *Solution Overview* with further explanations on the theft protection.

## **7.2. Partners**

For the optimal development of our activities and daily processes, we must develop partnerships in different key points of the payment gateway. For the optimal operation of the scanning service we chose one of the most recognized companies in this activity such as Scandit, also provider of the same service to MishiPay. Nevertheless, this provider will be incorporated after seeing year 4 results since it has a high cost, the quotation is around 3,7 dollars per active customer annually, nevertheless the license value decreases due to economy of scale.

Moreover, for the solution for retailers with RFID technology, we have found several international and national suppliers. MishiPay for example uses Cisco as a supplier. However, at the beginning, strategically it seems more appropriate to use national suppliers in order to reach the commercial establishments that are already using this technology, making the implementation process not as expensive as it usually is. After analyzing different providers, the best to provide this technology is Accendo due to the proximity to our planned headquarters in Barranquilla

and the openness of collaborating with our project, they collaborated us with data to analyze and how their solution can be integrated with ours. Furthermore, the payment gateway should establish the transactional network relationship with the players of the market for credit cards, Redeban and Credibanco.

For the indoor mapping, a supplier has already been chosen with Inpixon as stated in the appendix *Indoor Mapping Overview*.

### **7.3. MVP**

For Eric Ries, author of *The Lean Startup*, he describes the MVP as the version of a new product which allows a team to collect the maximum amount of validated learning about customers with least effort. So, the process of developing TrikiPay should be at first to develop the initial solution which will be the Scan & Pay system (as describes above). Moreover, having a low CAPEX, Companies as Vex Soluciones offers us a white label payment gateway, with the integration with the transaction network for half of the CAPEX if we develop it from scratch. After a successful MVP launch, the goal is to launch the integration with the ERP system as it will let us fulfil all customers' expectation. The rationale behind not including the ERP from the beginning is that the development is time intensive and costly which increases the financial burden on TrikiPay. As the MVP already brings customers benefits, TrikiPay can already earn money to finance future development costs. Additionally, the time allows a deeper collaboration with the retailer. This will help to gain more in-depth knowledge about the market to tailor the ERP solution better to their needs. A first draft of a potential app design can be found in the Appendix *App Design Overview*.

## **8. Marketing & Growth Strategy**

### **8.1. Growth Strategy**

The growth strategy will be based on having the right team to succeed in the project and generating the network effect to reach the critical mass, the strategy will be based on five stages, namely: The MVP, The Launch, Scale Phase and Market Positioning, the strategy will put a strong emphasis on generating the network effect necessary to scale it.

Stage 1 The MVP (1 year): This stage will be focused on the development of the necessary technology to carry out the MVP, it will have the search for suitable personnel for the development of the app. In the spirit of not having such a high investment in the MVP's development, a White-Label payment gateway should be the right path to go since it will require the half of investment. Furthermore, highly qualified personnel will require a salary for working on the project, so we will need a team for the integration process of the white label payment gateway with the transactional network of the different stages of the product component to be developed. Moreover, in order to develop and test, the process should be fast and measured, the company will follow the Lean start up methodology to build the platform.

Stage 2 The Launch (1 year): The go to market strategy will be based on two main pillars: generating demand of retailers and generating demands of app users. For retailers the strategy will be based on price penetration, the price set will be less than the competition and it will not require an installation cost and change in the physical store. Moreover, the marketing strategy will begin. Furthermore, the targeting of the first retailers will be neighborhood stores and chain stores, where Colombian households spend the most. According to BBVA research neighborhood stores represent 54% approx. of household expenses and chain stores represent 20% of expenses approx. In the other hand generating app users demand will be based through social media advertising, this media will be expressed in a communication base targeting our target

customers, considering that the app is free for users. Also, in this phase the company will develop the solution integrated with ERP system and RFID solution, since this will require time and trained human resources to develop it. Nevertheless, this is a crucial part of the growth strategy, since we see in the investigation our target customers and retailer are asking for these solutions in the payment gateway sector.

Stage 3 Scale phase (1 year): In this phase TrikiPay should process more than 1 million transactions per year obtaining the 2 % of the transactions of our potential customer fit and increasing our customer rate by 0,5% due to the implementation of ERP system and RFID, and finally be profitable, we will stay using a price penetration strategy for our first solution. Nevertheless, for the ERP and RFID solution we will apply a different strategy since they will add more value to the retailers.

Stage 4 Market positioning (1 year): In this phase TrikiPay will consolidate the market that it already captures and gain more market shares, will implement an aggressive marketing campaign, with around 350,000 USD budget as the company at this stage is more profitable due to the economy of scale, with this stage, the company will prepare to be a solid market share leader in the future years and start preparing for an international expansion.

## **8.2. Marketing Strategy**

The marketing strategy will be based on two separate strategies, a B2B strategy for retailers and a B2C for app users. As described in the growth strategy, creating a network effect among consumers is crucial to scale quickly and to create leverage against business customers. Therefore, both strategies will be built on the 4-P-framework although the product component will not be specifically stated as it has already been covered in the part *App technology development*.

### B2B Strategy

With TrikiPay being an innovative product requiring the retailers to adapt to rather new technology or to adjust current processes, the distribution and communication needs to be based on

strong personal interaction and direct contact to TrikiPay. In order to gain first contacts and leads, cold digital and analog calling (e.g., calls, trade fairs, GoogleAds, mail or professional networks like LinkedIn) will be the main channel in the beginning. Regarding the message, it will be based on the benefits of TrikiPay highlighting the benefits compared to other solutions. Thereby, it is important to communicate well that the company is a start-up, and some functionalities will be only being available at a later stage. Business customers need to understand clearly the benefits they will get from collaborating with TrikiPay and the future potential regarding sales optimization, cost efficiency gains and customer satisfaction. Helpful is here the fact that the implementation costs are lower than the solutions of other providers and no changes are required at the physical stores as it can be seen in *Table 1: Pricing TrikiPay Scan & Pay for retailers* in the appendix. This allows a communication towards the retailers in the way that they do not lose anything from trying out TrikiPay and that they can only win from using it.

For the start of the operations only the MVP with the Scan & Pay solution will be available as the ERP integration needs time and funds to develop the required interfaces to the ERP systems. The same applies for the RFID solution.

As the complexity of the product increases over the development stages and leverage over the retailers increases with a growing network effect the product pricing is expected to change over time. Therefore, the pricing of the MVP should be guided by a penetration strategy with attractive prices to get retailers into the ecosystem as this is a requirement to grow the consumer base. In general, the pricing model will be based on a transaction fee as this is an industry standard. 2.5% & 500 COP in aggregates model & 199 COP in payment gateway model.

Once the critical mass on the consumer side is reached and the more advanced ERP and RFID solutions are available, the pricing strategy will change towards a skimming strategy with a value-based pricing approach as leverage over retailers present with consumers demanding the existence of TrikiPay. The willingness of retailers to pay higher prices for the benefits of ERP

integration has been validated in an interview with the CEO of Distrimax. In a first estimate, he said that with the benefits he would be willing to pay 5% more of commission on the transactions. Compared to the current transaction fee of 2,88%, the willingness to pay is significantly higher. In this way, TrikiPay will benefit in two ways from the implementation of the ERP and RFID solution as this helps increasing retail sales and consequently the base value for the transaction fee and it also allows to increase the transaction fee. As the RFID solution requires implementation efforts, those costs will be also invoiced to the retailers. With depending on the size of retailers' doors and inventories, those costs are estimated between 50.000.0000 COP and 60.000.000 COP. Further information on the pricing can be taken from the *Table 2: Pricing TrikiPay Scan & Pay for retailers with ERP Integration* and *Table 3: TrikiPay Scan & Pay for retailers with RFID* in the appendix.

### B2C strategy

As TrikiPay is a platform model, the consumers are a critical part of the business model and its success. For consumers the usage of the payment gateway solution is free of charge at any stage as the financing is covered by the retailers through the transaction fees and customers are paying indirectly with their data. To reach most potential customers the app needs to be available in both Google PlayStore as well as Apple's AppStore since they dominate the mobile operating system market in a duopoly. Regarding the promotion measures, two channels will be utilized with making, on the one hand, direct digital marketing on social media to the consumers and using, on the other hand, the communication channels of the retailers to promote the app usage as it is beneficial to the retailers. For the digital marketing, mainly social media will be used with balancing paid ads and influencer marketing. As TrikiPay cannot control the retailers' communication channels, the final execution will depend on the retailers. However, TrikiPay will allow their business customers to use the logo and will make suggestions on how to make the communicate the partnership with TrikiPay to their customers. Since payment gateway and



paying itself is everyday action that consumers do as a matter of routine, the most added value for the consumer will be the functionality of scanning the product and paying through the app as a way to skip the queues. Additionally, consumers will have a central source to inform themselves about retailers' current promotions and they will be able to keep track of their spending's. In communicating these potential benefits, TrikiPay can move the perception from a commoditized payment provider to a provider of value-adding shopping solution increasing the customers' convenience. This bears the potential that consumers will become rather attached to TrikiPay than to the retailer as consumers will associate easy shopping experience with TrikiPay.

## **9. Financial Plan**

Financial plan projections were based on our potential customer fit amount of transaction per month and a conservative expectation in terms of market shares. The detailed tables including the development of the value drivers, the revenue forecast, the cost forecast as well as the cash flows can be found in the appendix *Financial Plan Overview*.

### **9.1. Revenue Structure**

The revenue stream is based on the 3 different solutions and their pricing strategy developed in the marketing plan above. Moreover, based on our financial projections the MVP with the Scan & Pay solution will be the main revenue driver of the first four years due to its scalability. The share of it in the portfolio mix will be reduced by ERP and RFID solution's development, reduce it to 85% in the third year and 75% in the fourth year. In the appendix the figure 14: *Development of Transactions per Solution* visualizes this.

After the MVP is tested with a successful result, the implementation of the ERP solution will start. It is going to be an event that will disrupt the market. We do not expect an acceptance right away, that is why we are conservative at the time of the projections with projections of

10% for the third year and 15% for the fourth year. RFID solution due to the high implementation cost that will have, a conservative projection should be 5% at the third year and 10% in the fourth year.

## **9.2. Cost Structure**

Payment gateways require large investments in infrastructure, which makes its cost structure high and its operation characterized by economies of scale and scope. Moreover, the path to follow on the MVP is a White label payment gateway as mentioned before. Nevertheless, the investment in IT resources to integrate and maintain the payment gateway represent 78% in our cost structure. Further needed are 340,000,000 COP in the CAPEX for the White-Label payment gateway which needs further decreasing investments in the future for maintenance and expansion. As TrikiPay sells transactions and those have no variable cost, what represent a cost to the company is the infrastructure and human resources to maintain transaction activities. Moreover, in the first year is not required to hire marketing personnel due the operational only to happen after the first year. This value increases over the time due to an intensive marketing campaign.

## **9.3. Fundraising Strategy**

When analyzing the free cash flow of the business, positive cash flows are expected to be realized in the fourth year. In the initial three years a cumulative negative cash flow of 2,500 million COP is forecasted, showing the need of a profound fundraising. The negative cash flows are aligned with the expectations of high entry costs. In order to have skin in the game, the CEO is expected to fund 50% of the first year's capital requirements with his own funds resulting to a starting capital of 400 million COP. The rest is expected to be raised in a seed round financing which will be orchestrated in the 2<sup>nd</sup> quarter of the year to ensure future liquidity. After finishing the MVP and winning first customers, a post seed financing is planned for the 1<sup>st</sup> quarter of the

second year to secure funds for maintaining the business operations and starting the development of the ERP and RFID solution. The post seed round is expected to raise 1,500 million compared to an expected negative cash flow of around 1,000 million in order to have ensure liquidity for backing risks on the revenue side in the launch year. A subsequent series A round is expected for the beginning of year 3 for raising the capital needed before achieving positive cash flows in year number 4. The liquidity needed is expected to be around 1,000 million COP. Again, this is a bit higher than the forecasted negative cash flows to ensure a liquidity buffer. With an expected cash flow of 1,800 million in year number 4, no additional financing is needed, and the cash flows almost offset the initial investments of the previous years, underlining the profit potential of the industry after overcoming the entry barriers.

## **10. Conclusion and Limitations**

Covid-19 impacted the way people are doing daily actions significantly. In regard to shopping, Covid-19 made people more averse to queuing and paying in cash which is expected to be a sustainable change. Therefore, new ways are required to address this problem to the customers. Payment gateway is consequently a solution to solve these issues in order to make the payment process faster. Conducted surveys showed the potential in the Colombian market for a certain target group. However, not only consumers would benefit from TrikiPay but also retailers as it shows cost and revenue potentials with further developments creating a win-win situation for all parties.

During the development of the business idea, a profound understanding of the market with its players and the requirements has been developed. Significantly meaningful for the future development of the venture is the network built over the last month with having deep connections to leading retailer executives, skilled IT and marketing staff as well as Colombia's financial regulators for the payment gateway sector. Esp. the contacts in the retail sector where very open to do business in the future and to use TrikiPay once available. With the financial planning and

combining the gained insights, the business plan supports a strong mid-term profitability potential leading to the conclusion that the venture should be undertaken if the initial fundraising shows to be successful.

However, the investigation had limitations that need to be mentioned. Regarding the survey, the sample was mainly collected in Barranquilla, one of Colombia's main cities. Further, communication with international competitors was limited as well as with big grocery retailers, limiting data access to create the pricing strategy. Nevertheless, the data obtained from the analysis was sufficiently clear to create a strategy approach to enter to the payment sector in Colombia. For future studies an international approach to assess an opportunity in the payment sector and how new technologies are innovating the payment sector is recommended.

## 11. References

Adyen. (2019). *Retail Report*.

Adyen. (2020, 12 31). Retrieved from [https://www.adyen.com/es\\_ES/precios](https://www.adyen.com/es_ES/precios)

BANCA DE LAS OPORTUNIDADES & SFC. (2019). *Financial Inclusion Report*.

BANCA DE LAS OPORTUNIDADES. (2018). *Estudio de la demanda*.

BBVA Research. (2019). *Perfilamiento del consumidor colombiano*.

CENCOSUD. (2019). *Anual Report*.

Credibanco. (2020, Diciembre 31). Retrieved from <https://www.credibanco.com/>

DANE. (n.d.). Retrieved from <https://www.dane.gov.co/>

DANE. (2018). *Censo nacional de poblacion y vivienda*.

DANE. (2020). *Mercado Laboral*.

Epayco. (2020, 31 Diciembre). Retrieved from <https://epayco.co/precios.php>

Fast Track. (2020, Diciembre 31). Retrieved from <https://www.fasttrack.com.co/tarifas/>

Financial Superintendence of Colombia. (2015-2019). *Informe de tarjetas de crédito y débito - Administradoras de sistemas de pago de bajo valor*. Retrieved from <https://www.superfinanciera.gov.co/inicio/informes-y-cifras/cifras/intermediarios-de-valores-y-otros-agentes/informacion-periodica/informe-de-tarjetas-de-credito-y-debito-administradoras-de-sistemas-de-pago-de-bajo-valor-13413>

Greg Linden, B. S. (2013). *Amazon.com Recommendations, Item-to-Item Collaborative Filtering*.

Grupo Exito. (2020). <https://www.grupoexito.com.co/>. Retrieved from <https://www.grupoexito.com.co/>

Gürel, E. (2017). *SWOT Analysis : A Theoretical Review*.

Jeronimo Martins. (2019). *Anual Report*.

Jeronimo Martins. (2020). [www.jeronimomartins.com](http://www.jeronimomartins.com).

Kushki Pagos. (2020, Diciembre 31). Retrieved from <https://kushkipagos.com/pricing/co>

McKinsey. (Apr 25-28, 2020). *COVID-19 US Digital sentiment Survey*.

MishiPay. (2020, Diciembre 31). Retrieved from <https://mishipay.com/>

OlimpiaIT. (2020, Diciembre 31). Retrieved from <https://www.olimpiait.com/recaudo-digital.html>

Pago Agil. (n.d.). Retrieved from <https://www.pagoagil.co/proceso-transaccional/>

Place to Pay. (2020, Diciembre 31). Retrieved from <https://www.placetopay.com/web/tarifas/>

Porter, M. (1979). *How Competitive Forces Shape Strategy*.

Redeban. (2020, Diciembre 31). *Rbm Colombia*. Retrieved from <https://www.rbmcolumbia.com/wps/portal/index/>

Sprinting Software. (2020, Diciembre 31). Retrieved from <https://sprintingsoftware.com/>

SQUARE. (2020, Diciembre 31). Retrieved from <https://squareup.com/us/en/pricing?solution=pricing-in-person-payments>

Unidad de proyección normativa y regulación financiera. (2018). *Estudio sobre los sistemas de pago de bajo valor y su regulación*. Bogota.

Valorem. (2020). <https://valorem.com.co/>.

Wompi. (2020, Diciembre 31). Retrieved from <https://wompi.co/tarifas/>

## 12. Appendix

### 12.1. Figures

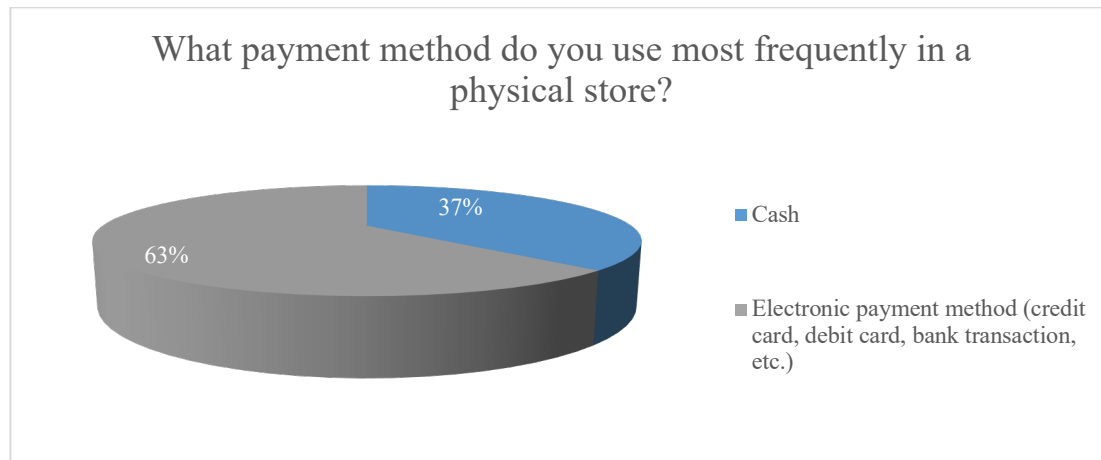


Figure 1: What payment method do you use most frequently in a physical store?

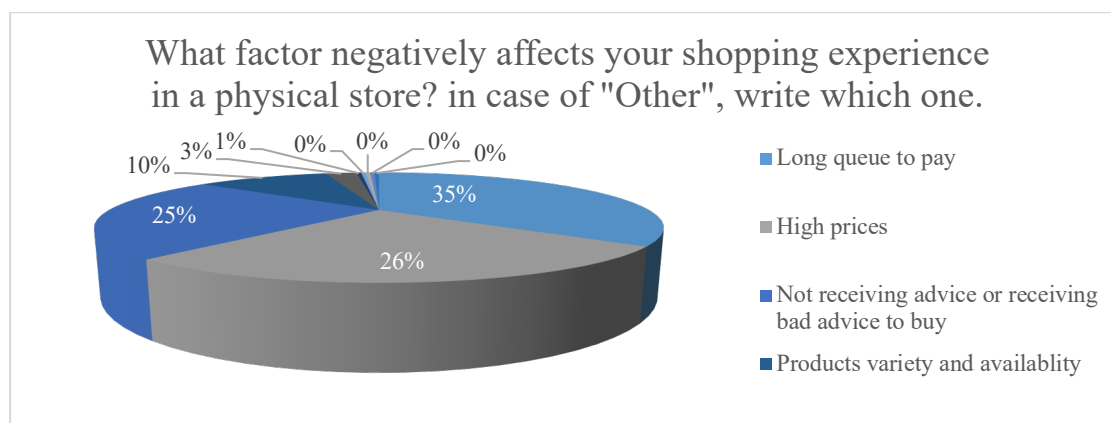


Figure 2: What factor negatively affects your shopping experience in a physical store? In case of "Other", write which one

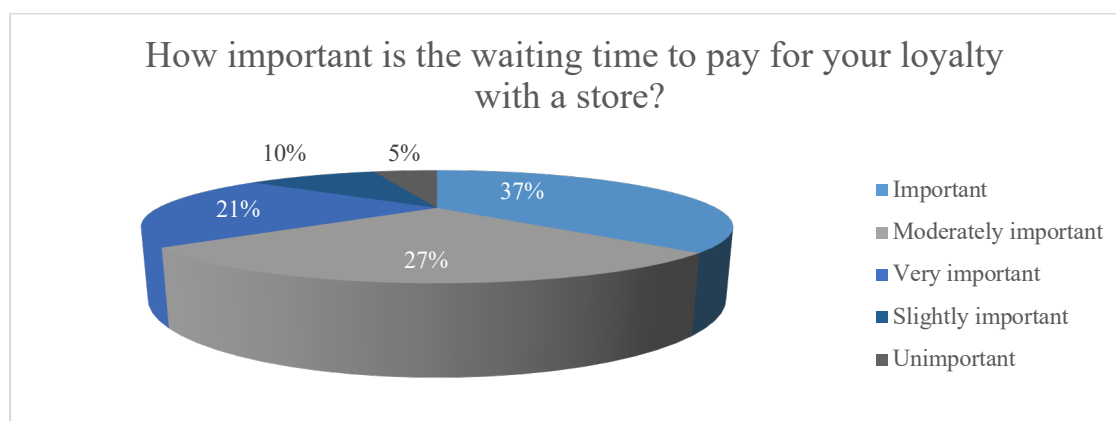


Figure 3: How important is the waiting time to pay for your loyalty?

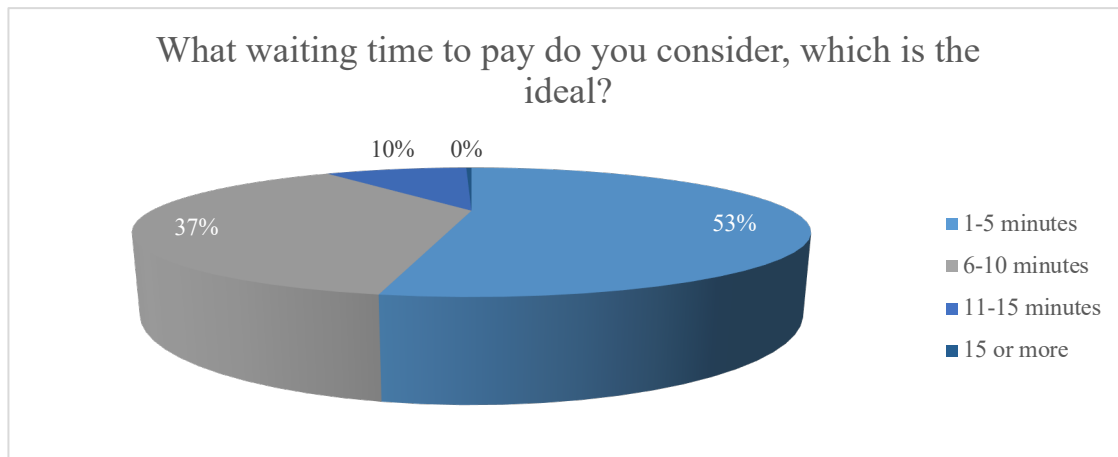


Figure 4: What waiting time to pay do you consider, which is the ideal?

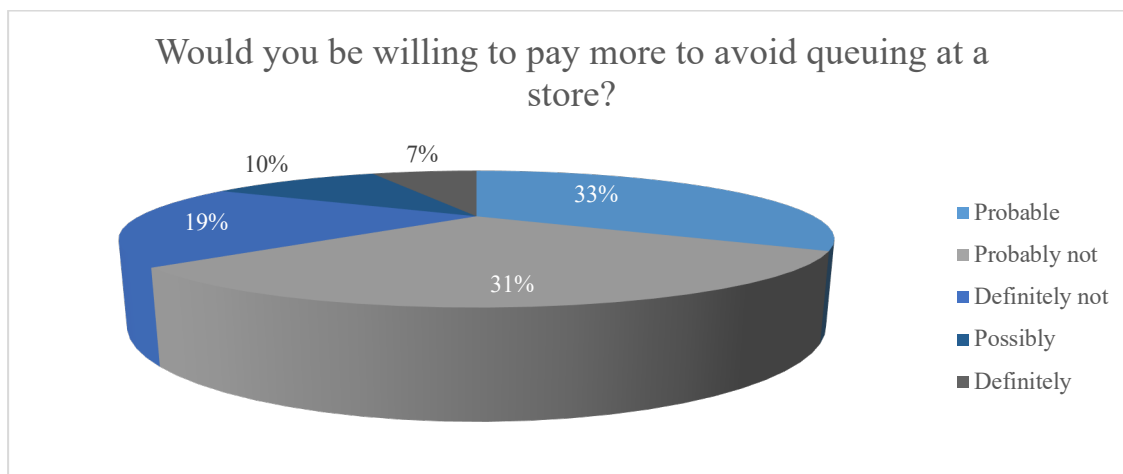


Figure 5: Would you be willing to pay more to avoid queuing at a store?

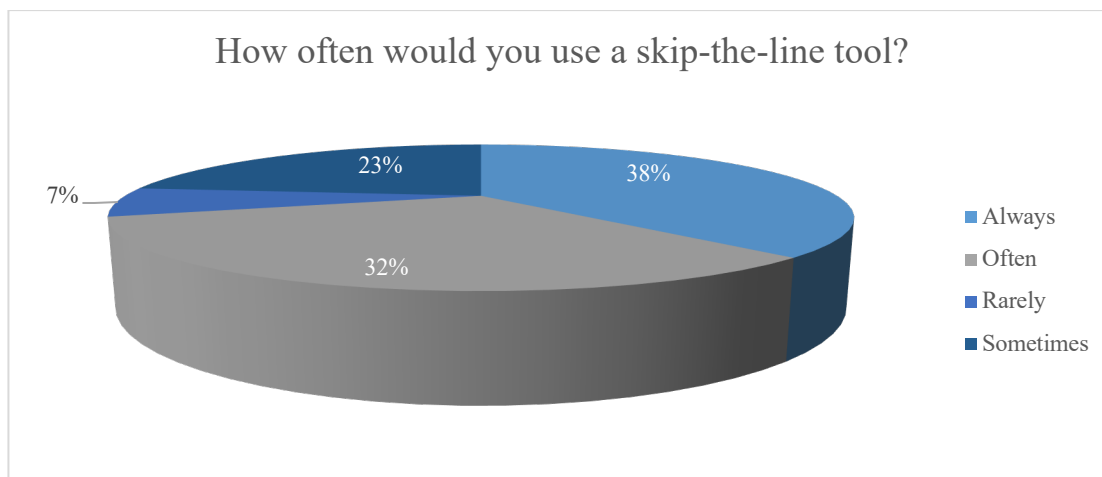
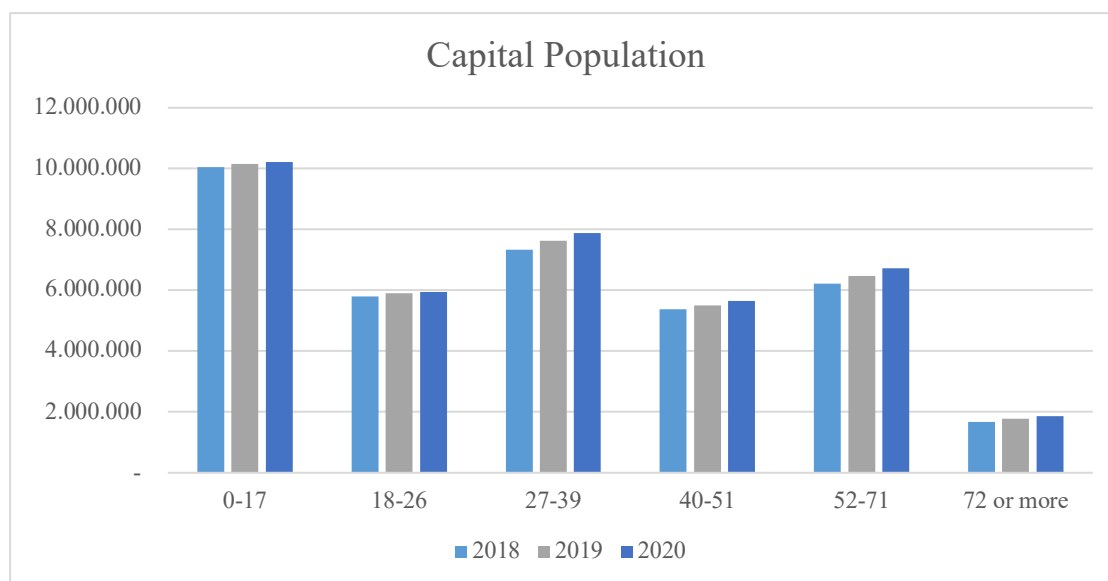
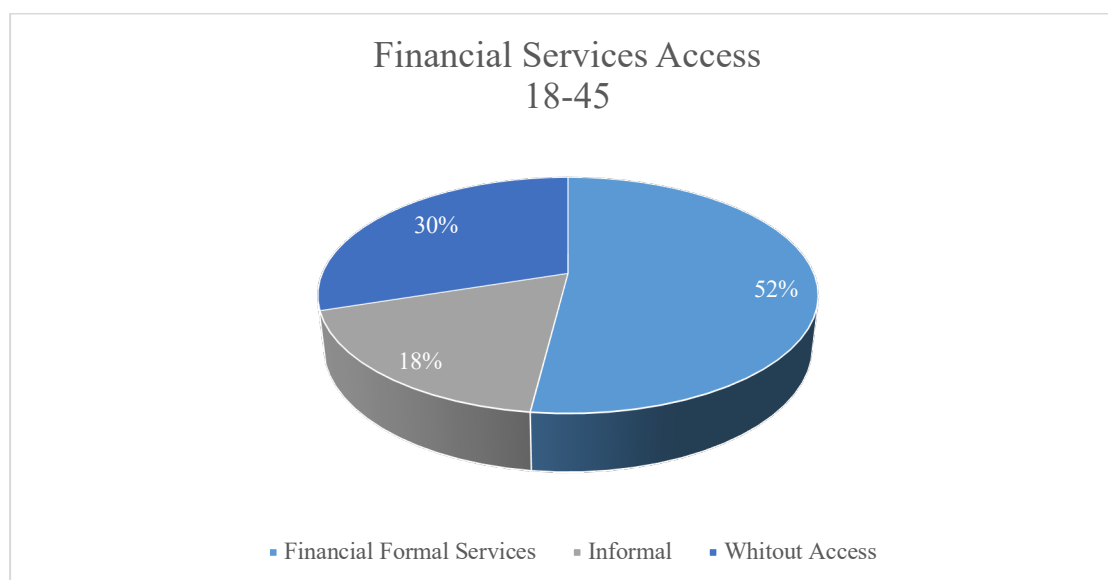


Figure 6: How often would you use a skip-the-line tool?





*Figure 7: Capital Population*



(BANCA DE LAS OPORTUNIDADES, 2018)

*Figure 8: Financial Services Access*

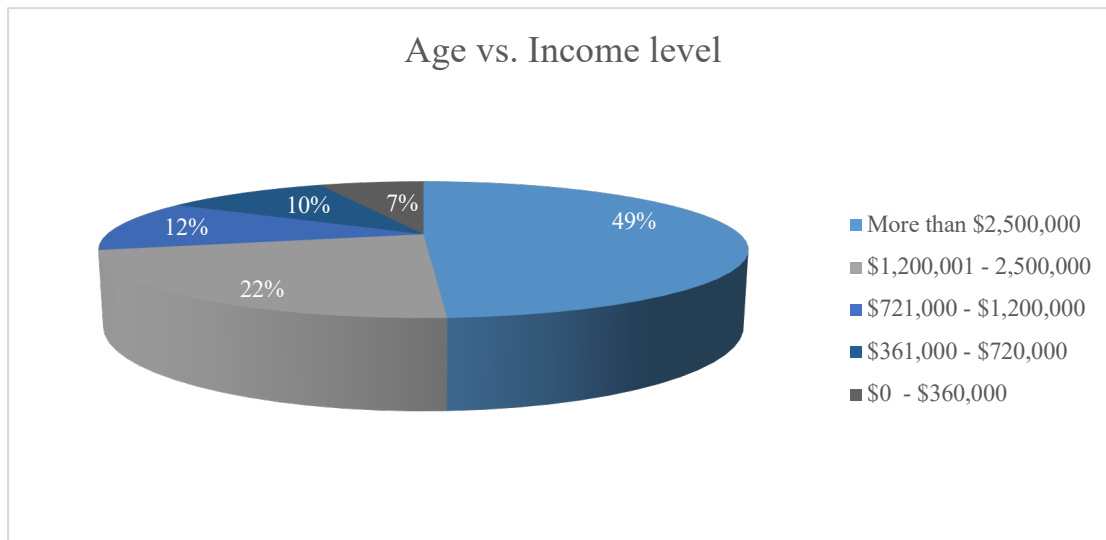
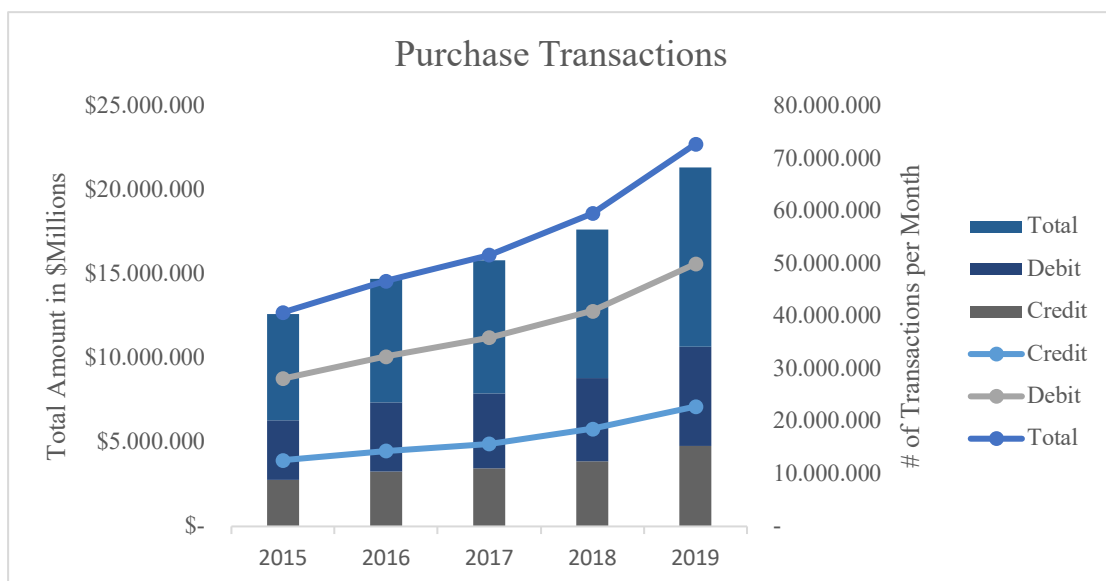


Figure 9: Age vs Income level



(Financial Superintendence of Colombia, 2015-2019)

Figure 10: Purchase Transactions

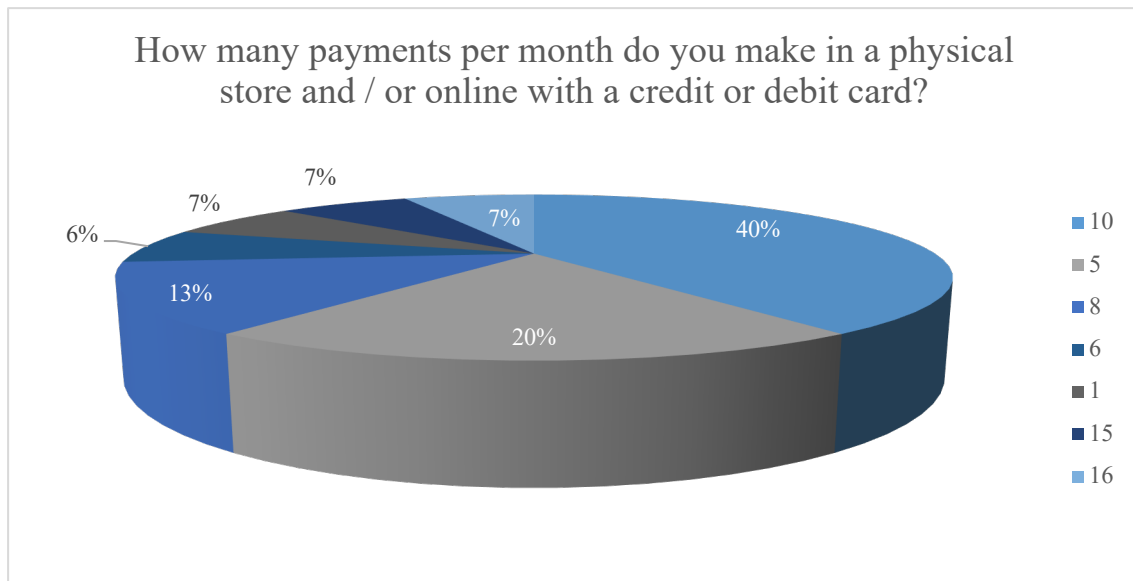


Figure 11: How many payments per month do you make in a physical store and / or online with a credit or debit card?

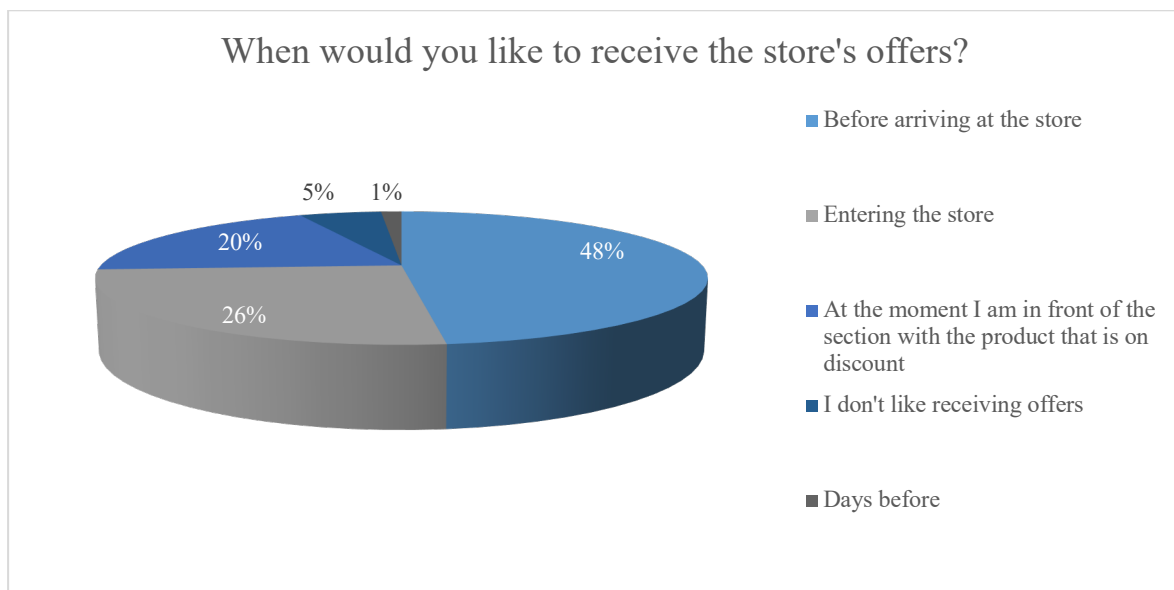


Figure 12: When would you like to receive the store's offer

## 12.2. Tables

Payment Gateway	Aggregate Model
<b>Cash delivery</b>	<b>Cash delivery</b>
24 H	24 a 48 h
<b>Cost</b>	<b>Cost</b>
\$199	2,50% + \$500

*Table 1: Pricing TrikiPay Scan & Pay for retailers*

Payment Gateway	Aggregate Model
<b>Cash delivery</b>	<b>Cash delivery</b>
24 H	24 a 48 h
<b>Cost</b>	<b>Cost</b>
5,00%	6,00%

*Table 2: Pricing TrikiPay Scan & Pay for retailers with ERP Integration*

Payment Gateway	Aggregate Model
<b>Cash delivery</b>	<b>Cash delivery</b>
24 H	24 a 48 h
<b>Cost</b>	<b>Cost</b>
5,00%	6,00%

*Table 3: TrikiPay Scan & Pay for retailers with RFID*

Name	Website
Oriient	<a href="http://www.oriient.me">www.oriient.me</a>
Point Inside	<a href="https://www.pointinside.com/">https://www.pointinside.com/</a>
Navigine	<a href="https://navigine.com/">https://navigine.com/</a>
Wirfarer	<a href="http://www.wifarer.com/">http://www.wifarer.com/</a>
Jibestream	<a href="https://www.inpixon.com/">https://www.inpixon.com/</a>
Meridian Apps	<a href="https://meridianapps.com/">https://meridianapps.com/</a>
Maps Indoors	<a href="https://www.mapspeople.com/mapsindoors/">https://www.mapspeople.com/mapsindoors/</a>
VisionGlobe	<a href="https://visioglobe.com/">https://visioglobe.com/</a>

*Table 4: List of possible Indoor Mapping providers*

### **12.3. Indoor Mapping Overview**

Indoor navigation enters brick & mortars shopping experience into the digital world, having an indoor mapping in your retail stores, customers will save time getting optimal routes to get exactly what the customer is searching for, improving their experience and become loyal to your brand. Moreover, indoor mapping engages customers at the moment they are in your stores. Imagine receiving a coupon or a discount at the moment you are in front of the product. Furthermore, this can increase basket size and have an impact on store sales.

Nevertheless, some retailers underestimate digital experience in brick-and-mortar stores although it represents a huge opportunity to engage shoppers during their purchase process. Moreover, it increases loyalty within a store. Further, knowing how your customers move around your supermarket or store can help you optimize the layout of the aisles and walkways and improve the placement of products.

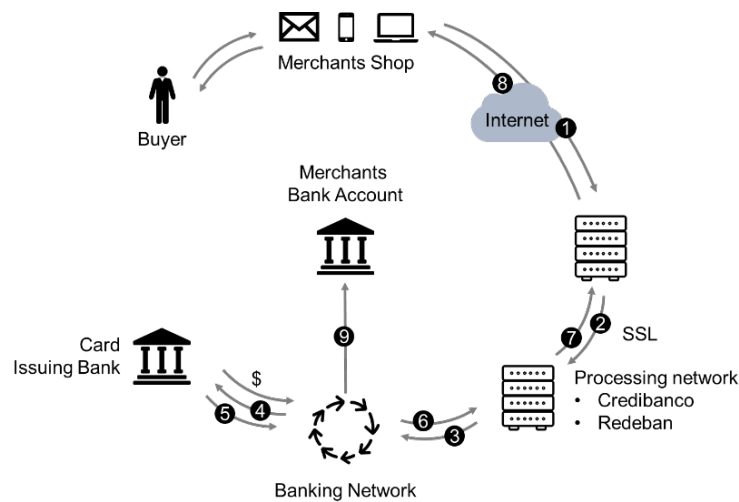
In Colombia, there are only few stores with indoor mapping. Until now some Exito stores, with store concept of Exito Wow have indoor mapping. It is a trend that has started this year. Furthermore, it is probable that their competition will try to implement it as soon as possible.

After running our survey filtered by our potential customers group as you can see in *Figure 12*, 26 % answered they would like to receive offers entering the store and 20 % would like to receive offers at the moment they are in front of the section with the product that is on discount. Nevertheless, the majority likes to receive offers before arriving at the store. We can conclude that indoor mapping and receiving offers at the moment customers is in front of the product can increase the bag size in approx. 20 % of stores customers.

As we will not be specializing in indoor mapping, the payment gateway can make partnerships with indoor mapping providers. Due to this we created a list of possible providers as you can see in *Table 4: List of possible Indoor Mapping providers* that will be interested in. Nevertheless, Jibestream acquired by Inpixon, they are interesting due their path in indoor intelligence, they combine mapping, positioning, analytics, sensor fusion with IoT to get the most from indoor location. Moreover, Inpixon have a reseller and partnership program that will help us to offer their technology and win money in the process.

## 12.4. Operations Plan Overview

### Everyday Processes (Short-Term Processes)



*Figure 13: Overview of process of payment transaction*

(Pago Agil, s.f.)

Step 1: The buyer selects and scan the product to buy and pays with a credit card through the app.

Step 2: Payment gateway receives the buyer's payment data and sends the request to the corresponding processing network (Credibanco or Redeban).

Step 3 and 4: The processing network sends the request to the card issuing bank and it approves or rejects the transaction.

Step 5 and 6: The card issuing bank delivers a response to the processing network.

Step 7: The processing network delivers a response to Payment Gateway

Step 8: Payment Gateway delivers a response to the buyer and the merchant.

Step 9: If the transaction was successful, the bank issuing the card affects the buyer's quota and transfers the funds to the merchant's bank account.

(Pago Agil, s.f.)

## **12.5. Industry Analysis Overview**

### Bargaining power of suppliers (Low)

Addressing Porter's bargaining power of suppliers, the Payment Gateway service requires commercial agreements with the most popular card brands known: Visa, MasterCard and American Express and additionally integrate technologically with the transaction network. This leads to a market with high concentration ratio.

Although Visa and MasterCard have their own payment gateway system and are owners of the transaction network, the bargaining power of those providers can be seen as low. This is based on the situation that the card brand providers benefit from an independent payment gateway as the ultimate goal is to accept all card brand and process all transactions. Consequently, a collaboration of the card brand providers and the payment gateway is a win-win relationship for both industries.

Further, there is no switching cost and substitutes regarding the card brands since they always are the same.

Nevertheless, in terms of human resources supply for the IT area, national government have developed different educational free programs to increase developers IT offer in Colombia like Mision MinTIC 2022 that have the mission to capacitate 100,000 software developers, in different programming languages and English. Also, in Colombia courses about programming have a lot of interest like for example Platzi courses due to Colombia's government since 2017 have been giving free courses through the Ministry of Information Technologies and Communications. also in general IT development suppliers are an international industry, people are used to work also with developers in India or other countries remotely reducing the bargaining power as well.



### Bargaining power of buyers (Moderate)

The bargaining power of buyers is moderate. The revenue stream of the industry is based on commissions per transactions, it is around 3% + 900 + (TAX) or in the payment gateway model 300 COP to 900 COP per transaction plus banking costs. The power of the buying side depends on their size in the market and becomes stronger when the customers is a big player in the retail sector. Through the large volumes and net sales of transactions they have in their stores, they have significant leverage over the payment gateway providers as they are strong revenue drivers. Most of these big players have net sales around tree million USD per store in 1 year and around 5000 transactions per month. Moreover, these players are usually recognized brands in the retail sector as Zara, Ara, Olimpica, Exito, Homecenter and Pricesmart as an example.

Usually, big players use the payment gateway model. Therefore, the switching cost is low in the e-commerce and POS. Nevertheless, in POS, they have to purchase another hardware for using a different gateway. This hardware has a cost of around 99,000 COP (20 USD) with tax with one store usually having between 1 and 5 hardware. However, in case a system comparable to the one of TrikiPay is used, the acquisition of POS hardware and barcode scanners are not needed or less need as this method does not require them. Regarding the integration of those methods into the business operations, it is not very difficult. In the first step the bank account of the store needs to be added to the payment gateway. Afterwards each product's barcode has to be added to our database. Therefore, stores have to send their product list with their barcodes to be integrated within the app. Furthermore, this is a service that will have substitute services like cash acceptance and the new free scan QR code banks app. Scan QR codes banks apps work by giving a QR code to each account and you scan it and automatically you get the store's account number, and you transfer the amount money is on the receipt.

### Threats of new entrants (Low)

The easier it is for new companies to enter an industry, the more cut-throat competition there will be. Subsequently, the threat of entry is inversely proportional to the height of entry barriers. In theory, there are several factors that determine the height of entry barriers: Economies of scale, economies of scope, product differentiation, capital requirement and cost advantages. (Porter, 1979). In the case of software development has a high capital requirement at the beginning for developing the technology creating a moderate to high barrier to enter. Additionally, the market entry requires time to fully understand the local market as there is a need to have the right partnerships with the card brands and banks to develop the technology and commercial relationship for each of them. Furthermore, in Colombia, payment gateways have to have the PCI-DSS security certification among others.

Also, there is a regulation in Colombia for the payment gateway creating a barrier for new entrants as you can see in the Appendix *Legal Overview*. Further, it will require time to make the brand identity of the company payment gateway due to the number of retailers that are in the market with also requiring to establish the contact and to convince them to use the payment gateway.

As security in this type of business is very important, developing high security standards for payment gateway is time intensive and consequently costly leading to even higher upfront development costs. Few players but big ones, retaliation should be something to consider as well. Finally, payment gateways are surveillance by the Financial Superintendence of Colombia. Last but not least the threat of new entry is low which is mainly driven by high entry barriers set through high fixed costs in the beginning and the strong country-specific regulations.

### Threat of Substitutes (Low)

The substitute that payment gateway has is payment with cash. As observable in the appendix in Figure 1, 37% of people pay with cash. It does not vary to much between ages, but it varies when filtered by income level and it decreases when customers have a higher income level. 27% of the potential customer surveyed with an income of more than \$2,500,000 pay with cash. Furthermore, this will decrease with time as cash is consider as a way to get any virus including COVID-19.

Nevertheless, when consulting Estudio de la demanda 2018, 94,9 % of people with an income level more than \$2,500,000, have access to formal financial services. Therefore, following the trend with the actual circumstances and adding accessibility to formal financial services, people have enough access to formal financial services so the trend to use electronic money can continue growing more. (BANCA DE LAS OPORTUNIDADES, 2018).

Based on the fact that cash is the only real substitute and electronic money is a growing trend, the threat of substitutes can be assessed as low.

### Degree of Rivalry (High)

In terms of concentration there are few players in the market, with having around 10 payment gateway companies in Colombia moreover, the market is expected to continue growing as see-able later in the part about the market size. Just the grocery sector players have increased the number of stores per year in the country. Therefore, in product differentiation there is no different in what the actual players offer, commissions in the aggregate model are between 2,85% to 3,5% + a fixed fee between 700 COP - 1000 COP per transaction and in the payment gateway model are between 200- 900 COP for each transaction.

Nevertheless, in Point-of-sale payment gateways there are two big companies as mentioned before that also owns the credit card transaction network, Redeban and Credibanco. Redeban

owns MasterCard franchise and CredibanCo owns franchise Visa in Colombia and have a high rivalry between them.

Finally, the degree of rivalry between players in the market is high as Credibanco and Redeban are trying to be the number one company in the payment gateway market.

## **12.6. Legal Overview**

In accordance with Article 6 of Law 795 of 2003, the national government is empowered to regulate payment systems and the activities are not the responsibility of the Banco de la República, pursuant to article 72 of the same law payment gateways companies may be subject to the inspection, surveillance and control of the Financial Superintendence of Colombia

Decree 1400 of 2005 developed a glossary with the relevant terms for the industry and established the rules by they are regulated it. (Unidad de proyección normativa y regulación financiera, 2018)

Moreover, Financial superintendence of Colombia through the external circularity 008 of 2018 give some requirement to create a payment gateway company

“2.3.8. Linking of entities administering payment gateways and establishments trade. Credit institutions and administrators of low-value payment systems that link to administration entities of payment gateways or establishments of businesses that carry out the activities indicated in sub numeral 2.2.10. of this Chapter, must meet, at least, the following requirements:

2.3.8.1. Include in the contracts entered into with said commercial establishments or administration entities of payment gateways:

2.3.8.1.1. The obligation on the part of commercial establishments or entities payment gateway administrators to count, maintain and deliver PCI-DDS certification issued by an entity that holds the QSA Qualified Security Assessor) category.

2.3.8.1.2. The obligation on the part of commercial establishments or entities administrators of payment gateways to have a treatment policy and protection of personal data of consumers, in

accordance with the provisions of the Law 1581 of 2012 and in Law 1266 of 2008, where relevant.

2.3.8.1.3. The obligation on the part of commercial establishments or entities payment gateway administrators to have policies and procedures related to the prevention and control of the risk of money laundering and financing of terrorism.

2.3.8.1.4. The obligation on the part of commercial establishments or entities administrators of payment gateways to carry out information campaigns on the security measures that buyers and sellers must adopt for the conducting electronic commerce operations."

## **12.7. Groceries Overview**

### Grupo Exito

Grupo Exito is present in Colombia with the brands Éxito, Carulla, Super Inter, Surtimax, Surtimayorista and Viva. Éxito is the hypermarket from Grupo Exito while Super Intern, Surtimax and sutimayorista are low-cost supermarkets and Carulla is a convenience format store with high quality food plus Fresh Market strategy

Moreover, Grupo Exito has five main strategic pillars in 2019-2020 that are innovation, Omni channel experience, digital transformation, best practice and integration as well as sustainable shared value. Therefore, Grupo Exito could be a potential customer for our app since in their digital transformation they are considering frictionless payment method.

After analyzing Grupo Éxito reports from 2017 to 2020, the group the overall number of stores decreased caused by decreasing store numbers of the Éxito and SurtiMAX/SuperINTER brands. The number of Carulla stores stayed almost constant while new stores of the Surti-Mayorista were opened as it can be seen in the table below. (Grupo Exito, 2020)

Stores	FY 2019	FY 2018	FY 2017
Carulla	99	100	100
Éxito	252	263	261
SurtiMAX/SuperINTER	185	202	205
SurtiMayorista	18	9	

*Table 5: Development of number of Grupo Exito's stores*

(Grupo Exito, 2020)

#### Jeronimo Martins (Ara)

In Colombia, Ara currently operates in three geographical areas of the country: The Coffee Growing Region, the Caribbean Coast and Bogota. It is a chain of proximity food stores, mostly set up in residential neighborhoods, with a positioning of quality at the best price, combining competitiveness with promotional opportunities in key categories for the Colombian consumer. At the end of the year, Ara was operating 616 stores, having renewed its strategic model to best adapt to the characteristics of each region in which it is present.

(Jeronimo Martins, 2019)

(€ 000,000)	H1 2020	FY 2019	FY 2018	FY 2017	FY 2016
Net Sales		784	599	405	236
Store Network	631	616	532	269	161

*Table 6: Revenue and Store development of Ara from 2016 to H1 2020*

(Jeronimo Martins, 2020)

After analyzing Jeronimo Martins Reports, it shows that between 2016 and H1 2020 Ara has built 470 stores in Colombia representing an increase of 292% in the store.

#### KOBE Colombia S.A.S (D1)

D1 has 1,300 stores in 24 departments and more than 267 municipalities, covering 74% of the country. It maintains the leadership in the hard discount stores with a 12% share in the basket of mass consumer goods in Colombia at the end of 2019, according to data from Kantar World-panel.

(Valorem, 2020)

Stores	FY 2019	FY 2018	FY 2017
D1	1300	900	724

*Table 7: Store development of D1 from 2017 to 2019*

(Valorem, 2020)

### Cencosud

Cencosud has two main brands of Super/Hypermarkets Jumbo and Metro as a hard discount store. Moreover, in Colombia there are 94 Jumbo stores distributed throughout the country with a total of 381,398 m<sup>2</sup> of sales area.

Analyzing their annual report, it is observable that they are developing and working on their Omni-channel experience through their website. Nevertheless, they are implementing click and collect in other countries in Latin America, not yet in Colombia.

(CENCOSUD, 2019)

## **12.8. Competition Overview**

### *Direct competitors*

### Redeban

Redeban are the owners of the MasterCard franchise. They are payment facilitators giving three solutions to their clients. (Redeban, 2020)

Payment Link	Mini Datafono	QR CODE
It allows you to sell online without having a website.	A mobile device that connects to your cell phone to receive card payments	Your clients can pay from the app, E-Wallet from their bank.
<b>Inmplementation</b>	<b>Implementation</b>	<b>Implementation</b>
Free	Free	Free
<b>Cost</b>	<b>Cost</b>	<b>Cost</b>
Comission: 2,99% + \$800 COP+ TAX	Comission: 2,99% + \$800 COP+ TAX	Comission: 2,99%
	Device cost: \$99,000	

*Table 7: Solutions offered by Redeban*

(Redeban, 2020)

### Credibanco

Credibanco is a strong player in the market with being the owners of Visa franchise and their main activity is to be a facilitator giving three solutions to their clients. Moreover, they have implemented PaGo through their app, really similar to what TrikiPay does. However, they do not offer budgeting functionalities. (Credibanco, 2020)

### Wompi

Wompi is Grupo Bancolombia's payment facilitator with being around 2 years in the market. (Wompi, 2020)

Payment delivery: 1 day	Payment delivery 15 days	Payment delivery: 30 days
Implementation	Implementation	Implementation
Free	Free	Free
Cost	Cost	Cost
Comission: 2,85% + \$800 COP+ TAX	Comission: 2,75% + \$700 COP+ TAX	Comission: 2,65% + \$700 + TAX

*Table 8: Solutions offered by Wompi*

(Wompi, 2020)

### Place to Pay

Place to Pay has more than 20 year of experience. Moreover, in the last two years they have proceed more than 30 million transactions (Place to Pay, 2020)

Payment Gateway	Aggregate Model
Cash delivery	Cash delivery
24 H	1 week
Cost	Cost
Comission: \$240-\$760	2.9%* + \$950

*Table 8: Solutions offered by Place To Pay*

(Place to Pay, 2020)



## FAST TRACK

*“Operation based on the use of FastTrack Suite: a powerful and versatile tool that includes a Transactional Gateway Host to Host (H2H), with Microservices technology and Service Buses, designed by its engineers combining state-of-the-art technology”.* (Fast Track, 2020)

Payment Gateway	Aggregate Model
<b>Cash delivery</b>	<b>Cash delivery</b>
24 H	1 week
<b>Cost</b>	<b>Cost</b>
Comission: \$900	2.84%* + \$850

*Table 9: Solutions offered by Fast Track*

(Fast Track, 2020)

## Kushki Pagos

Kushki Pagos has presence in 6 countries: United States, Peru, Colombia, Mexico, Ecuador and Chile. Moreover, they process 75,000 transactions per second. Nevertheless, they show a high cost when compared with the median in the sector. (Kushki Pagos, 2020)

Payment Gateway	Aggregate Model
<b>Cash delivery</b>	<b>Cash delivery</b>
24 H	1 week
<b>Cost</b>	<b>Cost</b>
Comission: 0,8% + \$3000	3,2% + \$900

*Table 10: Solutions offered by Kushki Pagos*

(Kushki Pagos, 2020)

### OlimpiaIT

SecurePay is the payment gateway solution of OlimpiaIT. They offer a range of digital solutions as a company including the payment gateway. (OlimpiaIT, 2020)

Payment Gateway	Aggregate Model
<b>Cash delivery</b>	<b>Cash delivery</b>
24 H	1 week
<b>Cost</b>	<b>Cost</b>
Comission: \$227	2,49% + \$400

*Table 11: Solutions offered by OlimpiaIT*

(OlimpiaIT, 2020)

### Epayco

Epayco is the payment gateway of one of the biggest banks in Colombia, Davivienda. Epayco's implementation of the payment gateway has a fee of 1,499,000 COP +Tax and it includes subscription to the platform and integration with the credit card and debit card network, Incocredito certification, management console, and installation and configuration of merchant terminals. (Epayco, 2020)

Payment Gateway	Aggregate Model
<b>Cash delivery</b>	<b>Cash delivery</b>
24 H	24 a 48 h
<b>Cost</b>	<b>Cost</b>
Comission: 235-900 COP	2,99% + 900 COP

*Table 12: Solutions offered by Epayco*

(Epayco, 2020)

### *International competitors*

### Mishi Pay

Mishi Pay enables shoppers to use their own device to scan and pay for their shopping from any location in your store. Nevertheless, they have their own app with their services being not integrated with the retailers app.

They have with customer brands like Mango, EROSKI, Picwictoys, Laithwait's wine, RELAY, Media Markt Saturn Group & Leroy Merlin

(MishiPay, 2020)

### Ayden

Ayden offers different payment solutions. They have solutions for online payments, point of sale, platforms, unified commerce and issuing cards. The solution that is in what we compete is point-of-sales solutions. In general, they have a fully certified and PCI-compliant terminal range. Moreover, they have an API that integrates payment to web browsers, mobile devices and cash registers. Further they have their own dashboards showing performance of the store. This dashboard connects payment data across channels for accurate and in-depth customer insights. Furthermore, they have the following brands as their clients: Uber, Tiffany & Co, Ebay, Booking.com, Mango, Evernote, LinkedIn, McDonalds, Transferwise, Spotify, DeBijenkof, Etsy, Oneill, Microsoft, Groupon, KLM, Gap Inc., Tory Burch and more. In terms of cost they have a fee of 0,60% per transaction. They have presence worldwide but in Latin America they are only present in Brazil and Mexico. (Adyen, 2020)

### SQUARE

SQUARE is one of the leading payment gateways worldwide with presence in different countries with a broad number of payment solutions. (SQUARE, 2020)

Terminal API and Reader SDK transactions	In-App Payments SDK transactions	Online Payment APIs transactions
That's for every payment you take at a custom-built point of sale, attended kiosk, or any other in-person payment solution for your business.	That's for every payment you take using your business's mobile app.	That's for every payment you take using our e-commerce integrations or online payment APIs.
<b>Implementation</b>	<b>Implementation</b>	<b>Implementation</b>
Free	Free	Free
<b>Cost</b>	<b>Cost</b>	<b>Cost</b>
Comission: 2.6% + 10¢	Comission: 2.9% + 30¢	Comission: 2.9% + 30¢

*Table 13: Solutions offered by Square*

(SQUARE, 2020)

### *Indirect Competitors*

Indirect competitors are the ones that are not a payment platform, but that have solutions for queues in stores like sprinting software

Sprinting Software offers three solutions, but the one that affect TrikiPay is their “Mobile Self-checkout for retail”. Sprinting Scan & Go allows shoppers in stores to scan items, pay using their own smartphone and skip the queue.

Nevertheless, they do not have their own app. What they do is that they offer their services license to the retailers and retailers use it in their own retailer’s apps.

(Sprinting Software, 2020)

### **12.9. Solution Overview**

#### *TrikiPay Scan & Pay for retailers*

Step 1: Stores generate a QR Code with invoice data

Step 2: Customer scan the invoice QR code

Step 3: Customer see the invoice in the shopping bag

Step 4: Customer pays

Step 5: Transactional process occurs

#### *TrikiPay Scan & Pay for retailers with ERP Integration*

Step 1: Customer scan product barcode

Step 2: Customer review the shopping bag

Step 3: Customer pays

Step 4: Transactional process occurs

Step 5: App send invoice information to the ERP system

Step 6: App generates QR code with the invoice data

Step 7: Security scan QR code and receive all the invoice data for a visual security check

Step 8: Security sends data to the ERP system

### *TrikiPay Scan & Pay for retailers with RFID*

Step 1: Customer scan product barcode

Step 2: Customer review the shopping bag

Step 3: Customer pays

Step 4: Transactional process occurs

Step 5: App send invoice information to the ERP system

Step 6: App generates QR code with the invoice data

Step 7: Security scan the QR code and receive all the invoice data for a RFID security check

Step 8: Security scan customer physical bag and deactivate RFID sensors with the RFID Scanner

Step 9: RFID system checks if information received by QR code and RFID scanner are the same

Step 10: Security sends data to the ERP system

### Recommendation engine

Recommendation engine will be based on a cluster model, the goal of the algorithm is to treat the task as a classification problem, the cluster will divide customers into segments, classified by their characteristics and usual purchases, further it will recommend product purchased by other similar users and similar shopping bags. (Greg Linden, 2013) This will let brick-and-mortar retailers have the benefits of cross selling and up selling as used in e-commerce. With TrikiPay retailers are able to integrate customer-centric communication and advertising on an individual basis through the recommendation engine which retailers hardly could achieve before.

### Theft prevention system

Security Certification: Payment gateway operator should have a Transport Layer Security certification moreover, 3DSecure system because having 3DSecure system, businesses are no

longer responsible for returns due to claims of fraud by card owners, this system is promoted by Visa and MasterCard franchises

Shrinkage security: The app will have an algorithm that will choose randomly a bag to rescan in case of the ERP integration, nevertheless with the RFID technology this will not be a problem. Moreover, the app will have a fully registration process for a security check. Further, internally each user will have a security score, this score will depend on how successful is the randomly rescan process, if the user has a low score, will have more probability to be chosen to a rescan process, until the user increases their score

## 12.10. App Design Overview

The image shows a large black rectangular area representing a mobile app screen. In the center of this screen is the 'TRIKIPAY' logo. The logo consists of the word 'TRIKIPAY' in a bold, white, sans-serif font. On either side of the text are vertical bars of varying heights, resembling a barcode or a stylized 'T' and 'Y'.



**Select the store you are visiting**

**Did we get that wrong?**





### Country



**COLOMBIA**

Please select the store you are currently in

SEARCH

Filter

OLIMPICA

JUMBO



#### **OLIMPICA STORE**

Cra 51B #No. 85 - 48, Barranquilla,  
Atlántico, Colombia.



#### **MINISO MALL PLAZA**

local 78. Cra. 51 #80, Barranquilla,  
Atlántico, Colombia.



#### **JUMBO SUPERMARKET**

Cll 99, Cra. 53, Barranquilla,  
Atlántico



#### **OLIMPICA STORE II**

Cra. 46 ## 82 - 54, Barranquilla,

 **TRIKIPAY** 



**Add loyalty card?**

**Skip**

**Add Card**



## My Bag

**Scan an item to  
add it to your  
bag**

**START SCANNING**



Bag



Scan



Account

 **TRIKIPAY** 

**2X1  
JUST  
FOR  
TODAY**

**40%  
OFF  
On this  
item**



**25% OFF ON  
THAT ITEM**

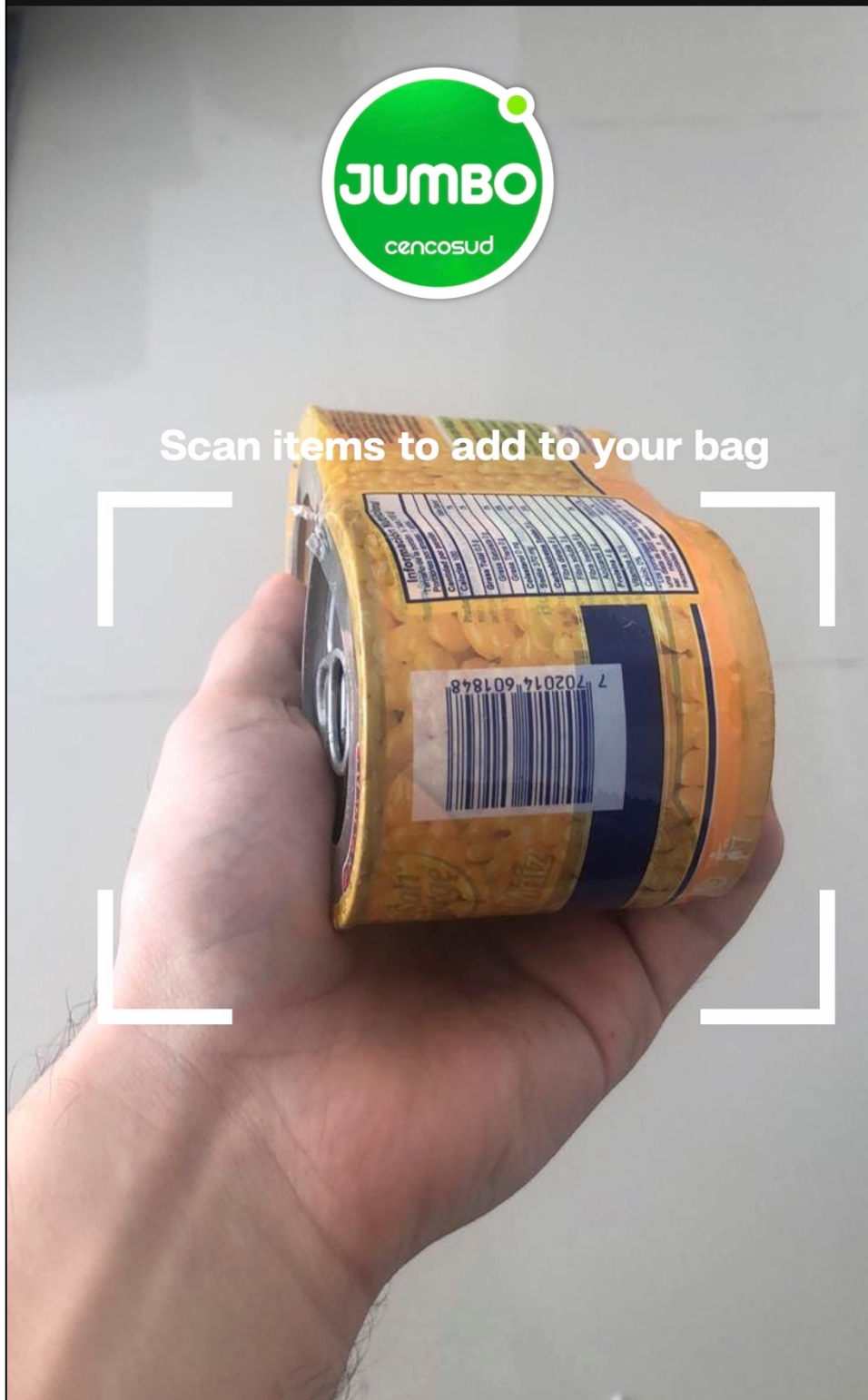
Set aside products with  
discount stickers, security  
tags and vouchers for their  
application at the register at  
the end of your purchase

**OK**

# TRIKIPAY



Scan items to add to your bag



## 12.11. Financial Plan Overview

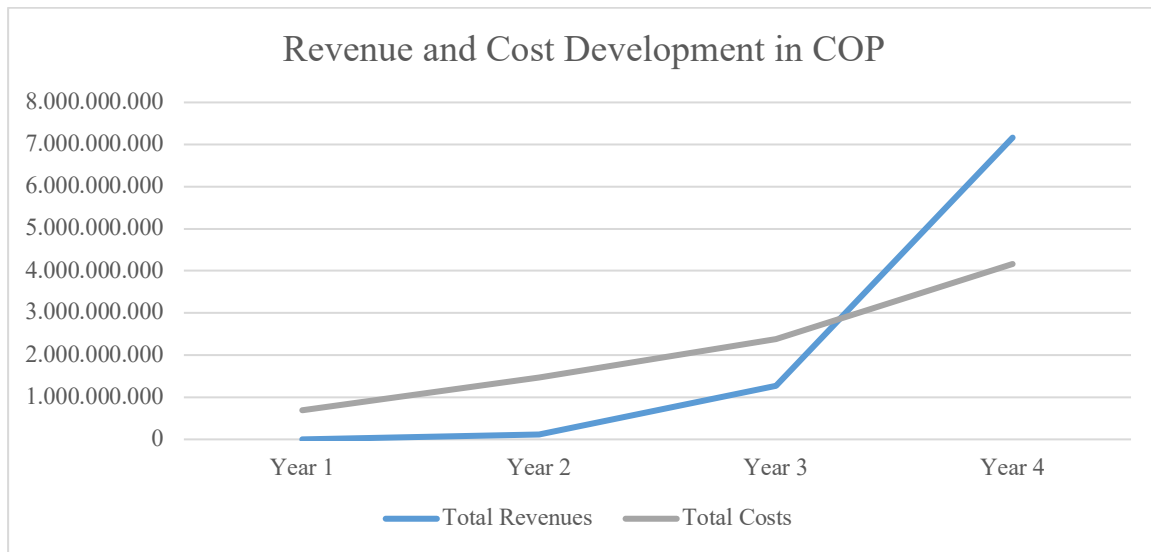


Figure 14: Revenue and Cost development

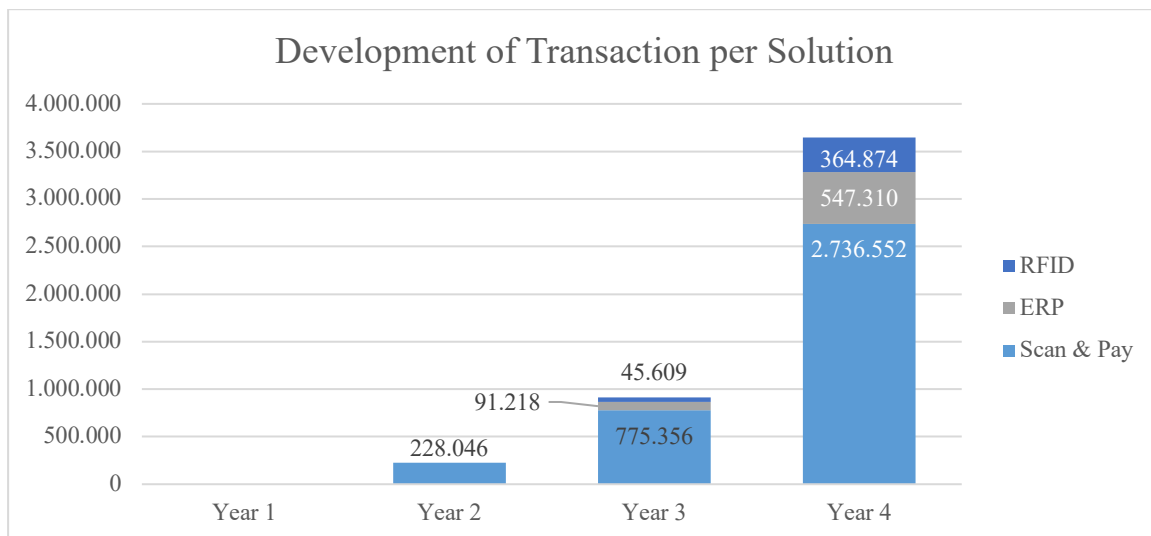


Figure 15: Development of Transactions per Solution

Value Drivers	Year 1	Year 2	Year 3	Year 4	Assumptions
Customer Potential	5.429.666	5.429.666	5.429.666	5.429.666	Number of potential customers stays constant for the next 4 years
Customer rate	0,0%	1,0%	2,0%	4,0%	Business operations start in Year 2 with an exponential growth strategy
<b>Total Customers</b>	<b>0</b>	<b>54.297</b>	<b>108.593</b>	<b>217.187</b>	
Average transaction per customer per year	84	84	84	84	Number of annual transaction will remain constant in the short-term future and are based on the survey answers
% of Transactions processed by Trikipay	0%	5%	10%	20%	Strong transaction growth due to winning larger retailers as customer
Transaction processed by Trikipay per customer per year	0	4	8	17	Numbers show to be very conservative with being in year 4 around 1,5 transactions per day
<b>Total transaction processed by Trikipay</b>	<b>0</b>	<b>228.046</b>	<b>912.184</b>	<b>3.648.735</b>	
Average sales ticket per transaction (in COP)	124.000	124.000	124.000	124.000	Data is based on Redeban Purchase tickets and is assumed to stay constant in the future
<b>Total transaction value processed by Trikipay (in COP)</b>	<b>\$ -</b>	<b>\$ 28.277.699.851</b>	<b>\$ 113.110.799.404</b>	<b>\$ 452.443.197.615</b>	

Table 14: Forecast of the TrikiPay's value drivers for Year 1 to Year 4

Revenue Forecast					Assumptions
	Year 1	Year 2	Year 3	Year 4	
<b>Solution 1: Scan &amp; Go: % of Product Mix</b>	<b>0%</b>	<b>100%</b>	<b>85%</b>	<b>75%</b>	Solution 1 will be available through the MVP in the first operational year. Over time it will decrease due to the launch of the ERP & RFID solution, but will remain the main revenue source
Variable Fee for Payment Gateway (in %)	0%	0%	0%	0%	
Fixed Fee for Payment Gateway (in COP)	\$ 199	\$ 199	\$ 199	\$ 199	Assuming the price set strategy stay constant over the time
Percentage of Payment Gateway of the transactions	90%	90%	90%	90%	As most transactions are done with larger retailers esp. for grocery that can use payment gateway, a split between payment gateway and aggregate model of 90/10 is assumed.
<b>Revenue from Payment Gateway</b>	<b>\$ -</b>	<b>\$ 40,843.033</b>	<b>\$ 138,866.311</b>	<b>\$ 490,116.391</b>	
Variable Fee for Agregate Model (in %)	2,50%	2,50%	2,50%	2,50%	Assuming the price set strategy stay constant over the time
Fixed Fee for Agregate Model (in COP)	\$ 500	\$ 500	\$ 500	\$ 500	Assuming the price set strategy stay constant over the time
Percentage of Agregate Model of the transactions	10%	10%	10%	10%	As most transactions are done with larger retailers esp. for grocery that can use payment gateway, a split between payment gateway and aggregate model of 90/10 is assumed.
<b>Revenue from Agregate Model</b>	<b>\$ -</b>	<b>\$ 82,096.548</b>	<b>\$ 279,128.263</b>	<b>\$ 985,158.575</b>	
<b>Total Revenues from Solution 1</b>	<b>\$ -</b>	<b>\$ 122,939.581</b>	<b>\$ 417,994.574</b>	<b>\$ 1,475,274.967</b>	
<b>Solution 2: Scan &amp; Go with ERP: % of Product Mix</b>	<b>0%</b>	<b>0%</b>	<b>10,0%</b>	<b>15%</b>	Solution 2 will be made available in the 2nd year and gain traction through the interest of larger retailers
Variable Fee for Payment Gateway (in %)	5%	5%	5%	5%	Assuming the price set strategy stay constant over the time
Fixed Fee for Payment Gateway (in COP)	\$ -	\$ -	\$ -	\$ -	
Percentage of Payment Gateway of the transactions	95%	95%	95%	95%	As ERP systems are usually implemented at larger retailers, the split between payment gateway and aggregate model is assumed to be 95/5 to accomodate this situation
<b>Revenue from Payment Gateway</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 537,276.297</b>	<b>\$ 3,223,657.783</b>	
Variable Fee for Agregate Model (in %)	6,00%	6,00%	6,00%	6,00%	Assuming the price set strategy stay constant over the time
Fixed Fee for Agregate Model (in COP)	\$ -	\$ -	\$ -	\$ -	
Percentage of Agregate Model of the transactions	5%	5%	5%	5%	As ERP systems are usually implemented at larger retailers, the split between payment gateway and aggregate model is assumed to be 95/5 to accomodate this situation
<b>Revenue from Agregate Model</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 33,933.240</b>	<b>\$ 203,599.439</b>	
<b>Total Revenues from Solution 2</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 571,209.537</b>	<b>\$ 3,427,257.222</b>	
<b>Solution 3: Scan &amp; Go with RFID: % of Product Mix</b>	<b>0%</b>	<b>0%</b>	<b>5,0%</b>	<b>10%</b>	Solution 3 will be made available in the 2nd year and gain traction through the interest of larger retailers
Variable Fee for Payment Gateway (in %)	5%	5%	5%	5%	Assuming the price set strategy stay constant over the time
Fixed Fee for Payment Gateway (in COP)	\$ -	\$ -	\$ -	\$ -	
Percentage of Payment Gateway of the transactions	100%	100%	100%	100%	As RFID needs additional technology and is therefore only implemented at larger retailers, making the payment gateway accomodating for all the RFID transactions
<b>Revenue from Payment Gateway</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 282,776.999</b>	<b>\$ 2,262,215.988</b>	
Variable Fee for Agregate Model (in %)	6,00%	6,00%	6,00%	6,00%	Assuming the price set strategy stay constant over the time
Fixed Fee for Agregate Model (in COP)	\$ -	\$ -	\$ -	\$ -	
Percentage of Agregate Model of the transactions	0%	0%	0%	0%	As RFID needs additional technology and is therefore only implemented at larger retailers, making the payment gateway accomodating for all the RFID transactions
<b>Revenue from Agregate Model</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Total Revenues from Solution 3</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 282,776.999</b>	<b>\$ 2,262,215.988</b>	
<b>Total Revenues</b>	<b>\$ -</b>	<b>\$ 122,939.581</b>	<b>\$ 1,271,981.109</b>	<b>\$ 7,164,748.177</b>	

Table 15: Forecast of the TrikiPay's revenue for Year 1 to Year 4

Costs					Assumptions
	Year 1	Year 2	Year 3	Year 4	
Yearly Cost of Senior IT engineer	\$ 84.000.000	\$ 85.680.000	\$ 87.393.600	\$ 89.141.472	Salary adjustment assumed to be equal to an inflation rate of 2% & based on Glassdoor
Number of Senior IT engineers	1	1	2	3	Constant increase of IT staff to accommodate the growth, future developments and product maintenance
Yearly Cost of Junior IT engineer	\$ 72.000.000	\$ 73.440.000	\$ 74.908.800	\$ 76.406.976	Salary adjustment assumed to be equal to an inflation rate of 2% & based on Glassdoor
Number of Junior IT engineers	3	3	6	10	Constant increase of IT staff to accommodate the growth, future developments and product maintenance
Yearly Cost of Marketing/ Sales Employees	\$ 18.000.000	\$ 18.360.000	\$ 18.727.200	\$ 19.101.744	Salary adjustment assumed to be equal to an inflation rate of 2% & based on Glassdoor
Number of Marketing/ Sales employees	0	9	20	50	Marketing staff will be hired from the first year of product launch. As the product is designed as platform, marketing and sales staff is crucial to support the growth strategy and to create the network effect.
Yearly cost of accountant	\$ 36.000.000	\$ 36.720.000	\$ 37.454.400	\$ 38.203.488	Salary adjustment assumed to be equal to an inflation rate of 2% & based on Glassdoor
Number of accountants / Auditor	0	2	3	3	As the amount of accountant work increases significantly in the year of product launch, this capability needs the full attention of experts, esp. as Trikipay is operating in the financial industry
Yearly cost of lawyer	\$ 36.000.000	\$ 36.720.000	\$ 37.454.400	\$ 38.203.488	Salary adjustment assumed to be equal to an inflation rate of 2% & based on Glassdoor
Number of lawyers	1	1	1	1	Being in a highly regulated industry, an inhouse lawyer is needed from the beginning.
Yearly cost of graphic designer	\$ 24.000.000	\$ 24.480.000	\$ 24.969.600	\$ 25.468.992	Salary adjustment assumed to be equal to an inflation rate of 2% & based on Glassdoor
Number of graphic designer	1	2	3	4	UI/UX and corporate design are crucial parts to create a consistent brand image in order to achieve the desired customer growth
Yearly cost of CTO	\$ -	\$ 167.000.000	\$ 170.340.000	\$ 173.746.800	Salary adjustment assumed to be equal to an inflation rate of 2%
Yearly cost of CFO	\$ 180.000.000	\$ 183.600.000	\$ 187.272.000	\$ 191.017.440	Salary adjustment assumed to be equal to an inflation rate of 2%
Yearly cost of CEO	\$ -	\$ 48.000.000	\$ 48.960.000	\$ 49.939.200	Salary adjustment assumed to be equal to an inflation rate of 2%. CEO/Founder will not pay himself a salary in the first year and in general a lower salary to reduce needed cash flows. As a founder he has upside potential and incentives over the shareholder equity which also allows dividends.
<b>Total Staff cost</b>	<b>\$ 540.000.000</b>	<b>\$ 1.028.960.000</b>	<b>\$ 1.630.082.400</b>	<b>\$ 2.655.974.736</b>	
<b>CAPEX (Platform acquisition + IT Development)</b>	<b>\$ 340.000.000</b>	<b>\$ 85.000.000</b>	<b>\$ 100.000.000</b>	<b>\$ 100.000.000</b>	Assumed depreciation period of 5 years in a straight line
<b>CAPEX (IT Hardware)</b>	<b>\$ 31.500.000</b>	<b>\$ 63.000.000</b>	<b>\$ 76.500.000</b>	<b>\$ 162.000.000</b>	Assumed depreciation period of 4 years in a straight line. IT Hardware costs per employee will be 4.5 million COP
<b>Depreciation</b>	<b>\$ 75.875.000</b>	<b>\$ 108.625.000</b>	<b>\$ 147.750.000</b>	<b>\$ 208.250.000</b>	
<b>Office &amp; Utilities</b>	<b>\$ 36.000.000</b>	<b>\$ 72.000.000</b>	<b>\$ 108.000.000</b>	<b>\$ 180.000.000</b>	Increase of office rent to incorporate need for new space due to new employees
<b>Hosting &amp; Cloud Services</b>	<b>\$ 17.534.616</b>	<b>\$ 21.041.539</b>	<b>\$ 25.249.847</b>	<b>\$ 30.299.816</b>	Increase of 20% per year to incorporate the growth of users and transactions & based on expert from Amazon Web Services
<b>Marketing campaign</b>	<b>\$ -</b>	<b>\$ 200.000.000</b>	<b>\$ 400.000.000</b>	<b>\$ 1.000.000.000</b>	Strong marketing expenditures for the campaigns to attract a consumers in order to reach a critical mass
<b>Travel expenses</b>	<b>\$ 10.000.000</b>	<b>\$ 20.000.000</b>	<b>\$ 40.000.000</b>	<b>\$ 40.000.000</b>	Assumed increase of trip in the first two years due to office opening in each city
<b>Telecommunication</b>	<b>\$ 6.000.000</b>	<b>\$ 12.000.000</b>	<b>\$ 18.000.000</b>	<b>\$ 30.000.000</b>	Increase due to new employees and increased business activity
<b>Office supplies</b>	<b>\$ 6.000.000</b>	<b>\$ 8.000.000</b>	<b>\$ 12.000.000</b>	<b>\$ 20.000.000</b>	Increase due to new employees and increased business activity
<b>Total Operating Expenses</b>	<b>\$ 75.534.616</b>	<b>\$ 333.041.539</b>	<b>\$ 603.249.847</b>	<b>\$ 1.300.299.816</b>	
<b>Total Costs</b>	<b>\$ 691.409.616</b>	<b>\$ 1.470.626.539</b>	<b>\$ 2.381.082.247</b>	<b>\$ 4.164.524.552</b>	

Table 16: Forecast of the TrikiPay's costs for Year 1 to Year 4



Financial Summary (in COP)	Year 1	Year 2	Year 3	Year 4	Assumptions
Total Revenues	\$ -	\$ 122.939.581	\$ 1.271.981.109	\$ 7.164.748.177	
Total Costs	\$ 691.409.616	\$ 1.470.626.539	\$ 2.381.082.247	\$ 4.164.524.552	
Earnings before taxes	-\$ 691.409.616	-\$ 1.347.686.959	-\$ 1.109.101.138	\$ 3.000.223.624	
Taxes (33%)	-\$ 228.165.173	-\$ 444.736.696	-\$ 366.003.375	\$ 990.073.796	
Earnings after taxes	-\$ 463.244.443	-\$ 902.950.262	-\$ 743.097.762	\$ 2.010.149.828	
Depreciation	\$ 75.875.000	\$ 108.625.000	\$ 147.750.000	\$ 208.250.000	
CAPEX	\$ 371.500.000	\$ 148.000.000	\$ 176.500.000	\$ 262.000.000	
Net Working Capital Changes	\$ -	\$ 2.458.792	\$ 22.980.831	\$ 120.314.133	Only evaluating operational cash which is set to be 2% of sales
Free Cash Flow	-\$ 758.869.443	-\$ 944.784.054	-\$ 794.828.593	\$ 1.836.085.695	

*Table 17: Summary of TrikiPay's financial planning for Year 1 to Year 4*