Association for Information Systems
AIS Electronic Library (AISeL)

2013 International Conference on Mobile Business

International Conference on Mobile Business (ICMB)

2013

From Loyalty Points to Virtual Currencies: Expanding Loyalty Schemes for Mobile Platforms

Uschi Buchinger
iMinds-SMIT, Vrije Universiteit Brussel, uschi.buchinger@iMinds.be

Heritiana Ranaivoson
iMinds-SMIT, Vrije Universiteit Brussel, hranaivo@vub.ac.be

Pieter Ballon
iMinds-SMIT, Vrije Universiteit Brussel, pieter.ballon@vub.ac.be

FROM LOYALTY POINTS TO VIRTUAL CURRENCIES: EXPANDING LOYALTY SCHEMES FOR MOBILE PLATFORMS

Buchinger, Uschi, iMinds-SMIT, Vrije Universiteit Brussel, Pleinlaan 9, 1050 Brussels, Belgium, uschi.buchinger@iMinds.be

Ranaivoson, Heritiana, iMinds-SMIT, Vrije Universiteit Brussel, Pleinlaan 9, 1050 Brussels, Belgium, hranaivo@vub.ac.be

Ballon, Pieter, iMinds-SMIT, Vrije Universiteit Brussel, Pleinlaan 9, 1050 Brussels, Belgium, Pieter.Ballon@vub.ac.be

Abstract

Since the first loyalty program was introduced in the 1980s, technological innovation has changed the possibilities for such programs considerably. One significant change is the emergence of mobile and online platforms that started to deploy loyalty schemes aiming at both sides of the market, namely customers and third parties such as retailers or merchants. One consequence is the expansion of the roles of loyalty measures to the point of introducing a Virtual Currency. More than plain loyalty points, Virtual Currency is a tool to support multiple usage options granted to different types of users and utilizations.

Based on the analysis of four case studies, this paper examines the business conditions and consequences of the implementation of a Virtual Currency by mobile and online platforms. One consistent element throughout all examples is the aspect of rewarding customers for desired user actions. Beyond this, the objectives of implementing a Virtual Currency go from strengthening loyalty to opening new revenue streams.

The paper contributes to gain insights of how loyalty measures and rewarding schemes can be transformed and expanded to Virtual currency programs and how respective strategies can impact platforms' business models and hence performance in the market.

Keywords: Loyalty schemes, Virtual Currency, Business models, Two-sided markets

1 Introduction

Since the first loyalty program was established by American Airlines in the 1980s, variations of this scheme to build customer loyalty have been adopted by several industries such as hotels, retailers, financial services and leisure sectors (O'Malley, 1998; Palmer et al., 2000). The focus on customer loyalty is often substantiated by the argument of the positive influence on the financial performance and the higher value of customer retention compared to new customer acquisition (Christopher et al., 2008; Reichheld and Sasser, 1990; Webster, 1992).

One of the most common measures is the issuing and redeeming of company-related loyalty points. But it is only now, in the technology driven emergence of digital money, that rewarded points loose their status of simple loyalty measures to become Virtual Currencies (VC), which have potential to change the business' economics. Unlike points, VC answers multiple purposes e.g. payment methods accepted by other business partners and thus exceeding the sole B2C relation. Building a network of such Third parties around the VC scheme, while also aiming at the original intention of binding loyal customers, the purveyor of the VC is confronted with operations on two-sided markets.

Most platforms and platform solutions on the contrary are operating already on two-sided or even multi-sided markets (Ballon, 2009a; Rochet and Tirole, 2002a). As such Rochet & Tirole (2002a) determine for example software (videogame platforms, operating systems), portals and media platforms or payment systems. An essential characteristic of such markets is that utility derived from a good or service correlates to the number of users of this good or service (Varian, 2000). Hence, platforms (acting as intermediates) need to create two mutually equivalent market sides. Simultaneously, a strong network gains strategic advantages towards competitive platforms. Looking for ways to reinforce this strategic plus and exploiting their natural embedding in two-sided markets, it seems natural that platforms adopt loyaly schemes.

Contrasting conventional loyalty schemes, little research is conducted to examine how loyalty measures and rewarding schemes, embedded in the digital environment of online and mobile platforms, can be transformed to VC programs and how such strategies can impact platforms' business models. Based on four case studies, the paper analyses how mobile and online platforms have adopted, altered and/or expanded the initial model of loyalty programs. VC strategies are thus examined upon its impact on organizational, financial and service design parameters. The paper shows that the VC exceeds the roles that a mere loyalty scheme can fulfil. VC is able to strenghten the platform's gatekeeper position and thus control over the Third parties and the customers alike. Moreover, it can be deployed as a tool to lock in one or both sides of the market. The extent of the lock-in effect depends on the platform's decision of how rules, conditions and obligations are set in the relationship with the other actors in the value network.

In the remainder of the paper, Section 2 describes the applied business model methodology. Section 3 explains how loyalty points schemes used by organizations have turned into VC used by platforms. Section 4 describes in detail how VC has been implemented in four (mobile) case studies; Section 5 analyses the impact of such an implementation on business model parameters. Section 6 concludes and suggests ways for further research.

2 Methodology

In order to analyse disperse interests of actors in a value network, their respecting resources, roles and relationships, the methodology of business modelling will be adopted. The authors rely on the framework developed a.o. by Ballon (2007) and Braet and Ballon (2007), providing an holistic approach for examination of network architectures. They define the business modelling cycle as consisting of four parameters (see *Figure 1*): organization, technology, service and finance. The organization design corresponds to the Value network, i.e. a framework consisting of business actors

(physical persons or corporations mobilizing tangible or intangible resources), roles (business processes fulfilled by one or more actors with according capabilities), relationships (the contractual exchanges of products or services for financial payments or other resources). The technology design includes aspects such as modularity, distribution of intelligence and interoperability (the technology design is taken as granted and therefore considered with less details in this paper). The service design refers to the intended customer value. Finally, the finance design includes issues related to costs and revenues.

Although each platform offers different services in their main business operations, the paper focuses on the implementation of VC hence its impact on the business model parameters.

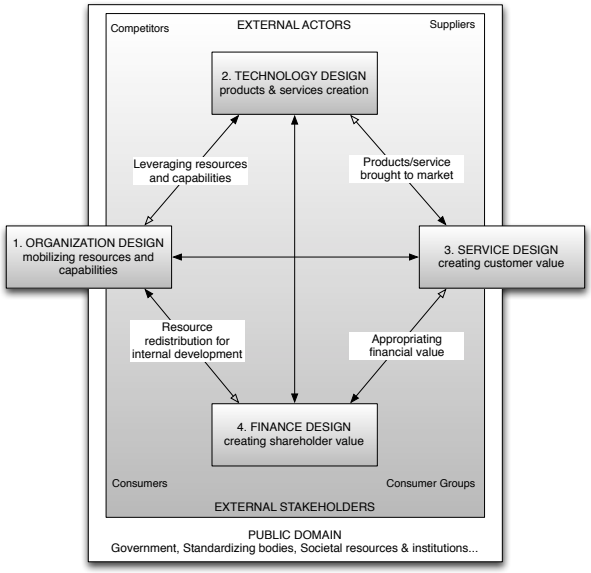


Figure 1. The business model cycle (Source: Braet and Ballon, 2007).

3 The Development of Virtual Currency Schemes on Two-Sided Markets

3.1 Platforms as the hub of two-sided markets

Information and Communication Technology (ICT) markets are characterized by far-reaching platformisation (Ballon, 2009b) and mobile markets are no exception in that respect. A platform can be defined as a product, technology or service that is an essential building block upon which an ecosystem of firms can develop complementary products or services (Gawer and Cusumano, 2002). In ICT markets, crucial gatekeeper roles and functionalities are often conducted by platform leaders. Various business models have emerged that help them to exercise a form of control over the wider network, and to add and capture significant value in the process.

An essential characteristic of platforms is their operation on two-sided markets. Two-sided markets exist as soon as the utility of any customer A is correlated to the number of customers B. These models were first applied to credit card markets (Rochet and Tirole, 2002b). Actually on such markets, the higher the number of credit card holders, the more interesting it becomes for the shops to be equipped with devices that allow to pay by card. Conversely, the higher the number of equipped shops, the more utility one cardholder derives from having such a card (European Central Bank, 2011).

The value network can thus be broken down to three actors, represented in *Figure **2***, building the base of each case study: the platform (and purveyor of VC), the customer and the Third party. The platform facilitates the interaction between the two sides of the market.

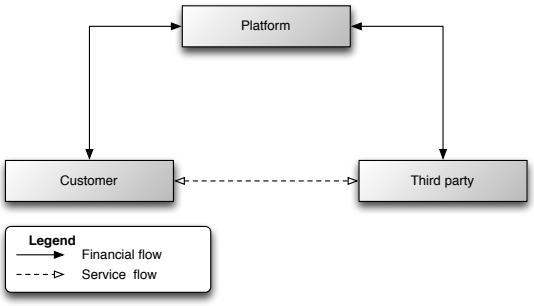


Figure 2. A stylised representation of two-sided markets

Relations are displayed as arrows between the actors. Black lines indicate financial streams, dotted lines indicate service streams. In the following figures, grey lines depict the VC stream. Relations are bidirectional (exchange between actors) or monodirectional (from one actor to another).

3.2 From Loyalty Points to Coalition Loyalty to Virtual Currency

The paper follows Sharp and Sharp's (1997) definition of loyalty program as *"structured marketing efforts which reward, and therefore encourage, loyalty behaviour"* (Sharp and Sharp, 1997 p.474). Different types of rewards have been developed throughout B2C sectors, notably the implementation of incentives such as points that are redeemable for rebates or prizes within the loyalty scheme (Dowling and Uncles, 1997; Sharp and Sharp, 1997). Organizations implement according measures to acquire competitive advantages. Such programs however might become a standard within the industry quickly, diminishing the competitive edge of rewards (Palmer et al., 2000).

One possibility to counteract this tendency is to expand the industries or brands participating in the loyalty program. The cooperation scheme, defined also as coalition loyalty or cross loyalty, describes the facilitation of members' loyalty cards at multiple - sometimes competing - retailers. From the customer perspective, every industry or brand in the network adds incentives to join (Baird, 2007).

While Baird (2007) refers particularly to the card as the most common form of a rewarding design, multiple approaches have arisen that changed the establishments in the sector. An important trend is the rise of applications allowing customers the mobile and online coordination of loyalty programs. Applications can have all necessary functionalities to make a physical loyalty card obsolete. Hence, platforms are developing adequate online and mobile systems for points collection and storage (Perez, 2012). More generally, with the technology-driven emergence of digital money, loyalty points are increasingly treated as a *Virtual Currency* with potential to change the business' economics. Whereas the topic also raises legal issues, such issues are outside the scope of the paper. For further readings see the Report on Virtual Currency Schmes of the European Central Bank (European Central Bank, 2012), the Electronic Money Directive (2009/110/EC) or the Payment Service Directive (2007/64/EC).

Like plain loyalty points, VC acts as a loyalty measure towards customers and/or Third parties by binding them to this particular currency (and hence the related organization). However, whereas pure loyalty programs are mainly implemented to reward customer behaviour (Kumar & Shah, 2004), VC allows several uses, i.e. they are tools for multiple usage options granted to different types of actors. These usage options represent the roles that are conducted in the value network. This paper identifies eight roles bound to the VC flow in the Value network (see *Table 1*): Sell, Reward, Redeem, Create, Buy, Spend, Get rewarded and Store. The actors that conduct these roles are the platform, the Third party and the customer.

		Type of actor		
		Platform	**Third party**	**Customer**
Flow	**Out**	Sell Issuing VC in exchange of conventional money		Spend Using VC as a payment instrument instead/alongside conventional money
		Reward Issuing or awarding VC		
	Into	Redeem Taking back VC i.e. accepting it as a payment		Get rewarded Conduct a (qualifying) activity that is awarded with VC
			Buy Purchase VC for conventional money	
	In	Create Build up and coordinate the network around a VC		Store Accumulating and saving VC in personal accounts or wallets

Table 1. VC roles in the Value network

Some roles can be performed by only one type of actor in the network (i.e. either by the platform, by the Third party or by the customer) while others can be performed by two or more types of actors. Roles describe *flows* or *motion* of VC in the network, i.e. whether VC leaves a partner's account (i.e. a partner issues VC; flow is outward), enters the account (i.e. the actor gets VC; flow is inward or coming into) or fulfil tasks in the account. Having represented all possible options that this paper addresses, in the following analysis this generic table will be aligned to represent each case specifically.

4 VC implementation in platform schemes - a case study analysis

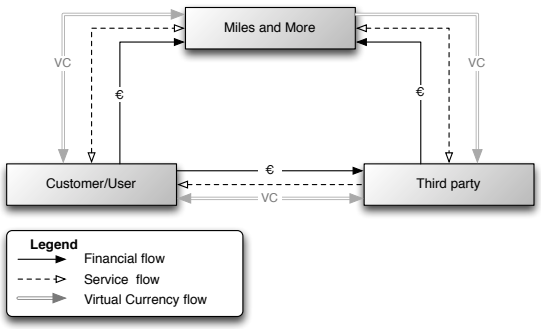
The section provides a detailed study of four cases of platforms, including mobile platforms that have implemented a VC approach, namely Miles & More, Groupon Bucks, Facebook Credits and Mobile Viking Points. They were selected based on their different VC implementation strategies, the diversity of their related business models. The case study approach was choosen for its ability to describe "a contemporary phenomenon in its real-life context." (Yin, 1981 p.59). While different data collection methods can provide evidence; this paper combines findings mainly from obeservations and some interviews. It thus addresses the objective to describe current procedures in the industrial field. Set-up as a cross-case analysis, examples can then be compared upon several factors. The authors follow the process of i) collecting data, ii) analyse cases separately, iii) make a cross-case analysis with deriving overall findings, iv) drawing conclusions (Eisenhardt, 1989; Yin, 1981)

Albeit the value network contains of the same types of actors (platform, Third party, customer) the roles conducted by each and the relationships between them, vary, showing the extent of uses allowed in VC strategies. A consistency is the role of the platform as enabler of interactions between the two sides of the market and purveyor of VC. VC is meant to bind either one or both sides of the market to its services. Customers can store, get rewarded, buy and/or spend VC mainly on personal accounts on the platform. Third parties encompass all entities that sell products or services by the means of the platform. Relationships displayed in the value network include i) financial and service flows ii) VC flows and roles related to the implementation of VC. The following section analyses the interactions between the actors for each case study.

4.1 Miles

The native intention of the Miles & More program implemented by the German airline Lufthansa is to raise customer loyalty towards the airline while the extension of the VC to Third parties increases its value for customers. The platform targets both sides of the market: Miles are rewarded to the customer and sold to Third parties (e.g. banks, retailers, hotels). In 2011, 20 million members from 234 countries participated in the program, with 250 partners (Lufthansa, 2011). A mobile application was launched in July 2012 with limited functionalities resulting in the fact that the physical card remains requested by most Third parties for rewarding/redeeming points (Miles & More, n.d.).

Figure 3 illustrates the relation between the partners, while the accompanying Table highlights in grey the roles that are conducted. Plain boxes indicate roles that are not conducted. The VC stream is bidirectional between the platform and the customer and the customer and Third party (both partners can reward and redeem VC from the customer) and monodirectional between the platform and the Third party. Third parties need some form of payment agreement with the platform (displayed in a black arrow) to receive the VC that they can reward (Mason and Barker, 1996). The financial stream from the customer to the platform indicates the purchase of goods/service that is rewarded with VC



	Platform	Third party	Customer
Out	Reward	Reward	Spend
	Sell	Sell	
Into	Redeem	Redeem	Get rewarded
		Buy	Buy
In	Create		Store

Figure 3. Miles & More Value network

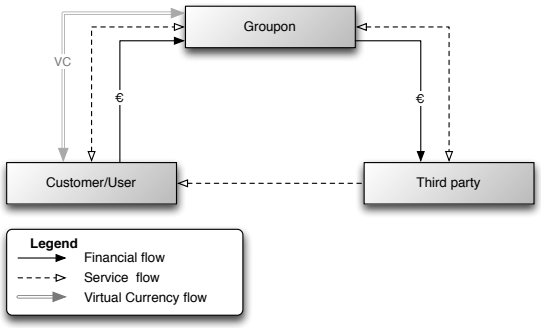
Platform/Customer: The primary intention of the VC program is to reward VC to (and redeem VC from) customers for purchases of flights. The revenue stream is unattached to the direct purchase of VC. Customers' purchased miles, unlike rewarded ones, can solely be used for an immediate redemption such as flights or service provided by the airline (not a Third party). Given the divergent characteristics, purchases of miles are not exposed as a possibility for the customer in the table.

Platform/Third party: Originally purveying VC, the platform cedes control to Third parties by allowing them to reward and redeem miles. In return, the platform collects money for every mile that the Third party rewards. The redeeming system reflects in a revenue sharing model.

Third party/Customer: Third parties conduct the same rewarding process as the platform making use of the VC acquired from the latter. They are unrestriced in their decisions upon applying terms and conditions for rewarding (e.g. one mile for every Euro spend on a purchase).

4.2 Groupon Bucks

Groupon Bucks executed by the group-buying platform Groupon (and its mobile equivalent Groupon Now!), solely reinforce customers' loyalty. Groupon is an online/mobile platform that allows Third parties to sell own products and services to customers at a discounted price that can be set by the means of economies of scale emerging form group buying. Registered customers are given the possibility to subscribe for offers that are validated once enough customers have subscribed. Customers receive products or services directly from the Third party (Groupon, 2012).



	Platform	Third party	Customer
Out	Reward	Reward	Spend
	Sell	Sell	
Into	Redeem	Redeem	Get rewarded
		Buy	Buy
In	Create		Store

Figure 4. Groupon Value network

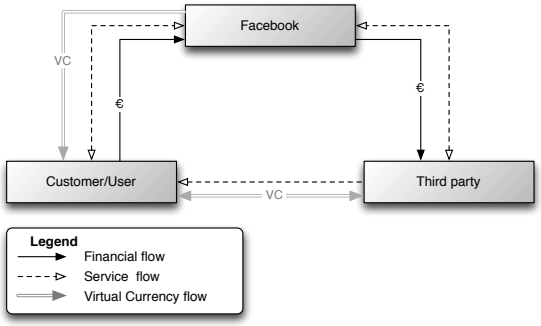
Platform/Customer: The VC encourages solely interactions between customers and the platform. A customer who has performed, or participated in, a "qualifying user activity" (e.g. referring someone to Groupon who then conducts a purchase on the platform) are incentivised with Groupon Bucks. The VC is redeemed for any deal at the platform. Additionally, Bucks can be bought in form or gift cards as presents for other customers.

Platform/Third party: The platform serves as a mere sales channel for Third parties' offers. The revenue model consists of a fee taken by the platform on every deal made by a Third party but yet unrelated to the VC.

Third party/Customer: The VC plays no role in their relationship.

4.3 Facebook Credits

Facebook Credits, the platform's VC, answer the purpose as loyalty measure towards Third parties but moreover creates as a source of revenue. Credits are studied in this paper in the case of game applications. Launched in 2004, the free platform Facebook gathered more than 1 billion active users in 2012. Since 2007, Third party developers are able to provide apps, including games, usable via the platform (The Associated Press, 2013). Together with the partner company TrialPay, Facebook has implemented a rewarding mechanism for customers conducting "qualifying user activities" (e.g. completing advertiser offers). Facebook Credits' use is constantly evolving. The paper focuses on the system that was running least until end 2012 (Facebook, 2013a, 2013b).



	Platform	Third party	Customer
Out	Reward	Reward	Spend
	Sell	Sell	
Into	Redeem	Redeem	Get rewarded
		Buy	Buy
In	Create		Store

Figure 5. Facebook Value network

Platform/Customer: Facebook permits its customers to use Third party services (mobile and online games) via their accounts. Within the game set-up, purchases of virtual in-game items are supported, demanding however the utilization of VC, stored in the customer's account. Facebook Credits can be redeemed in all Facebook games from Third parties though not at the platform itself. Assuming a customer intents to purchase in-game items from Third party games, the actually need to have a sufficient amount of Credits. Monetary transaction is conducted by the platform returning these

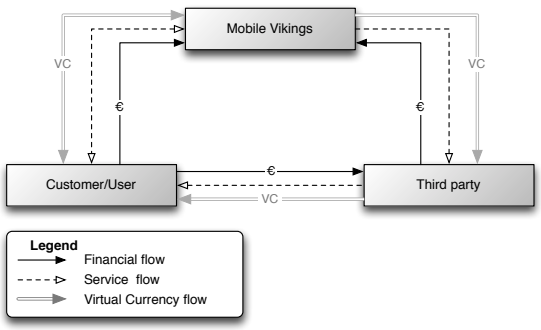
Credits. Besides conscious, provident purchase of VC preliminary to playing, it is possible to buy Facebook Credits whilst playing when the account is not sufficiently filled. Facebook Credits are then automatically converted into the requested item or in-game currency. In other words, customers think they buy the Third party's currency whilst actually buying Facebook Credits. Facebook thus creates a direct revenue stream from the customer. A partner company of Facebook enabled a rewarding mechanism that allows Third parties to award "qualifying user activities" with Facebook Credits.

Platform/Third party: While the platform creates and operates the main service offer for the customers, for the gaming applications it relies mainly on the enrichment of assets via Third parties. The platform empowers and support Third parties in the development of game applications and embedding of payment mechanisms. Through the implementation of VC, an obligatory payment method for gaming, Facebook has introduced loyalty measures towards Third parties. Payments are collected from customers. For each transaction, Facebook credits Third parties with the proceeds from the sale minus their service fee of 30 % + any applicable tax (Facebook, 2013b; Kincaid, 2011).

Third party/Customer: The compulsory VC scheme locks in game developers who want to address and sell in-game items to the customer base of Facebook. Customers are locked-in likewise since they can solely play Third party games via Facebook's platform.

4.4 Mobile Viking Points

The MVNO (mobile virtual network operator) Mobile Vikings implemented (Mobile) Viking Points as a loyalty measure towards their customers. Additionally they incite Third parties to use this VC thus contributing to loyalty towards both, themselves and the platform. Active in Belgium and the Netherlands, Mobile Vikings counts 160.000 members whom they sell mobile services such as call minutes, SMS and data packages on Viking SIM cards. The VC can be exchanged in these mobile services. Mobile Vikings additionally operates a service to register Third party locations (thus creating a "Spot"). The location is thereupon shown on a virtual map to all customers of Mobile Vikings, with possibly related deals made available (CityLive NV, 2012; Mobile Vikings, 2013a, 2013b).



	Platform	Third party	Customer
Out	Reward	Reward	Spend
	Sell	Sell	
Into	Redeem	Redeem	Get rewarded
		Buy	Buy
In	Create		Store

Figure 6. Mobile Vikings Value network

Platform/Customer: Comparable to Groupon Bucks, Mobile Viking Points depicts a reward mechanism for certain "qualifying user activities" (e.g. convincing someone to join Mobile Vikings). Additionally, Viking Points can be bought in form of gift cards mainly as a present for other users. VC is redeemable for services/products of the platform Mobile Vikings.

Platform/Third party: Solely the platform provides the services/products that customers get in exchange for the VC, i.e. its various mobile services. Mobile Vikings however provides to Third parties the possibility to gratis register venues such as shops and stors on their virtual map. In addition, Mobile Vikings runs a business focused product bundle for € 375 (VAT incl.) per year, permitting Third parties to create deals connected to the "Spot". Such deals aim at attracting customers due to price cuts and rebates on products. With the product bundle, Third parties also receive 3000 Viking

Points that they are asked to reward their customers with every concluded deal. The Third party decides upon the height of the rebate and the volume of points rewarded for each deal. Third parties have even options to purchase further Viking Points for their rewarding intentions. Mobile Viking charges then the price for the VC plus 25% (CityLive NV, 2012).

Third party/Customer: Third parties expand their options with the purchase of the product bundle like the localization and coordination of "Spots" (i.e. shops and stores) and the creation of deals that the customers can conduct. Third parties decide upon the creation and exact configuration of deals. They are obliged however to issue VC with every deal conducted by customers.

5 Market trend analysis of Virtual Currency streams

The section compares the cases studied previously to analyse the impact of VC on business models. The cases were chosen for their coverage of mobile and online platform solutions, in various sectors. Hence it is not possible to draw general conclusions. The analysis however allows identifying of a few trends and issues that affect the use of loyalty schemes and VC. Following the business model cycle of Ballon (2007) and Braet and Ballon (2007) four parameters define a business model - organization, technology, service and finance design. Hereafter, conclusions are drawn explicitely and implicitely.

Seeing the technological aspect as given, several characteristics, linked to the remaining parameters, seem of being of utmost relevance for comparison: the side(s) of the market on which the VC is oriented; whether the platform itself provides goods or services for which the VC can be redeemed; whether Third parties also redeem the VC; if the scheme rewards customer behaviour; if the platform generates revenue by selling the VC. For the last point, a trade-off is necessary between the Third parties (T.P.) and customers (Cust.). *Table **2*** depicts an overview on which characteristics are ascribed to which business model parameters and their respective execution in the various use cases.

		Miles and More		**Groupon**		**Facebook**		**Mobile Vikings**	
Organization design	Orientation of the VC scheme	two sides		one side		two sides		two sides	
Organization and service design	Multifaceted redemption	Y		N		Y		N	
Service design	Platform provides services/products	Y		N		Y		Y	
	Option of Rewarding Cust.	Y		Y		Y		Y	
Financial design	Direct Revenue Platform	T.P.	Cust.	T.P.	Cust.	T.P.	Cust.	T.P.	Cust.
		Y	N	N	Y	N	Y	Y	Y

Table 2. Characteristics of business model strategies

The paper first demonstrates an increase in the range of roles conducted by platforms concerning VC and especially allowed to Third parties and customers. The analysis shows that the implementation of VC requires at least consistency of some roles. Thus the *platform* in the position of the purveyor is asked to create and coordinate a VC program. The platform likewise owns a *customer* base. The latter is in direct interaction with the platform because i) of the platform's own services or products and/or ii) the services or products from *Third parties* that are accessible via the platform. There are however options for parameter choices for the three actors in the network concerning the roles of the VC (i.e. sell, reward, redeem, create, buy, spend, get rewarded and store).

Influencing the organization design, one of the most important aspects is the opening of the system to both sides of the market. It is described as *Orientation of the VC scheme*: two-sided signifies the issuance of VC (rewarding or selling) to both sides of the market: customers and Third parties. It applies to all cases except of Groupon. Groupon Bucks addresses solely the customer side while

excluding Third parties from the scheme. On two-sided markets, the intermediate (i.e. platform) however needs to make a trade-off between each party's interests in transacting with the platform. As a result it will address one more than the other. While Miles & More and Mobile Vikings create demand for the VC primarily on the customer-side, Facebook targets principally the Third parties to implement the VC standards and concurrently locks customers in.

Multifaceted redemption relates to the organization as well as to the service design and describes the possibility to redeem points at a variety of actors including the platform and the Third parties. Variety can be given throughout industries or within such (e.g. different execution of games for Facebook). Each actor who redeems the VC adds value to the loyalty scheme for the customer. On the other hand, platforms with their own products/services profit from a system where VC, once issued, can only be redeemed in their respective stores. Consequently, platforms need to make a trade-off between single (here: Mobile Vikings and Groupon), or multifaceted redemption places (Miles & More, Facebook). The latter implies that the platform provides an adequate redemption system to the Third parties.

A characteristic of the service design is the platform proposition. Two types of platforms can be distinguished depending on *whether they have their own products/services to exchange* for the VC on top of the platform activity. Those who have own products (here: Miles & More, and Mobile Vikings) are less dependent on the Third parties' performance. Their VC is still valuable for the customer without the other side of the market. With this type of platforms, customers know the products/services they receive in exchange for VC. The VC of the latter (Groupon and Facebook) has only as much value as the Third parties (various types of merchants and game providers) create. The platform is thus dependent on the Third parties' capacity and willingness to fulfil their engagements. Even Third party products are valueable for the customers currently, long term it is unclear if the former can cover the demands of the customer with their products. If they fail, the VC looses its value.

A second characteristic of the service design is the aspect of rewarding customers for desired user actions. It remains a central point for VC implementation and presents a consistency throughout all cases. The aspect links up to the initial loyalty schemes that aim in building-up a (long-term) customer relationship, where loyal customer behaviour has a positive impact on a company's revenue.

Influencing the financial parameter, VC can constitute a *direct source of revenue* for some platforms. In general, platforms choose either side of the market for creating revenue with the VC; mainly Third parties that buy VC to reward it to customers. Third parties need to compensate the "loss" e.g. by additional sales. Only Facebook directly sells the VC to customers. In the other cases, customers are included in the VC scheme for free. However, platforms give them the option of buying VC in form of gift cards or vouchers only redeemable at the platform. Miles & More allows customers to buy additional airmiles only under the restriction that they are used for flights or services that are provided directly from the airline. Miles & More and Mobile Vikings allow Third parties in fact to decide on conversion rates and terms and conditions for rewarded VC, nontheless income is not generated directly by allowing Third parties to sell VC.

The counterpart of using VC as a source of revenue is that it can slow its adoption process by Third parties or customers. The higher the fee (e.g. per transaction using VC), the less interesting for the customer to use the VC.

6 Conclusion

Based on the business model approach developed by Ballon (2007) and Braet and Ballon (2007), the paper has analysed the implementation of VC schemes of mobile and online platforms. It has first shown how loyalty schemes, embedded in a digital environment, have transformed into VC schemes, allowing the two sides of the market - mediated by a platform - a broader range of options in the utilization of VC. Value networks have been used to analyse the business strategies of VC implementation based on four case studies: Miles & More, Groupon Bucks, Facebook Credits, and Mobile Viking Points.

The value networks have represented the interplays between three types of actors: platforms, customers and Third parties (i.e. partners that sell products or services by the means of the platform). The platform facilitates the connection between the two sides of the market in terms of service-, financial- and VC flows. VC answers in its basic functionalities the same purposes as loyalty points. It rewards customers and thereby binds them to a particular platform. However, VC exeeds that by expanding its roles for multiple usage options granted to different types of users. The paper has identified eight roles: Sell, Reward, Redeem, Create, Buy, Spend, Get rewarded and Store.

The four case studies were compared along main five characteristics that are directly linked to the organization-, service and financial design of business models: the side(s) of the market on which the VC is oriented; whether the platform itself provides goods or services for which the VC can be redeemed; whether Third parties also redeem the VC, if the scheme rewards desired customer behaviour and if and from which side of the market the platform generates revenue by selling the VC.

Unlike plain loyalty points, VC concepts can accomplish multiple purposes. Their objectives rank from strengthening loyalty measures on one or both sides of the market and lock in either of them to opening new revenue streams. One consistency throughout all examples is the aspect of rewarding customers for desired user activities. It remains a central point in the implementation of VC strategies that should reflect in the company's revenue and the build-up of a (long-term) customer relationship.

Moreover VC can enhance the platform's gatekeeper position and thus control over the Third parties as well as the customers. It can be deployed as a tool to lock in one or both sides of the market. The platform's set up of rules, conditions and obligations with the other actors in the value network determines the extent of the lock-in effect.

The authors acknowledge that industries are still in an early phase of experimenting with new business models concerning VC strategies, in particular with mobile devices opening up new possibilities such as the broader use of localisation-based services. Further research is thus required reflecting the development of the market, also from a technical point of view.

Acknowledgement

CoMobile is an R&D project cofunded by IWT (Agentschap voor Innovatie door Wetenschap en Technologie), the government agency for innovation by science and technology founded by the Flemish Government. Companies and organizations involved in the project are C2P – ClearPark, Alcatel-Lucent, Netolog, CityLive – Mobile Vikings, Colibri, Belgian Direct Marketing Association, K.U.Leuven/COSIC, K.U.Leuven/CUO, K.U.Leuven/ICRI, UGent/MICT, iMinds/iLab.o.

References

Baird, N. (2007) Coalition Loyalty programs: The next big thing? Chain Store Age, 83(7), 14.

Ballon, P. (2009) The Platformisation of the European Mobile Industry. Communications & Strategies, (75), 15–33.

Ballon, P. (2007) Business modelling revisited: the configuration of control and value. Info, 9(5), 6–19

Braet, O., & Ballon, P. (2007) Business Model Scenarios for remote management. Journal of Theoretical and Applied Electronic Commerce Research, 2(3), 62–79.

Christopher, M., Payne, A., & Ballantyne, D. (2008) Relationship Marketing. Oxford: CRC Press.

CityLive NV (2012) Viking Spots [WWW Document] https://vikingspots.com/en/ (accessed 6th February 2013)

Dowling, G. R., & Uncles, M. (1997) Do customer loyalty programs really work? Sloan management review, 38, 71–82.

Eisenhardt, K.M. (1989) Building Theories from Case Study Research. The Acacemy of Management Review, 14(4), 532-550

European Central Bank. (2011) Occasional Paper Series: Interchange Fees in Card Payments. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=457529
European Central Bank. (2012) Virtual Currency Schemes. Retrieved from http://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf
European Parliament and Council. (2007) Directive 2007/64/EC
European Parliament and Council. (2009) Directive 2009/110/EC
Facebook. (2013a). Facebook Sign Up [WWW Document] https://www.facebook.com/ (accessed 6th February 2013)
Facebook. (2013b) Facebook Developers. [WWW Document] http://developers.facebook.com/ (accessed 6th February 2013)
Gawer, A., & Cusumano, M. A. (2002) Platform Leadership: How Intel, Microsoft, and Cisco Drive Industry Innovation (1st ed.). Boston: Harvard Business Review Press.
Groupon. (2012) Groupon. [WWW Document] http://www.groupon.com (accessed 26th July 2012)
Kincaid, J. (2011) Facebook To Make "Facebook Credits" Mandatory For Game Developers (Confirmed). TechCrunch. [WWW Document] http://techcrunch.com/2011/01/24/facebook-to-make-facebook-credits-mandatory-for-game-developers/ (accessed: 31st October 2012)
Kumar, V., & Shah, D. (2004) Building and sustaining profitable customer loyalty for the 21st century. Journal of Retailing, 80(4), 317–330.
Lufthansa. (2011) Lufthansa Press Releases. Miles & More: 20 million members. Press release archive. [WWW Document] http://presse.lufthansa.com/en/news-releases/singleview/archive/2011/february/11/article/1875.html (accessed 3rd July 2012)
Mason, G., & Barker, N. (1996) Buy now fly later: an investigation of airline frequent flyer programmes. Tourism Management, 17(3), 219–223.
Miles & More. (n.d.) Miles & More [WWW Document] http://www.miles-and-more.com/online/portal/mam_com/de/homepage (accessed 6th February 2013)
Mobile Vikings. (2013a) Home [WWW Document] https://mobilevikings.com/bel/en/ (accessed 6th February 2013)
Mobile Vikings. (2013b) What are Viking Points? [WWW Document] https://mobilevikings.com/bel/en/vikingpoints/ (accessed 6th February 2013)
O'Malley, L. (1998) Can loyalty schemes really build loyalty? Marketing Intelligence & Planning, 16(1), 47–55.
Palmer, A., Mcmahon-Beattie, U., & Beggs, R. (2000) Influences on loyalty programme effectiveness: a conceptual framework and case study investigation. Journal of Strategic Marketing, 8(1), 47–66.
Perez, S. (2012) PassRocket Lets Any Business Create Loyalty Cards For Apple's New Passbook App For Free. TechCrunch. [WWW Document] http://techcrunch.com/2012/09/19/passrocket-lets-any-business-create-loyalty-cards-for-apples-new-passbook-app-for-free/ (accessed 2nd October 2012)
Reichheld, F. F., & Sasser, E. W. (1990) Zero Defections: Quality Comes to Services. Harward Business Review, 14(3), 497–507.
Rochet, J.-C., & Tirole, J. (2002a) Platform competition in two-sided markets. Journal of the European Economic Association, 1(4), 990–1029.
Rochet, J.-C., & Tirole, J. (2002b) Cooperation among Competitors: Some Economics of Payment Card Associations. The RAND Journal of Economics, 33(4), 549–570
Sharp, B., & Sharp, A. (1997) Loyalty programs and their impact on repeat-purchase loyalty patterns. International Journal of Research in Marketing, 14(5), 473–486.
The Associated Press. (2013) Hits and misses in Facebook history over the years. The Big Story. [WWW Document] http://bigstory.ap.org/article/hits-and-misses-facebook-history-over-years (accessed 3rd February 2013)
Varian, H.R. (2000). Introduction à la microéconomie, 4th ed. De Boeck Université, Bruxelles.
Webster, F. E. (1992) The Changing Role of Marketing in the Corporation. Journal of Marketing, 56(4), 1.
Yin, R.K. (1981) The Case Study Crisis: Some Answers. Administrative Science Quarterly, 26(1), 58-65