Cases on SMEs and Open Innovation:

Applications and Investigations

Hakikur Rahman
University of Minho, Portugal

Isabel Ramos
University of Minho, Portugal

BUSINESS SCIENCE
Reference

Chapter 10
Cardmobili:
Innovation Technology in Everyday Life

Cândida Silva
Polytechnic Institute of Oporto, Portugal

Isabel Ramos
University of Minho, Portugal

EXECUTIVE SUMMARY

The developments of the internet, the proliferation of the use of Web 2.0 tools, and of the technology in general, are leveraging new ways of people to communicate, collaborate, and interact. This new world and new markets, in a daily change, are enabling the emergence of new innovative enterprises and services, taking advantage of the new technologies and of the global network. Cardmobili is a Portuguese start-up company working in the area of mobile services. This company provides a mobile service to manage rewards and membership cards, enabling users to store them in the cloud, while using mobile applications to present them in store, collecting and using the rewards, sharing cards and information with other users and friends in social networks. Cardmobili is linked to merchants' loyalty management systems, enabling users to access exclusive offers, delivered to their mobile application and web account. The company provides complete services to make any loyalty or membership program mobile: branding, new customer registration, integration of customer account balance, mobile vouchers, coupons and offers, and mobile communication.

COMPANY BACKGROUND

History and Motivation

Cardmobili is a very recent company. Its formal constitution happened in June 2008, but its activity in fact began in February 2009, by hiring a working team of five people - three programmers, one for marketing and communication, and another for sales and management.

They started the implementation of the service in Portugal, but quickly left for internationalization all over the world. By now, the service is launched globally, in four languages (Portuguese, English, Spanish and French), it has users registered from over 20 countries, and the working team grew to 12 collaborators.

The idea of the service arose from a day-to-day problem that the founders were experiencing in their professional lives, with many trips and a huge number of loyalty cards, and the difficulty of bringing all these plastic/paper cards with oneself. They also realized that they needed to use the cards, but for this should not be necessary to "carry" so many plastic cards in their wallet. So, they came up with the idea of dematerialization of plastic cards.

Allied to this idea, was the experience and know-how from the founders to verify that the mobile phone is a key tool in people's lives, ubiquitous, ensuring proximity between people, is always present, and has many capabilities.

Thus, they came up with the concept of mobile customer loyalty, a virtualization solution for customer loyalty cards, which allows communication between customers and company, and also a marketing tool for businesses.

Service

Cardmobili[1] is a service for registration and management of customer loyalty cards, available to its registered users. The user can subscribe all the loyalty cards, whether belonging to brands avail-

able in the platform or not. He is solely responsible for all the information they record and any activity carried on the website. Users only need to add their cards, and just show the phone in a store. The service is free and includes hundreds of brand cards from all over the world. Users can also get coupons from Cardmobili partners. The mobile application only needs Internet access to synchronize the user cards between the web platform and the mobile phone. The service already has more than 1500 brand cards available.

After entering the cards in the Website, installing the mobile application in the mobile phone and synchronizing them, it is ready to be used. Users can always use the Cardmobili service, even though the companies of their loyalty cards are not clients of the service. They simply need to present the card number at the store from their phone. The service also includes the possibility of cards barcode reading in the phone, being only necessary to use a POS[2] scanner for reading barcodes. The service cannot be used only at stores that use stamps on the card itself.

The key benefits of the service are: it is free, simple and convenient; the cards are gathered in one place: the mobile phone; subscribing new cards is quick and easy; and the person does not need to carry cards in the wallet.

Market studies have been conducted to analyze the feasibility of introducing this concept in the market, and therefore, if the idea of digital loyalty cards could become a business. First, it was examined if there were already companies that implement this concept, and it was found some solutions were identical, but only in the aspect concerning the mobile applications. Afterwards, they have the need to analyze all the different types of cards in the market and mode of operation, namely, what are the existing cards, which technology they use, what are the costs associated with creating the card, and sending messages and vouchers. Moreover, the market was also analyzed to see which mobile phones are being used by most of the people, if they use applications that

come on mobiles, and what is the use that they make of the Internet. These studies and analyses were needed to develop the business model for the company to operate.

The first phase on building this service was modeling its mode of operation and interaction with users and potential clients. Thus, it was created a website platform where people can subscribe to the service and enter their cards for free of cost. The second phase was the development of applications that allow users to take virtual cards with them, for the major mobile phone brands.

In 2009, the service had many developments and already makes available applications that permit the use of virtual cards to almost all brands of mobile phones; the Website has also evolved considerably; with a strong presence on social network tools, like Facebook, Twitter, Blog, and YouTube, and they also offers new features for Facebook.

The year 2010 is for introducing the innovation in the market and working for its massification. Users are encouraged to register their loyalty cards in the website and download the software to install in their mobile phones, so that they can use and enjoy the benefit of their loyalty cards by simply using their mobile phones.

Cardmobili business' model is focused on companies. They are the ones that contract a virtual customer loyalty service. As mentioned earlier, the service is free for users.

Business Strategy

Cardmobili is a company developing mobility solutions for customer loyalty. Their aim is to put technology at the service of people simplifying their everyday live. They see technology as a tool that should serve people by providing more convenience, more mobility and new ways to interact with the world around them.

The company's vision is to develop services for people who want to take advantage of technology, particularly the potential of their mobile

phone, and simplify their day-to-day life. They create communication and marketing solutions for organizations to communicate effectively and with a significant amount of people. The aim is to simplify the way people and organizations interact, communicate and collaborate.

The main activities of the company are to provide tools to users to sign up to the service (a Website platform and applications for mobile phones), and to enable communication channels with their clients to maintain loyalty card programs and between clients and users.

The strategy to enter in the loyalty card's market was to provide the service for free to companies and users, and by this way, to create its own opportunity for companies wanting to implement the service, with all its functionalities.

First they are trying to convince and attract the maximum number of users for the service by delivering it for free. That means, register on the Website, introducing the cards, installing the application on the mobile phone and then synchronizing it with the mobile phone. To achieve this goal Cardmobili had to face two main challenges: first it was necessary that the users discover the service and after they use it continuously. So, they established mechanisms to open a bidirectional communication channel between the company and loyalty card users.

The discoverability strategy is there to use several channels of advertising and marketing, always aiming to a close and privileged contact with users. Since the beginning, the service was developed with the collaboration of the end users by establishing a communication, proximity and collaboration culture with them. There is a strong investment in Web 2.0 social tools, including a Blog, a page on Facebook, Twitter, YouTube channel and a newsletter (P. Anderson, 2007; O´Reilly, 2007; Shuen, 2008).

The knowledge within a crowd and its capability to best solve problems than an individual, even an expert, is a subject that has been studied since the beginning of the nineteen century. Since then,

there are many examples and demonstrations that, the probability of a heterogeneous crowd to best solve a problem is higher than an expert of the area (Surowiecki, 2005). Cardmobili strategy is also to take advantage of the crowd knowledge, involving their users in the service content sourcing. The company has been using a strategy of resorting the crowd to provide as many cards as possible in the Website, based on the presupposition that people all together will have more cards than the ones searched by Cardmobili staff. For this purpose, it is given the opportunity, and incentive to users to introduce new cards in the Web platform and to communicate for the services of the new cards.

Other strategies, in addition to those mentioned above, were the launch of questionnaires on the Website and on Facebook to gather ideas and feedback on the usefulness and acceptance of a new feature or functionality of the mobile application. Furthermore, the strategy to promote videos on YouTube serves to give a greater understanding of the service through short tutorials, and thus helping consumers to better use the service.

There is a clear investment on means of communication and interaction with the users. Therefore, all employees are aware of the need to be attentive and interactive with users, being that there are an employee fully dedicated to this task, responding and feeding all channels of Web 2.0 where the firm is present. All the comments and suggestions received are used to create use cases that reflect them, maintaining a list of all such use cases. This list is then used as requirements for improvements and developments of new features on the service. The concern is not to develop technology for the Web or to mobile phones, but focus on a virtual service for customer loyalty programs.

The Web 2.0 tools are used as instruments of customer loyalty to the Cardmobili itself. Here the strategy is to portray itself as a company that discusses themes and concerns of a global world where it operates, debating problems and situations related to day-to-day that any person

faces. Therefore, they usually present and discuss news topics that are not directly linked to the service, such as the sustainability of the planet and technological innovations that can improve the daily life of any individual. It also includes features for publishing in Facebook through the service, promoting social networking and sharing experiences among users about shopping, cards, discounts, promotions, etc. with the goal of creating the interest of users to consult, monitor, and being present in Cardmobili platforms.

The Facebook is used for: (1) spreading the service by the Cardmobili page; (2) making recommendation to friends and referencing the service in their personal walls; (3) feedback mechanism of new features and applications for new operating systems; (4) bug reporting; (5) suggestions and improvements, (6) creating ideas for new functions; (7) motivating communication and interaction between users of the service by providing applications for Facebook permit users to recommend loyalty cards, discounts and promotions, etc.; (8) dissemination of events and activities that focus service usage; (9) and conducting satisfaction and service improvement surveys.

The Website appears as a showcase of various card shops and services, motivating users to the accession of other services and shops since it does not need to carry one more plastic card, just need to add it to its application and carry on the application with him/her on the mobile device. This showcase of cards is also a marketing place enabled by Cardmobili for companies, helping them in their own process of customer loyalty program. The main goal of this strategy is to popularize the use of the service by users, and thus, it can be transported to stores by companies' customers, using their mobile phone instead of the physical card, collaborating with Cardmobili in the process of convincing companies of the advantages of the service. Moreover, they believe, as the CEO Helena Leite stated, that "Companies see value in connecting with a service that can get to a growing base of consumers and we are

providing that; as the user base grows, so does the interest from potential client companies".

In general, for other companies, this service is a privileged communication channel and online marketing, that, in one hand it eliminates the costs of card production, printing and shipping of orders, because it is digital, and on the other hand, it allows easier and immediate communication with their clients by using mobile devices. This service is not just an application that allows consumers to bring photos of their cards in the mobile phone, but it is a platform that provides marketing and communication tools (Kumar & Shah, 2004; Walsh & Godfrey, 2000).

Business Model

There are several internet business models (Lumpkin & Dess, 2004), namely:

- **Commission-based:** used by businesses that provide services for a fee, i.e., commissions charged for brokerage or intermediary services. Adds value by providing expertise and/or access to a wide network of alternatives.
- **Advertising-based:** used by companies that provide content and/or services to visitors and sell advertising to businesses that want to reach those visitors, i.e., Web content paid for by advertisers.
- **Markup-based:** used by businesses that add value in marketing and sales (rather than production) by acquiring products, marking up the price, and reselling them at a profit. Adds value through selection, distribution efficiencies, and by leveraging brand image and reputation.
- **Production-based:** used by companies that add value in the production process by converting raw materials into value-added products, i.e., selling manufactured goods and custom services.

- **Referral-based:** used by firms that steer customers to another company for a fee. Adds value by enhancing a company's product or service offering, tracking referrals electronically, and generating demographic data.
- **Subscription-based:** used by businesses that charge a flat fee for providing either a service or proprietary content. Internet service providers are one example of this model.
- **Fee-for-service-based:** used by companies that provide ongoing services similar to a utility company. Adds value by providing service efficiencies, expertise, and practical outsourcing solutions.
- **Freemium model:** is one of the most common Web business models that work on a basis of a subscription fee, and it can take a range of forms: varying tiers of content, from free to expensive, or a premium "pro" version of some site or software with more features than the free version (C. Anderson, 2008).

The business model adopted by Cardmobili is to offer the service to users for free, and a paid service for companies, called a fee-for-service-based business model. Firms wishing to be on the service pay a fee per card migrated to the platform support, which also accommodate, as well as information about card points or card balance, all discounts and promotions associated with their clients as well as other reasons for communication. There are different modalities of service payment that can vary according to the number of customers' cards of the company that are in the platform, to the type of loyalty program contracted, i.e., if, for example, the company only want a virtual customer card, or also intends to carry out promotional campaigns, or send digital discount vouchers.

SETTING THE STAGE

Open innovation is based on the principles that not all research carried out by a company are useful for them, but can be valuable to another firm, and vice versa; the recognition that the experts do not work all in the same company, therefore the research and ideas produced by others, outside the firm, can create value for the company, so they could be seized upon by the internal researchers. In the same way, the intellectual property (IP) produced inside a company that does not create value for them can be sold to others. Likewise, companies may buy others' IP that can bring benefits to the company's business model (Chesbrough, 2003).

Open innovation is thought to bring a number of benefits such as accelerate the time to market for products, increase the access to unique knowledge that are external to the organization, reduce the cost of innovation, better adaptation of products and services to customer needs, commercial utilization of knowledge or technology that otherwise would have been wasted, sharing of risks in product and service development, and enhance company image and reputation. The ideas and expertise can be found outside a company's boundaries and at the same time can be exported from within, and can create significant value for the company (Wallin & Von Krogh, 2010).

Figure 1 represents the open innovation model, where the innovation process is defined by the combination of internal and external ideas to create value, which should be incorporated in company' business model. In this model, company sells its own ideas and findings as well as buys innovations from other companies and seeks ways to bring its ideas to the market, which are outside the current business of the firm, generating additional value (Chesbrough, 2006).

Over time, companies have experienced different models of innovation, exploring ways to better improve weaknesses of their business and looking for better ways to expand their ideas in the market. Chesbrough, (2003) characterized the firms' innovation model as they focus their activity in one of the three following main activities:

1. **Funding innovation:** Composed by two types of entities: benefactors and investors. The benefactors are individuals or organizations that fund promising ideas and research at its very early stage that seems favorable for their industry, usually through awards and grants programs. The most common

Figure 1. Open innovation model (Chesbrough, 2003)
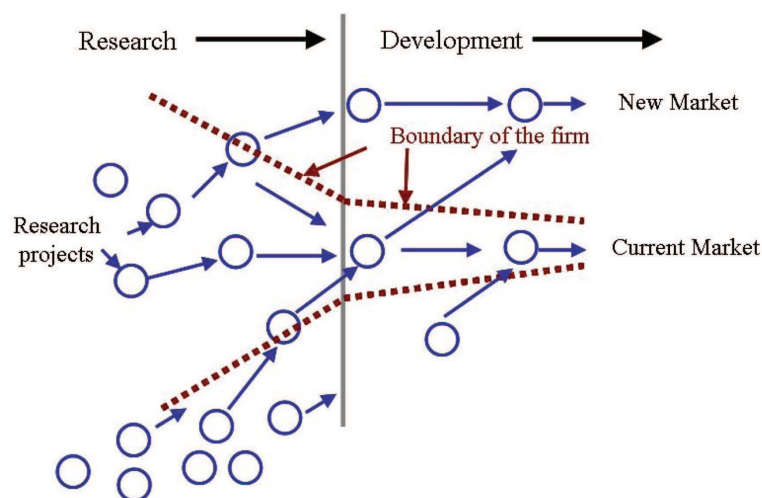
examples of this kind of funding are governmental agencies and non-governmental foundations. The investors, which include venture capital firms, angel investors, and corporate venture capital entities providing capital to move ideas out of corporations and universities into the market, typically through the creation of startups;

2. **Generating innovation:** Those are the organizations that primarily generate innovation. Some do it only for the innovation's sake, others innovate only with commercial goals in mind, fewer innovate to provide a valuable service in complex and fast-moving technology worlds, and still others are motivated to innovate by creating and advancing technologies to serve a cause; and

3. **Commercializing innovation***: Individuals and organizations are focused on bringing innovations to market. Basically, they analyze the market to understand the current and potential needs, and to buy and to sell innovative ideas, products and services.

Baldwin & Hippel, (2010) argue that the innovation models described above are just one mode of innovation, the producers' model, which is centered in the assumption that the profits are the only economically important motivation for innovators to create new ideas. They analyze two additional innovation models: innovations by users and open collaborative innovation. Essentially, users innovate to use rather than to sell, they expect to benefit from using a design, a product or a service. Open collaborative innovation model drift from open source software development where contributors share their work, outputs and collective design efforts openly for anyone to use.

The company analyzed in this chapter, Cardmobili – Desenvolvimento de Software, SA, is a Portuguese Enterprise, provider of services developing customer loyalty programs by taking advantage of Web 2.0 applications and mobile communication. This company is an innovation producer, an example of the commercializing innovation model, as they are outsourcers of innovative customer loyalty programs. Their business model is based on providing the service to their users for free, and selling it to companies who are developing their customer loyalty program virtually.

CASE DESCRIPTION

This case is portraying the company Cardmobili from Portugal, who has been in business since 2009 and operating in the arena of providing innovative services to their clients using mobile communication. As mentioned earlier, much of their activities and operations are based on open innovation concept and with increasingly growing trend the company is thriving to enlarge their customer circle through effective means and methods.

This case is organized into five sections. The first section presented the company background and explained the service, business strategy and the business model of the company. Later, it discussed about open innovation concepts and philosophies to set the stage. The third section is about the technology concerns, namely with users' behavior, security issues and, partners and clients concerns, the technology components and the managerial and organization concerns. The next section discusses the challenges and problems that the company faced, opportunities seized and developed. Finally, the case is summed up the solutions discussed and made some recommendations.

Technology Concerns

The development of the Website for customer registration and loyalty cards insertion has the following requirements: multi-language, accessibility and usability issues, and to be compatible with all major browsers on the market, and their different versions. For this, the company conducted a

market study on the most used browsers: Internet Explorer, Safari, Chrome and Firefox, and their different versions. The Website was developed and tested for the main types of browsers, and within these, its principal versions, and as new versions are emerging, the tests of the older versions are discontinued. Another important requirement in developing the Website was the implementation of mechanisms for recovery and optimization of the Website by the search engines most commonly used, such as Google and Yahoo.

The biggest technological challenge is in application development for mobile devices. There is little standardization in mobile phones developments; and at the same time, there are many brands of mobile phones with proprietary operating systems. Therefore, it is necessary to develop a specific application for each different operating system. The usability and consistency in the application with the operating systems are also a concern. So, each mobile application is implemented following the technical requirements and environment of the mobile operating system, and compatible with the layout of the mobile device.

The technological infrastructure that supports the whole service is outsourced by a company specialized in infrastructure, which ensures the required availability of service, bandwidth, disk, memory, for 24 hours a day and for 7 days a week. Helena Leite explained that "the focus of Cardmobili should be just the service itself and this is why we partner with other experts in their fields to provide the best infrastructure possible to run the service".

Security

The security concerns happen in three main levels: Website, mobile device, and communication between these two elements. The infrastructure that supports the website, as mentioned, is in outsourcing, where data security is also an indispensable concern. The architecture built for the service is based on three levels (Joshi, Aref, Ghafoor, &

Spafford, 2001): Web server, application server and database server, and it implemented security mechanisms in each one of these levels that are managed by experts. Thus, to corrupt the data of service users, it is necessary to "break" three levels of security.

Security mechanisms implemented are the following:

- **Firewall and database protection:** The database is protected by several layers of firewalls and is not reachable from the Internet. This means that even if a hacker attacks the servers, he won't get access to the database.
- **Password is not stored:** Passwords are stored hashed (encrypted) in the database, and can only be used to safely verify user identity when it is entered as the correct one. When a user forgets his password, the system sends an automatic email that has a link that allows defining a new password.
- **Captchas and login protection:** Captchas are made to be impossible to read by scripts (Pinkas & Sander, 2002). And if a hacker is trying passwords by hand, the account will become blocked after five attempts. Only the true owner can unblock it.
- **Mobile phone security:** It can define a PIN code to access the mobile application to block any unwanted access to it. The use of the pin is optional and carries an authentication system similar to that used in general access to a mobile device. Another security mechanism is the way data is stored in the mobile phone. It is stored in such a way that even it gets stolen no one could read it.
- **Mobile applications are certified:** This guarantees that the application that is running in the mobile phone was really made by Cardmobili (Enck, Ongtang, & McDaniel, 2009). This is true for Java application and for iPhone application store.

In security matter, the next step is to obtain the digital certificate for secure communications on the Website with the implementation of the communication protocol HTTPS[3] (HyperText Transfer Protocol Secure).

The data communication between the Website and the mobile device is done using encrypted messages, so if the message is picked up by others, it is virtually impossible to get the original data (Hassinen & Hypponen, 2005; Leavitt, 2005).

Data protection and privacy of information provided by users to the service is a concern, which is even more important than technology security. Cardmobili privacy policy ensures that user data are not consulted, nor made available and no other person or entity, except for itself can access it. Consumer confidence in the service is a crucial factor. Helena Leite stressed that "under no circumstances customer information for a particular card are available to other companies to do marketing or any other operation".

Following the same philosophy, Cardmobili only stores the loyalty card points achieved in shopping and manages them. Never, under any situation, information about user shopping bills will be stored or even retrieved to Cardmobili service.

Technology Components

As mentioned previously, this service is mainly composed of Web and mobile technology, including Web browsers and mobile platforms. The Web browser is the place by excellency where the service is developed. It provides the communication with companies, users and cards registration and all issues related with it. The mobile platforms are the applications for mobile devices permitting to use the virtual cards registered in the Website. The support of the whole service is performed by a datacenter, outsourced, where it is stored all the user data, loyalty cards and companies.

Management and Organizational Issues

Strategies for daily management of the company were always focusing on what is the business of Cardmobili in a dynamic involvement of all employees encouraging creativity and collaboration. Thus, all employees are encouraged to analyze loyalty cards, its benefits, the shopping habits of people, the way they use cards and loyalty programs, and especially the practical problems in day-to-day life they have to face. All employees are involved in the design and construction of a service innovative, attractive, and usable, which people want to have and use and that solve their daily problems.

Being attentive to the market for mobile phones and the Internet is also a priority for this service. So, as already mentioned, they are present in social networks since its foundation and have an employee dedicated to examining the behavior of users and communicate with them. They foster an online community on Facebook, Blog Twitter for gathering ideas for service development. Other activities to gather feedback of potential users of the service are performed, for example, invite some of their fans for a meeting to try and comment a beta application.

The developer's manager maintains a list of use cases, like a checklist, to write down all the contributions and ideas that employees will collect. This list is visited regularly, being used in the setting of requirements for developing the service by use cases, focusing in its utility rather in the technology used.

It also established a collaboration agreement with a PhD project in engineering services to study factors experienced in the use of mobile applications that dictate the membership of people to a service instead of another. Why do people want to experience, and how it should draw on the services for mobile applications that people want to use.

Concerning to paper production, bureaucratic procedures and fixed costs of operation the company adopted a minimalist management philosophy. It takes advantage of existing Web tools targeted to daily management and communication among employees, such as Gmail for mailing, Dropbox[4] for the management and internal organization of their processes, and Skype for voice communication, especially for international communications in order to minimize operating costs.

CHALLENGES AND OPPORTUNITIES

User Behavior

The social networking tools of Web 2.0 are presented as an easy mechanism of communication used by a large number of people. In these environments dissemination of information, of a message, is immediate, comprehensive, and universal, without any differentiation of tastes and preferences of people who receive it. This means that the same information for a particular segment / interests of people can be exciting and thriving by another group of people.

This phenomenon has developed the idea that brands can utilize their Websites to create consumer communities – enter social network marketing. Building brand communities online is about providing a virtual platform, centered on the brand, where consumers can discuss their opinions on anything and everything, promoting a direct connection of the community with the brand (Simmons, 2008). This kind of strategy, called viral marketing, is defined as the promotion of a company or its products and services through a persuasive message designed to spread, typically online, from person to person, creating branded Internet materials or Websites that consumers enjoy sharing with their friends (Kirby & Marsden, 2006).

Woerndl, Papagiannidis, Bourlakis, & Li (2008) gathered the benefits and the risks of conducting Internet marketing campaigns, and categorized as follows:

1. **Benefits categories:** diffusion speed; audience reach; peer-to-peer transmission; financial.
2. **Risks categories**: lack of control; potential negative impact; consumer dependency; lack of legal standards; lack of ethical standards.

Cardmobili takes advantage of Internet and strongly invest in this kind of tools to communicate with their users to spread its service and attract new users. It can even be said that their communication strategy is essentially based on the exploitation of these tools.

Of all Internet tools, blogs are perhaps the most talked about online phenomenon, because it provides an effective means of collecting and organizing as well as transmitting fresh insights and opinions on any subject. However, blogging has also led to a situation where brands are no longer in control of their marketing communications. Although, blogs can virally spread valuable information about the service as quickly as they spread negative perceptions. One key issue to success with this problem is the company to manage the blog in the spirit of transparency, partnership and openness (Simmons, 2008).

This company has been able to overcome this challenge by adopting a policy of continuous disclosure and transparency with its users. The opinions and suggestions of all users are recorded and respected, without having created any mechanism to check the message before posting. "The company motto is always to communicate with its public, and explain our point of view", added Helena.

The social marketing elevates the role and value the individuality of each customer and his network of contacts. In principle, a costumer with high connectivity in the network should positively help in

companies' marketing. Domingos (2005) argues that the costumers' network should be analyzed, searching for the ones that have high networking connections, in order to take the best advantage of it. He identifies three interesting factors that can influence the network value: (1) the user must like the product/service, preferably a lot; (2) the costumer must have a high network value, i.e., the influence that costumer has in his friends must be higher (ideally much more) than they influence him; and (3) customer's network value does not end with his immediate friends. Those friends in turn influence other people, and so on recursively until potentially the entire network is reached. These known should in turn like the product and have many other people they influence.

However, Huberman, Romero, & Wu (2009) conducted a study in Twitter network that shows that the connectivity between two persons thus not means that they interact, thus the need to find the hidden social network.

Those aspects should be considered when establishing a marketing strategy mainly conducted in the Internet, and using social networking materials as support.

Technological

There have been some technological challenges associated with maintaining the Website and mobile devices. Regarding the Website, it is important to present it consistently to all users regardless of browser being used. This requires constant maintenance and testing with all major browsers.

Moreover, the market offers a wide range of mobile devices, without any standardization of operating systems and applications associated with him. This represents a great challenge for the development and application maintenance for each of the different mobile devices. There is also a concern maintaining consistency between the applications of different devices, and more importantly, it is the attractiveness and usability of the application for users. The application design

should fit Cardmobili with the other applications offered by the device vendor.

Partners and Clients

Since its beginning, Cardmobili is attentive to all opportunities for partnerships to further develop their service. They established collaboration with a PhD project in Service Engineering, which is being developed at Engineering Faculty of Oporto University. This project analyzes factors on usage experience of mobile applications that lead to the adherence to a service on the expense of another. This partnership has given feedback about the consumer experience with mobile applications and Internet, and design of mobile applications.

Service discoverability is a crucial issue for this kind of service. It must be accessible and easily found by potential users. This challenge was tackled by optimizing the Website to be quickly retrieved by the major search engines; with service publicity in some online campaigns; advertising in some media; and invests in mobile operators partners. Helena Leite also mentioned that "mobile operators are the natural partners for these services because they are applications that will enrich their own equipment, and would be an opportunity for the promotion and dissemination of Cardmobili service". This kind of collaboration has resulted in some mobile operators that made available the Cardmobili application in their online shops and put it into prominence for some days.

Other natural partners or clients of this service are companies specializing in loyalty and companies who have customer loyalty programs and loyalty cards.

Innovation adoption refers to the decision of any individual or organization to make use of an innovation. Frambach & Schillewaert, (2002), identified, in literature, a set of factors that have been found to influence the acceptance, where the perceived of innovation characteristics are the most expressive one, and influenced by the others. The perception of benefits, including economics,

that the innovation offers has an important effect on the organizational adoption, as well as perceive the compatibility, complexity, observability, trial-ability, and uncertainty. The factors that influence the perceived of innovation are: adopter charac-teristics (organization size, structure, innovatiness or strategic posture); marketing activity (the tar-geting of the innovation, its communication, and the activities undertaken to reduce the perceived risk of the potential customer); social network (the interaction, in terms of frequency and richness, and the participation of organizational members in a social network can also enhance the speed and rate of innovation adoption); and environmental influences (the business environment such as network externalities and competitive pressures).

The social marketing strategy followed by the company is following the aim of giving a full perception of the innovative service benefits. This is been achieved by the great adherence to the service by users.

In Portugal, Cardmobili already has agree-ments with companies in the healthcare sector, restaurants and retailers, and negotiations are underway with several other companies.

Internationalization is, by itself, a challenge, it is necessary to analyze the new market, culture, and people behaviors. Their priorities are Europe and EUA. In Europe, they are implanted in Portugal, UK and Germany, where they already have avail-able the solution for the users, i.e., the Website with some cards pre-loaded and applications to the mobile devices. The service is always the same in any place in the world, only the content changes according to the country where it is being imple-mented however, this can mean great differences.

Cardmobili is attentive to incentives and grants from the government or foundations, as well as competitions. Recently, they entered, and won, the "Vodafone Mobile Clicks" 2010 competi-tion[5]. This international competition gave them recognition of their work, visibility and promotion among potential customers, and budget to develop other projects.

CONCLUSION AND RECOMMENDATIONS

Cardmobili is an innovative startup that arose from a simple idea that becomes a new product intro-duced in the market of customer loyalty programs.

The service is implemented in four different languages (Portuguese, English, French, Spanish) and available all over the world. The functionalities of registration of users and cards, availability of applications for almost all mobile phone brands, showing what cards we have to ours friends and the favorite ones', are all implemented and in use. The implementation of the entire customer loyalty program service in digital – emission of voucher, discount bills, promotions, etc, - in all the differ-ent mobile applications, is about to be finished.

Connection between social networking plat-forms and the service is a strategy that is being developed by implementing features to allow customers to interact and communicate from inside the service. As Helena mentioned, "shopping is an experience mainly social, thus people like to share the discounts, promotions, cards they have".

Other features that we recommend, and can be interesting to users, are: allowing to show to friends how much have won with some card, and recommend the store; exchange point from a card with other; to buy and/or sell points of a card; to receive an alert of the most used cards of his friends or the entire network; an adviser of stores with promotions for a period according to user interests; and an alert to the most attractive loyalty cards for the items the user usually buy.

A future challenge is to integrate payment cards in the service. For this there is already a Portuguese mobile payment project lead by Cardmobili, called MOBIPAG, with the Center of Excellence for Dematerialization of Transactions (CEDT), to further develop contactless payments using mobile phones. Several mobile payments trials are currently being developed throughout the world. Some brands, as Starbucks, are now testing these systems in their stores for small

amount transactions. Other initiatives in mobile payments are mostly directed at mobile commerce and shopping, or even mobile person-to-person payments. Also Google and Apple are researching in technologies to provide mobile payment through their mobile devices.

Finally, as a conclusion this case likes to present a sentence from Helena Leite, about the versatile use of the loyalty cards, "In the future, not only loyalty cards will be on your cell phone, but also payment cards!"

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KEY TERMS AND DEFINITIONS

Loyalty Program: A set of activities of marketing, promotional, and distribution undertaken by companies to captivate, maintain and managing their customers.

Mobile Application: An application software which runs in mobile devices. It is intended to enhance the features of the mobile device by providing additional functionalities and utilities that increase the device's utilitarian and entertainment features.

Open Innovation: A paradigm that proposes the use of external and internal ideas, and internal and external paths to market, as means to reach advances in technology. It enhances the use of R&D undertaken by the companies through the exchange and/or selling its ideas and findings to other companies.

Social Marketing: Is the application marketing techniques to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of persons targeted to social networks.

Web2.0: Is the evolution of the Internet for availability of online tools that allow the development of social and collaborative work. It includes wikis, folksonomies, blogs and social networking sites which encourage user-generated content and social interaction online.

ENDNOTES

1. www.cardmobili.com
2. POS – Point of Sale
3. is a combination of the Hypertext Transfer Protocol with the SSL/TLS protocol to provide encrypted communication and secure identification of a network web server, i.e., create a secure channel over an insecure network.
4. It is a easy way to store, synchronize, and, share files online (www.dropbox.com)
5. http://www.vodafonemobileclicks.com/blog/