

NOVA School of Business & Economics

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Millennium bcp's role in the mobile payments environment

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Title

Millennium bcp's role in the mobile payments environment

Abstract

Having been approached by Millennium bcp with the challenge of defining what should the role of the bank in the future of the Portuguese Mobile Payments arena, this document proceeds to reflect on the work done during the project, as well as summarizing key insights from it.

Keywords: Mobile payments, P2P transfers, App, Millennium, Wallet, Portugal

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1.1 Brief Context - Client

Being the largest private bank in Portugal, with around 2.3 million customers, Millennium stands as one of the main players in the Portuguese banking market. Having been through a recent financial crisis, the bank is still operating under net losses (-€387 million, in 2014), but is looking at new areas of opportunity in the Portuguese market. Two of those areas: internet banking and mobile banking.

The bank has a strong history of success in the usage of mobile payments (Bank Millennium Poland), but is lagging behind on the implementation of its mobile banking solutions in Portugal. Currently having a number of mobile applications (MApp, MEmpresas, MBolas), the bank is looking to further develop its mobile payment solutions.

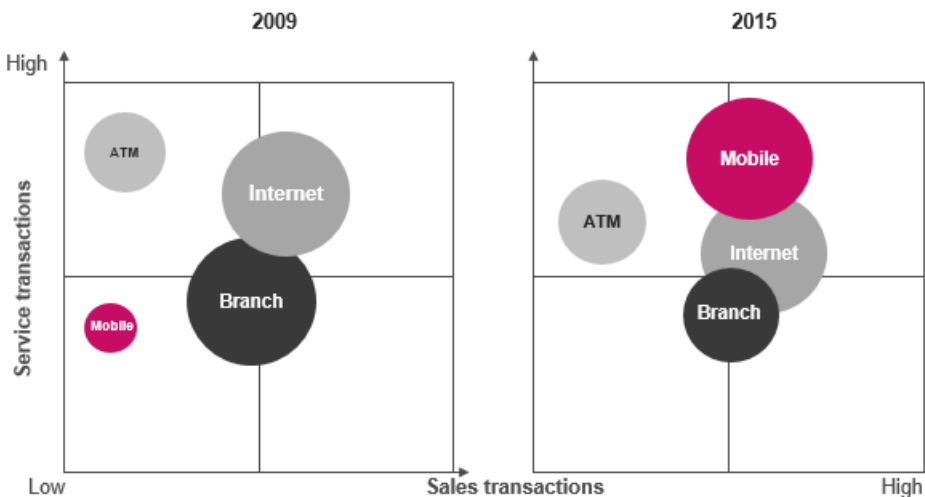
Current mobile banking penetration of Mbcp is of 3.7%, which is lower than the Portuguese average of 5.3%, and even lower than the Western European average of 11%. A more frightening fact is that the gap between the Portuguese average and Mbcp has been widening, going from 0.3% 1 years ago, to the current 1.6%. On the positive side, Mbcp users seem to be way more engaged than their competitor's users. For instance, an Mbcp customer logs-in 16.1 times per month, and does 1.4 transactions, while the Portuguese average stands at 8.9 and 0.9, respectively.

With this current situation at hand, the bank has defined five strategic priorities in order to create a sustainable bank adapted to customer needs and market trends. One of those priorities is to “redefine the retail distribution model exploiting the potential of new technologies in the digital area, namely Internet and Mobile banking”.

1.2 Brief Context – Market overview

Portugal is a country that is currently falling behind in terms of development of mobile payments. Looking at other developed countries around Europe or the US, and one can see a considerable gap in terms of developed solutions. The same has happened with internet banking, in the recent past: Portugal started behind, being a late adopter, but eventually started to pick up on the development of its own internet banking solutions, acting as a follower of the successful practices seen in other countries. The same is expected to happen with mobile.

Consumer perception of mobile banking is also changing, with the channel becoming increasingly important for the Portuguese consumer.



With consumers having a much larger number of interactions with their banks, the shift in a bank's business model is an inevitable change, where mobile banking is transforming from a service-based channel to a product up-selling and cross-selling engine for banks.

A reason for the delayed adoption of mobile banking in Portugal, might be related to the very highly developed and useful ATM machines. If one goes to many other European countries (e.g. Poland, Germany), there is very little that a person can do with the ATM other than extract money from it. In Portugal however, there is a huge number of functionalities that one can use, from buying train tickets, to charging a mobile phone, and many other things. Thus, the fact that we have an ATM machine in every corner, gives us a false sense of mobility. Whereas other countries

didn't have such well-developed ATM-machines, the benefit to shifting to a full mobile solution immediately was much higher for them, than it is for us now.

However, in the recent past, Portugal is now becoming an attractive market for mobile banking, much due to the ever increasing smartphone penetration, currently at approximately 46.4%. Currently representing a €400 million market in Portugal, M-commerce is this expected to grow continuously, and become a €1.1 billion market by 2019.

1.3 Brief Context – The business project challenge

Under this circumstances, our team has been approached with the following challenge:

“To define what should be the Millennium bcp role in the future Portuguese Mobile Payments arena, in terms of offer as well as in a marketing positioning perspective.”

2.1 Reflection on the work done – Problem definition

With our business project challenge already define, it is now important to further scrutinize the questions that need to be answered in order for the project to be successful:

- To whom will the app be available to? Millennium users, or everyone?
- Which kind of payment technology will the app incorporate? NFC? QR codes? Code-based payment? Some other less common method?
- Will the app allow for P2P payments? Or will it function strictly as a wallet?
- What type of transactions will it incorporate? Embedded card, or account based?
- Which partnerships need to be formed in order for the project to be successful?

2.2 Reflection on the work done – Methodology

As we started to develop the project, it was crucial to define from an early stage, what should be the work plan for the entire project. We identified four different phases that were deemed important in order for the project to be successful. They were:

Phase 1 – Development of an “AS-IS” analysis, which would allow the team to assess the current situation, and give us a solid base from which to build our solution from. During this phase, we conducted an internal analysis of the bank, a consumer analysis, and finally a market analysis. This helped us in identifying the strengths and weaknesses of Millennium, the consumer’s main characteristics, needs and concerns, as well as to identify current and future industry trends.

Phase 2 – Identification of gaps and alternative strategic solutions: by analyzing the current positioning of the existing players, and by identifying the most attractive strategic opportunities for Millennium to penetrate the market.

Phase 3 – Development of a comprehensive mobile payments strategy, that encompasses: (1) all the proposed functionalities and services to be included in the new strategy; (2) a prototype of the

app; (3) a marketing strategy to communicate and educate consumers about the proposed mobile payments solution.

Phase 4 – Development of a high level implementation plan, which identifies the key actionable steps and capabilities needed to ensure the successful implementation of the strategy, as well as the key performance indicators (KPIs) needed to monitor evolution.

Given this, and following a gap analysis approach, we attempted to identify the main gaps in the market, as well as to develop different alternatives that aimed at taking advantage of the different existing gaps. To accomplish that we proceeded to:

- Identify the existing players in the Portuguese market: revealed a number of different players that have already settled in (slide 77).
- Analyze the position of the different players, considering the market scope and services offered: which showed that players clustered differently, in terms of their offer. The 3 main clusters were:
 - o Niche market solutions allowing for either P2P or in-store payments (e.g. Flash'N pay, Caixa Plim, and Caixa Change)
 - o Mass market solutions allowing for P2P and online payments (e.g. Paypal and MB Way)
 - o Mass market solutions allowing for P2P and in-store payments (e.g. MEO Wallet and SEQR)
- Analyze the experience through the retail experience chain: which revealed some differences across the players in terms of pre-visit, post-visit and decision making, while showing that all players have m-payments as a core (slide 80).
- Analyze the ecosystem developed in the market: which revealed the importance that is in having a well-defined ecosystem of merchants and customers. While on one hand customers are more likely to adopt a payment solution if it happens to be spread across a wide network of merchants; on the other hand, merchants will only adopt a payment

method if it enables them to reach a large pool of customers. Thus, the virtuous cycle that we identified in slide 81.

- Analyze the technologies used in the market: which showed that a variety of players in Portugal are using QR codes, some are using PIN code, while only one player (MEO Wallet) is currently using NFC or SMS through their own network (i.e. not using the standard bank payment system). Given this, and looking at the spectrum of technologies available in the market, it became evident that NFC constitutes an opportunity. Let us take a look at some of the main advantages:
 - NFC-enabled POSs (points of sale) are already in place and spread across multiple merchants in Portugal
 - Most debit/credit cards issued nowadays, are contactless, and use the NFC technology, creating pressure on merchants to activate the functionality on their machines
 - It is an universal solution (i.e. one can pay with it all over the world)
 - It is seen as the best future solution, especially considering that major market shapers in the world are using that technology (e.g. Apple Pay and Google Wallet).
 - It is a fast, secure and convenient method.

However, there are also some disadvantages:

- Not every POS is NFC enabled yet, and not all of the enabled ones have it activated yet.
- Apple has restricted it's iPhone NFC functionality to Apple Pay only. There is a wide belief however, that Apple will remove that restriction in the near future.
- The Portuguese consumer is not yet familiar with the technology.
- Requires an alternative solution for cellphones that are not NFC enabled.

As a result of this gap analysis, we have identified 6 key success factors that were deemed as crucial for the success and adoption of an m-payment solution. They were:

- Frictionless user experience: making sure that the payment method to be introduced is not more complicated or time consuming than the current best cashless payment alternative (credit/debit card).
- Having a well-defined ecosystem: the payment solution will not survive unless it is able to attract both merchants and consumers, and thus our solution needs to guarantee advantages for both sides.
- Expand beyond card-based revenues: and in this way attempt to bring additional revenues from potential partnerships with merchants.
- Develop a wide network of merchants.
- High adoption rates.
- High security perception: it has been identified that the security of contactless payments, is on the mind of the consumers, not yet perceived as very secure.

Strategic Alternatives

After having concluded the gap analysis, our attention shifted towards building a number of possible alternatives that attempted to address different gaps identified in the market. A description of the three alternatives follows:

Strategic alternative 1: Niche market

This alternative is the only one of the three that would be integrated on the current app of Millennium. Thus, it would be restricted to Millennium clients, so the potential market size would be only of approximately 1.8 million customers (with 92 000 currently using the app). On the positive side, the barriers to adoption would be very low, and so would be the investment costs. On the other hand, the restriction to Millennium clients creates a much more limited market reach, and hinders the possibility of negotiating partnerships with other banks.

The app would allow for in-store mobile payments using NFC technology, and would thus require for the merchants to activate their NFC –enabled POS devices. This fast and secure payment method, comes with the advantage of the merchants already having the POS devices in place, with

the only thing missing is for the majority of them to actually activate the functionality. This comes with a great advantage for merchants, which arises from the fact that the commissions charged by banks on NFC payments is much lower than the commission charged on the use of debit , and even more so of credit cards.

More so, app users would also have the ability to transfer money to other app users by using the receiver's mobile number, making it a quick and convenient way for customers to send money. This functionality is identified as a P2P (person to person) transfer. This money transfer would occur instantly, and bear barely any costs for Millennium, with the inconvenient factor being of course that money could only be sent to other app users.

For both the in-store and P2P functionalities to work, the consumer would have to link their Millennium credit/debit card to the app. When compared to the usual pre-paid wallet (like MEO Wallet has, for example), this direct link comes with a much higher convenience advantage, given that it removes the concern from the user of having to "top up" the wallet every so often. There is also no need for consumers to create an additional account at the bank, which is also a big plus, as it removes friction from using the app. However, some concerns were raised during the consumer analysis, which relates to the fact that a percentage of the consumers perceived this direct link of their cards with a mobile app to be unsafe (users were afraid all their money on the card could "disappear").

Finally, the app would also have an added functionality of storing loyalty and gift cards. By scanning the digital cards, and allowing the user to carry them digitally on their phone, it removes the need for the user to actually carry the physical cards around. A big plus, for everyone who keeps forgetting to use them, and a definite "wallet thinner".

Overall, this niche market solution would be easily implemented and requires a small investment. For current app users the barrier to start using the function would be lower. However, the solution provides a limited scope in terms of market reach and there is a risk that a future service offered to the whole market will be preferred by consumers.

Strategic alternative 2: Universal

This 2nd alternative, would require the development of a new and independent app. It wouldn't be restricted to Millennium customers only, and considering the smartphone penetration rate of nearly 50% in Portugal, would allow the app to reach approximately 5.2 million consumers. Opening the app to everyone also furthers the possibility of creating alliances with other banks. On the negative side however, we would have the higher development and operational costs, as well a user base starting from scratch.

Similarly to alternative 1, this 2nd alternative would allow for both in-store NFC payments, as well as for P2P transfers. The differences however would be:

- This new app would not only allow for the user to link their debit/credit cards, but would also feature a second option: charging a pre-paid wallet. While making the app a bit more complex, it allows us however to cover everyone's preferences (some users prefer the perceived safety of pre-paid, while others prefer the convenience of the card-linked option)
- While the P2P functionality per say would be exactly the same, the fact that it is open to everyone (as opposed to being restricted to Millennium users in alternative 1), makes it that much more useful, given that the likelihood of our desired recipient to have the app increases exponentially. This factor also creates much strong "viral" effects, arising from word-of-mouth and the buzz created around it.

Another difference on the alternative 2, is on its loyalty and marketing platform. While alternative 1 only allowed for users to digitalize their loyalty/gift cards, alternative 2 will have much more features, for instance, an integrated promotional platform. By offering an integrated promotional platform users can enjoy discounts while the commissions collected serve as an additional revenue stream from Mbcp. It furthermore offers another incentive for merchants to partner with Mbcp. Additionally, on the loyalty side of the equation, merchants would be able to partner with Millennium, and thus associate their loyalty programs directly on the app. This could for instance enable the users to create their loyalty cards through the app, or to have the loyalty card directly associated to the payment when purchasing something at the store using the NFC payment. The disadvantage of this, is that it is not part of the core business of the bank, and the increased operational costs that come with it.

Overall, the universal solution allows Millennium to reach a much broader audience. It comes with higher development and operational costs, but gives the company a better chance of becoming a key player in the Portuguese m-payments market.

Strategic alternative 3: Apple partnership

This third alternative, would involve the cooperation with Apple. Similarly to what happens in other countries (namely outside of Europe), this alternative would involve a partnership with Apple, where Millennium would become Apple's strategic partner in Portugal. As it is known, the mobile payment apps use the traditional banking systems to move money around. Thus, Apple would have an evident benefit in partnering up with Millennium, while Millennium would benefit from the app developing capabilities of Apple, as well as its huge consumer base, that would swiftly transition to using it as soon as the service became available in Portugal.

However, the conditions for this strategic alternative to be feasible are not yet in place. It so happens that Europe has highly regulated fee structures, making the profit margins on credit and debit transactions already too small. That is exactly one of the main reasons why Apple Pay is not in place in Europe yet, as the profit margins are too small for any bank to be able to pay the fee that Apple would inevitably charge.

2.3 Reflection on the work done – Recommendations

Our final recommendation to Millennium, was that of pursuing the Strategic Alternative 2, or from here on out, the “Universal Solution”. It was clear from the analysis phase, that this alternative was the one best aligned with Millennium’s interests. The development of this mobile payment initiative was deemed as crucial for Millennium to stay competitive in the future payments landscape, and would help the bank evolve towards a digital ecosystem, taking a leader posture in the mobile payments market, and becoming a shaper of the industry. By taking an innovative step, it would allow Millennium to disrupt the payments industry and consumer behavior.

Furthering some of the details already presented earlier on the “Strategy alternative 2” section, our recommendation for Millennium would also feature the following core elements, which as can be seen above, cover many of the key success factors mentioned earlier:

- Not passing any costs to the customers: users will be able to download the app for free, as well as to “top up” their wallet with no associated costs.
- Not passing any costs to the merchants: By using NFC devices already in place, the merchants get to skip an investment in technology that is usually associated with other solutions (QR codes for instance). The lower fees charged for NFC payments (compared to regular credit/debit card payments) are also a big incentive for merchants as it reduces costs for them.
- Create frictionless user experience: app design and payment process has to be simple, efficient and evolve low effort.
- High levels of security: Millennium, being a bank, carries a higher level of trust when handling money compared to many of its competitors (MEO Wallet, for instance). This comes with the increased perception by the user, that their data will be safe, and that they will be protected against fraud.
- Develop an attractive ecosystem for merchants and customers: P2P, loyalty cards and promotions will make the app more attractive and increase the value of all parties.

Besides this, it is also important to have in consideration some of the technical details of the app. Some of the key technical details, that are deemed as crucial for the success of the app are listed below:

- Pre-paid and card-linked
 - o Users have the possibility to pre-pay the wallet through bank account transfers or with debit or credit card
 - o Users with NFC enabled Android phones have the possibility to link their current credit or debit card to the app
- Spending limits:
 - o Purchases over a certain amount (e.g. €20) have to be validated with a pin
 - o There will be a limit of the maximum spending and number of transactions per day. The user can also by himself set a lower limit for both validation and spending per day
 - o The limits are also applicable to P2P-transfers
- Payment process
 - o If under the valuation limit the user simply taps the phone on the POS
 - o If above the valuation limit the user with a NFC enabled device validates by inserting the PIN in the phone and the NFC sticker user validates by entering the PIN in the POS
- Virtual card
 - o A virtual Mbc card needs to be issued to some users
 - o It is a non-physical card and the information about the card is stored on the device
- Alternative NFC solution
 - o In order to allow users of non NFC enabled phones to use the NFC functionality of the app, a possibility would be to have the users use an NFC sticker. This is a low cost “sticker” (literally), that can easily be stuck to a cellphone device.

This would allow any smartphone user to make an NFC payment, with the only difference from a user with an NFC enabled phone, being that the user with the sticker would have to introduce the PIN code on the POS device, instead of doing it on the phone (the sticker doesn't communicate directly with the phone).

2.4 Reflection on the work done - Concerns

One of the key concerns regarding the project, is if it will ever move forward at all. On the wake of the crisis in Portugal, Millennium bcp is still in its recovery phase, and as we've seen during our meetings with top management, there seems to be higher priorities for the bank than investing in mobile. Thus, the ability for the Internet & mobile department to convince top management of the importance of this project will have a fundamental role in the outcome.

A second important concern, relates to the feasibility of our recommendation itself. Given that our recommendation was developed without the complete and exhaustive knowledge of all the costs associated with it, it may happen that the entire recommendation becomes unviable should some of the costs prove to be too high for the investment that Millennium is willing to make

Third concern is a matter of time. As we know, there are already some players in the Portuguese market that are one step ahead of Millennium, on top of this, our proposed solution will still take a long time before it hits the market. At the same time, international players (e.g. Google, Apple) are already way ahead in terms of solution development. For this reason, another key concern is that by the time that Millennium has concluded the development of its app, that other players are already so consolidated in the market, that it would become extremely difficult for Millennium to grab a commanding position.

Finally, and in regards to the marketing & loyalty platform, there is the issue of it not falling in the core business of the bank. Thus, there is the concern of the bank not being able to create the necessary capabilities to successfully implement that part of the project.

3.1 Reflection on learning – Previous knowledge

During this project, a variety of Masters' content has been applied:

- Porter's 5 forces(+1): Learned and used throughout different strategy courses, it was here once again applied as a framework to better understand the mobile payments environment in Portugal (slide 72).
- Slide design: Learned during the course of Consulting, we here applied much of the theoretical knowledge to create appealing slides throughout the presentations, which also better enabled us to transmit the message.
- Communication: Learned during my "Communication in strategy work" course, it was used as a way of more effectively transmitting oral messages during presentations, in order to make the messages easier to capture and accept by our business advisors (e.g. telling a story).
- Data interpretation: The field of Statistics enabled us not only to understand and interpret different graphs and data, but also to be cautious when interpreting survey results.
- Creative brief: Our creative brief was developed based on the learnings taken from the "International marketing communications" course. For instance, the communication objectives, target audience selection and campaign tracking were all methodologies applied from course content learned in class.
- Consumer analysis: Taken from the field of Marketing, it helped us in identifying and analyzing major trends in the Portuguese market, as well as to identify potential barriers to the adoption of mobile payments.
- Drivers of m-payments: Content taken from the Strategy course, helped us identify which factors affect the development of mobile payments for all the parties involved in the process (consumers, retailers, financial institutions, organizations and aggregators).
- Positioning map: Learned during the "Marketing in a dynamic world course", helped us understand the positioning and direction followed by the different players already in the market, as well as to identify what could be the ideal position for Millennium to adopt.
- Benchmarking: Another concept from the Marketing course, which allowed us to identify the best practices in the mobile banking industry around the world.

- Key performance indicators – A concept from the Strategy course, which helped us to identify the key ways of measuring the success of our solution.
- Innovation adoption cycle – A concept from the Entrepreneurship classes, which shows the expected evolution of the consumer base, as well as it helped us illustrate the key drivers that influence the transition through the different phases of model.

3.2 Reflection on learning – New knowledge

As for new frameworks or methodologies used in the project, the one that is to be highlighted the most is the whole layer of project management that needed to occur in order for the project to be successful. While students may have applied some concepts of project management before, this was the one time where it was more noticeably needed, with factors such as the extension and complexity of the project contributing for it.

A second framework that I hadn't learned or used before this project, was the McKinsey's 7S Framework, which was used as a basis for conducting the internal analysis of the company (slides 7 to 18).

Third, we have the Technology Acceptance Model (TAM), which was used as a tool to understand the main drivers of technology acceptance (slides 102 & 2013).

Finally, we have the frameworks and standard practices that were used for conducting the interviews and focus group. While the masters' content gives us some theoretical basis on how these tasks need to be conducted, we also had to acquire extra insight on the good practices of conducting an interview or focus group.

3.3 Reflection on learning – Personal experience

In terms of my personal experience during the project, I am glad to say that there has been no challenge too big to overcome. Naturally, there have been some tasks that were more challenging than others, but overall, I believe we managed to adapt quite successfully.

In more detail, here are some of the tasks that are worth highlighting:

- **Project Management:** It was for all of us students, the biggest project that we were ever presented with. Not only for its complexity, but also due to the close cooperation that needed to occur between the company, the students, and the academic advisor. Given these circumstances, it was necessary to plan everything in much more detail, and much more in advance than we were used to. It was for me a very enriching experience, especially given the fact that I had never taken a “Project management” course of any sort. For that reason, I felt extra challenged in this aspect, but with the benefit of hindsight now, I can say that I learned a lot from it.
- **Presentations:** This is something that I think Nova has prepared us very well to do, and that I was very comfortable with. There was that natural nervousness on the first meeting with the business advisors (especially consider that it was at the Millennium headquarters, and how serious and professional the environment usually is), but that quickly faded away after the first hour of the first meeting.
- **Team dynamics:** This also became a very curious factor, given that none of us chose one another as team mates, nor had we worked together ever before. More so, it was clear from the start that we would end up spending long hours working together on the project, and that it was not only of huge academic importance, but at the same time, that we were in a way representing Nova and CEMS. Putting all these factors together, and one can see that there was too much at stake, to risk “not getting along with each other”. This added, in my opinion, a “people management” layer to the project, where everyone’s ego needed to be managed, and where it was of particular importance to not hurt anyone’s pride, which could bring catastrophic implications on the long run. Given this, I felt I was measuring my words more frequently than I would usually do under a comparatively less important group work (e.g. any time my idea of what is right clashed with someone else’s).

- Nature of the problem: Another instance that was particularly challenging, relates to the nature of the problem. None of us had any experience with neither banks, nor apps, let alone a combination of the two. Thus, we had a rougher start, that arose from the need of educating ourselves in both fields (when comparing to working in an area we're used to).
- Meetings: This one was surprisingly easy. Initially, I would expect that given all the parties (students, academic and business advisors) busy schedule, that finding the time to bring everyone together on a bi-weekly basis would actually be difficult. It turns out, it wasn't, and I guess we have to praise for the availability and willingness to help of both prof. Paulo Faroleiro, as well as Millennium's business advisors, Joaquim and Duarte.

As for the way of further developing these skills, I couldn't put it any better than Aristotle did, so allow me to use his words: "For the things we have to learn before we can do them, we learn by doing them". That serves to say that I'm a firm believer that the best way we learn how to do things, is by doing them (i.e. with practice). On that note, and while I can foresee improving these skills by reading books/articles, listening to TED Talks, or educating myself in any other way, I hope that life throws at me such practical opportunities of developing these skills, though it's hard to say what exactly those will be, given the huge degree of uncertainty that I am currently faced with (e.g. not knowing at the time being, in which city, country, company, or business area I will be working in).

3.4 Reflection on learning – Benefit of hindsight

What I believe added the most value to the project, was the fact that we had such a heterogeneous team that complemented each other very well. Coming from such variety of countries for instance, really brought to the table an amount of knowledge and different views of the world that wouldn't be possible otherwise. Our foreign colleagues for instance, by living in countries where mobile payments is an actual reality, bring so much knowledge and user experience with them. Knowledge of what has proved to work best in other countries. Knowledge of all the success stories and failures. Knowledge on the direction that those countries (already ahead of Portugal in terms of mobile payments) are evolving to – which then allows us not only to plan a future for Millennium, but already a future that takes into consideration the “future's future”. A plan that carefully analyzed all the success stories and failures of mobile payment solutions around the globe.

A second instance that added substantial value to the project, and allowed us to have an even deeper discussion on some of the aspects of the mobile payment strategy, was the prototyping of the app. We went out of our way to deliver something that went beyond what was asked of us, and I believe that also helped to enrich the project.

As for our shortcomings in the project, I would have to point out the fact that we were not given a particular set of information (from the Cards & Payments department), that would have allowed us to further develop our solution in even greater detail. That is not to criticize our business advisors (they were truly helpful beyond expectations, and handled us plenty of material), but that piece of information that was left out created a small sense of “incomplete work” across the team. We did request the data some six weeks ahead the delivery of the project, but I imagine (being speculative now), that the data might have been too sensitive to be given away. This is exactly one of the things that could be done differently. Perhaps with more experience, we would have realized how sensitive the data was, and instead of trying to get it in such a direct fashion, we could have been more tactful. Perhaps we should not have “bundled” all the questions together (maybe some of the questions there could have been answered, but because they were mixed with other very sensitive questions, the reply to all our questions never came). Perhaps we should have aborted written communication, and tried to arrange another face to face meeting with the Cards & Payments department.

4 Concluding remarks

After conducting this study, there is very little doubt in our team's mind that mobile payments will be part of our everyday lives in a very near future. It is thus not a matter of "if it will happen", but instead a matter of "when it will happen". Thus, I would like to use these final words to highlight the importance that I believe mobile payment solutions will have in the future, and strongly recommend that Millennium sets forward with its own solution, or risk to become a dinosaur in the industry, and eventually becoming extinct.

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