Transforming Commerce to M-Commerce

A case study of transforming
a functioning business model to a mobile context

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Abstract

Today many companies in regular commerce strive to join the m-commerce business. This is a case study of such a company, namely Dreamstar. They plan to transform their business of selling physical discount booklets to a mobile context. To examine the viability of such a business model all Dreamstar's partners were presented with an app prototype and by using usability-centered methods together with an evaluation framework their opinions and thoughts were documented through observations and interviews. The result was that end customers liked the idea but the price used in regular commerce was more questioned when used in a mobile context. The distribution partners, who was thought to be the sport club members was in most cases the sport club member's mothers, which according to their children were not ready for a transformation to m-commerce. Most keen on the transformation were therefore the *companies advertising* in the physical booklet, which saw the value of being presented in an app instead of a physical booklet. To create a viable solution for Dreamstar's planned transformation, some of the improvements discussed were regarding the interface, the return of investments for the end customers as well as the exclusion of the sport clubs as a distribution partner. The suggested solution was, since there is no competition of free discount apps in Dreamstar's cities, to introduce the m-commerce business model alongside the existing one. That way the cash bringing business model used today would not be challenged, while new advantages to commerce and future m-commerce competition are being made by expanding Dreamstar's offer. An overall conclusion is that transforming commerce to m-commerce might not always be such a faultless success, as it may seem. And to help future studies to evaluate if a transformation from commerce to m-commerce would be viable, two additional areas to the used evaluation framework are suggested, which are the *implementation* and *competition*.

Contents

1. Introduction

1.1 Background

On January 7, 2011, Apple announced that ten billion apps had been downloaded (Apple, 2011, a). That is more then one app per citizen of the world. According to New York Times what Apple started 2008 with their App Store for their iPhone has become a game changer for the entire cellphone industry (2008). Dagens Nyheter writes in an article December 13 2010 that to talk about it as a revolution is an understatement (2010). Mediavision, a Swedish analytics firm, estimates that 25% of the population in Sweden possesses a smartphone[1] (2010, a). This is important since the users' behaviors has as well changed. Mediavision presented in another study that 90% of the questioned in the research owning a smartphone use their phones for other things then just texting and making calls, see a graph in *attachment 8.1* (2010, a). Mars 2 2011, when releasing the iPad 2, Apple announced that its mobile developers together had earned two billion dollars (2011, b). But this revolution, according to Forrester, does not plan to stop here. They presented a forecast stating that mobile apps would be a $38 billion business in 2015 (2011).

Mobile commerce, or m-commerce, can be seen as an extension of existing e-commerce businesses while some see it as a whole new phenomena (Sharma, Gutiérrez, 2010, p. 34). The term m-commerce is about *wireless* e-commerce, so in that sense it is an extension of e-commerce. (Schwiderski-Grosche, Knospe, 2000, p. 1-2). In the same time huge differences to e-commerce has lead to the explosion mentioned above. In an attempt to cover these differences, the first one is that the end user device is mobile, giving a whole new meaning to *ubiquity*. The user can now in real time at any place access m-commerce apps. Related to the ubiquity, the end user is in this mobile context always *accessible*. News and updates can easily be pushed to the end user. Cellphones are usually not shared between users, which makes *personalization* more usable. That personalization can mean everything from ringtones to professional apps. The fact that the SIM-card is personal as well creates some inherited *security* to a cellphone; some even regard a cellphone as a smart card reader with a smart card. Since the device is always close to the end user as well, *localization* solutions have given m-commerce another twist. And at last the *convenience* of mobile devices. Their

[1] Smartphone definition; "a cellphone with someone of the following properties: touch screen, keyboard, operative system: iOS, Android, Windows Mobile or Blackberry OS". (Mediavision, 2010, a)

size and weight together with the ubiquity and the accessibility already mentioned makes them an ideal tool for performing personal tasks (Schwiderski-Grosche, Knospe, 2000, p. 3).

Regardless if m-commerce is seen as an extension of e-commerce or not, what we see today is that regular commerce businesses stand in line to join the m-commerce business. (Dagens Nyheter, 2010). One of them is Dreamstar, which today sells physical booklets of discounts through sport that this case study will focus more closely on. But, little is known about how such transformations can be made viable and how we evaluate such transformations.

1.2 Goals and Purpose

This research aims to define crucial areas when transforming *commerce business models* to *m-commerce business models*. To do this I will do a case study on a fairly small but flourishing company called Dreamstar, which plan to transform their existing business model of developing physical booklets of discounts to an m-commerce business model with a mobile app booklet of discounts instead.

1.3 Problem Definition

What areas are crucial to evaluate for a viable business model when transforming a commerce business model to an m-commerce business models?

To answer this the following sub-questions in my case study needs to be considered:

- Would a straightforward transformation of Dreamstar's *existing commerce business model* to an *m-commerce business model* be viable for all its partners and customers?
- What changes in the straightforward transformation and the implementation of it might improve Dreamstar's possibilities for an overall viable business model?
- Are there additional aspects to the evaluation framework used that are important for viable m-commerce business models when a transformation is made from regular commerce?

1.3 Method

To answer the first sub-question of *would a straightforward transformation of Dreamstar's existing commerce business model to an m-commerce business model be viable for all its partners and customers* I will first define what a *business model* is. After that, ahead of the introduction of the evaluation framework that is going to be used, usability in human-computer interaction needs to be defined. These two will then be the core foundations for the prominent

evaluation framework written by Sulabh Sharma and Jairo Alberto Gutiérrez. This will all be defined in *2 – Theory*.

In *3 – Dreamstar In-Depth* I will define how a *straightforward transformation* of the commerce business model to an m-commerce business model in Dreamstar's case would look like. After that, in *4 – The Case Study,* the areas in the evaluation framework that will change in the straightforward transformation will be defined so that these can be evaluated. Since we know that Dreamstar has an existing business model that is very viable, since it is a flourish company today, we can presume that their partners and customers will have no problems with the part of the business model that will not change.

How viable the m-commerce business model would be is instead dependent on how Dreamstar's partners and customers think and feels about the areas changed. This will be examined by thirty *individual usability tests* followed up with *individual interviews.* Adding to that one *group interview* with two representatives from each user group will be held, using a SWOT-analysis.

To receive as much feedback as possible during these usability tests there is a great need to develop a prototype of Dreamstar's planned m-commerce app. Using a prototype will not only create much feedback on a future app but it will also be a great technique to give the interviewed a grip of what the new business model would mean for them. This will be developed with the usability design principles defined in the ISO13407, and be evaluated through the eyes of usability tests according to Human-Computer Interaction literature. More about the theory and the process regarding this can be found in *2.2 – Usability defined, 4.2 – Case study design* and *4.3 – Prototype development*.

To answer the second sub-question I will use the same material to try to find changes in the straightforward transformation and its implementation that would improve the viability of the transformation.

Same material will give feedback for the third sub-question when I try to see find the answer to if there are additional aspects to the evaluation framework used that are important for viable m-commerce business models when a transformation is made from regular commerce.

1.5 Delimitation

I have chosen to make some delimitation in the choice of mobile platforms. I will therefore only cover the transformation to one specific mobile platform. Android recently surpassed iPhone as the biggest mobile platform in Sweden (Mediavision, 2011, c) but when the delimitations for this study were made this was not the case. Apple did at that time as well

have the biggest app store (3G, 2010). This combined with iOS being Dreamstar's first choice made me choose Apple's iOS as the mobile platform for this study.

When developing a prototype in a usability context the design process is assumed to be iterative. When it comes to the prototype developed in this study the iteration process will not be finished, only merely started. With the usability tests done, suggestions will be made for the next design iteration, but developing the new design will be out of scope of this study.

Dreamstar have resources to develop an app. In the transformation I will therefore not look at the developing costs to move from commerce to m-commerce.

For this study there are three paths to follow regarding the management litterature when examining the transformation of a business model to an m-commerce business model. One is to study the litterature of transforming business models, the second is to study evaluation frameworks for viable m-commerce business models and the third path would be to examine both. I have chosen to limit myself to the second path.

2. Theory

2.1 Business Models

Business models are essential in this study. A business model does not need to be a highly sophisticated drawing with mathematical expressions; it is rather an answer to simple questions as: Who is the customer? What does the customer value? How do we make money in this business? If we ask these kinds of questions while we at the same time try to find the underlying economic logic of how we can bring this value to the customer within the limits of a feasible cost; we get a good foundation for good business model. Every viable organization has a sound and effective business model, and it is crucial for its very existence. Even if it only exists in the mind of the founder or if it is well outspoken, it exists as the core logic in the business. (Magretta, J, 2002, p. 4-8)

The term became commonly used as a buzzword during the e-commerce explosion in the nineties (Magretta, J, 2002, 1). Since then the literature around business models has developed from just defining a business model to classifying them into categories. After that, more descriptive models of business models started to endure. (Bouwman H., MacInnes I., 2006, 1). The descriptive models have then built up a foundation for business model evaluations. One of these, and which has become a key business model evaluation framework is the VISOR Evaluation Framework. It consists of five areas that companies must consider to assess the viability of a business initiative, which is: *Value proposition, interface, service platforms, organizing model* and *revenue/cost sharing*. (El Sawy, O., 2005, 1-2)

2.2 Usability Defined

Another essential litterature base for this study is litterature in Human-computer interaction (HCI). This is prominent in the evaluation framework for viable business models defined in next section where common notions from Human-computer interaction as *user-centricity* and *interface* play an important role. Since the transactions in m-commerce is done through users using a mobile interface this should not be too surprising.

One overall important term in HCI is *usability*. To define it we have ISO9241-11:

"Extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use."

As we can see it narrows down usability to a specific user with a specific goal and in a specific context. Meaning that usability needs to be measured and spoken about with this in mind. What is effective for one user might not be effective at all for another user and what is satisfactory for a user may not be satisfactory for the same user in another context. The IS09241-11 also states that the effectiveness, efficacy and satisfaction of the product are what we measure to define its usability. (Gulliksen, Göransson, 2002, p. 62-64)

ISO13407 then defines what *human-centered design* is, another area in Human-computer interaction. It includes the following four points:

- Understand and specify the context of use.
- Specify the user and organizational requirements.
- Produce design solutions.
- Evaluate designs against requirements.

Together with a suggested workflow map (see figure 2.2) the work process of Human centered design is suggested. This iterative process does not end until the requirements are meet and that is when the evaluation of the system is proven successful in fulfilling the initially specified requirements. By this we let the user have a formative role in the design process. Meaning that the users of the system will help form system, not evaluate a finished product. (Gulliksen, Göransson, 2002, p. 105-107)

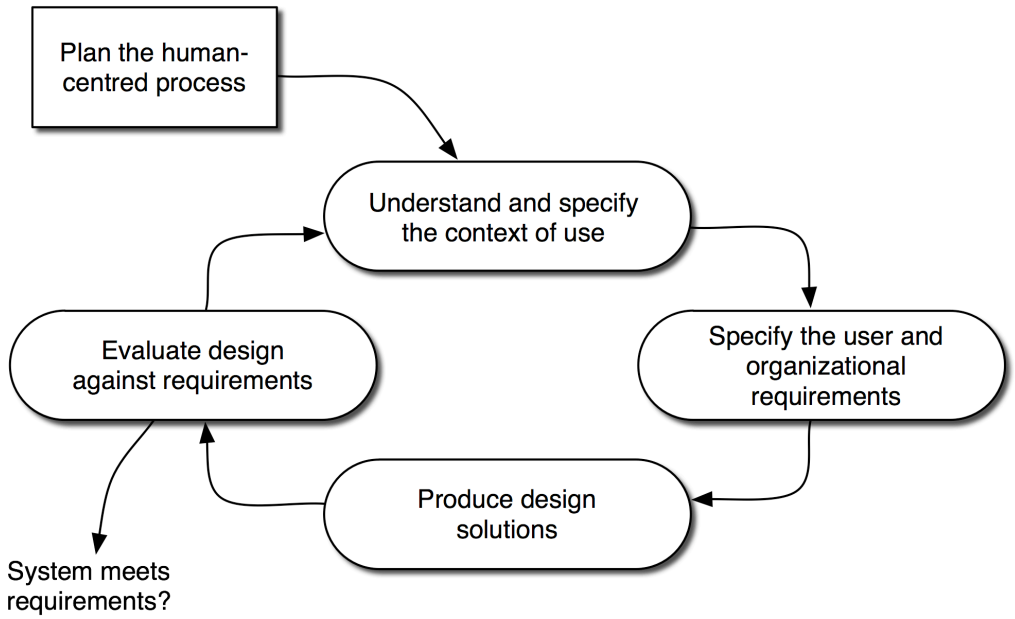


Figure 2.2 ISO13407 work process map (Code{4}lib, *User-Centered Design and Agile Deveopment,* http://journal.code4lib.org/articles/561, received 2011-05-04)

In the book *Interaction Design: Beyond Human-Computer Interaction*, Jennifer Preece, Yvonne Rogers and Helen Sharp declare techniques for doing usability studies. Altogether they state five methods. The first one is *observing users*, which could be done by video recording, screen capturing and reading logs of user interaction. *Asking users* is another, maybe obvious, technique of evaluation. Questions are asked as: Did the user like using the product? Did the user like the aesthetics? Did the user have any problems using the system? *Asking experts* is another commonly used technique that is compared to field evaluations relatively inexpensive and quick to perform. This is often used in the beginning of the design process. Another approach is to *model* human-computer interaction, which can be successful for system with limited functionality. Finally, we have *user testing,* which is seen as the cornerstone of all usability testing. The idea is to give the users specific and well-defined tasks and collect data about how well the user performed, how long time it took, the numbers of errors made and so forth. User testing combined with asking users complementary questions produce quite a good picture of how the user perceived the usability of the product tested. (2002, p. 344)

Further, the authors of the same book suggest techniques on how to perform such usability tests. A commonly used technique is the *think-aloud method*. The idea is that the user is asked to say out loud everything that they are thinking when trying to perform the tasks asked to perform. Through this, the idea is that the users thought process would be externalized and therefore possible to observe. This has been proven very successful in receiving important information for the on-going design process. (2002, p. 365-369)

To receive constructive feedback during a usability test, the use of prototypes is an important aid. Two categories of prototypes are *low-fidelity prototypes* and *high-fidelity prototypes*. A low-fidelity prototype is often sketches and drawings compared to the high-fidelity prototype that almost looks as the real thing. Both have their advantages and their drawbacks. A low-fidelity prototype is much easier to develop and change, whereas a high-fidelity prototype can be more user driven and fully interactive. However, according to Preece, Sharp and Roger, low-fidelity prototypes are to be actively encouraged since they are much more resource efficient and produces much more substantial feedback then high-fidelity prototypes. In high-fidelity prototypes users tend to spend more time on superficial aspects then on the actual workflow. (Preece et al, 2002, p. 243-246)

Further regarding designing prototypes an idea commonly used in human-computer interactive design is *metaphors*. David Benyon writes in his book Designing Interactive Systems that metaphors, if used correctly, can be very successful in letting the user know what to expect from an object or a view. Examples on successful metaphors are for instance the desktop, a folder or a window, which are all commonly used in modern operative systems. (2010, p. 203 – 208)

Finally, before the end of this section we can mention something in general regarding human-computer interaction, which will become interesting when the evaluation framework in 2.3 is explained. It is that the human-computer interaction literature has expanded to more and more include parts of the management theory. We can see this, again in David Benyon's book mentioned above, where he introduces measures for good usability design in terms of *user value* (2010, p. 37, 103-106). We can as well see glimpses of this by the introduction of other management theory notions in his book, such as *market analysis* (2010, p. 172) and *market research* (2010, p. 105-106).

2.3 Evaluation Framework

With the theory of *2.1 Business Models* and *2.2 Usability defined* we have enough information to take on an evaluation framework where human-computer interaction intervened with regular management theory.

A relatively recent study made by Sulabh Sharma and Jairo Alberto Gutiérrez acknowledges the need of an evaluation framework when looking at m-commerce business models. They created such a framework by studying five successful enterprises for their critical success factors and characteristics. They found that on top of the VISOR evaluation system, five additional criteria were important for a viable m-commerce business model. They state that all

of these ten components together will lead to viability in an m-commerce business model. (Sharma, Gutiérrez, 2010, p. 34-47)

This evaluation framework carries theory from management theory, which evidently is true for areas such as *C2 Value proposition*, *C4 Service offerings*, *C5 ROI arrangements* and *C8 Responsiveness to market trends*. But, interestingly this evaluation framework is as well influenced by traditional human-computer interaction literature, which is noticeable through areas such as *C1 User-centricity* and *C6 Interface.*

Figure 2.1 is an overview of the evaluation framework and below; table 2.1 is Sharma and Gutiérrez explanation of the different parts.

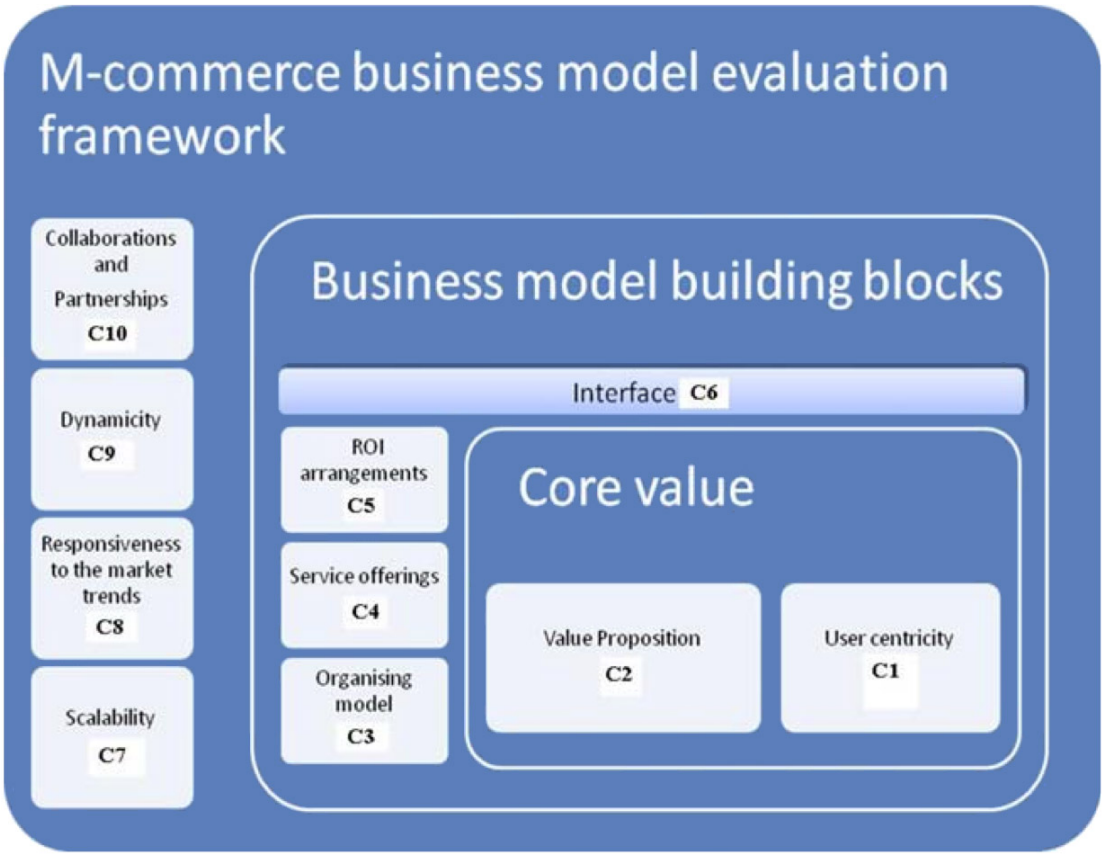


Figure 2.1 M-commerce business model evaluation framework (Sharma, S., Gutiérrez, J. A., 2010, 47)

C1 - User-centricity	The objectives of the business are meeting customer requirements; streamlining the services and products according to what the customer thinks, meeting customer expectations and improving the overall quality of the customer's experience.
C2 - Value proposition	A value proposition is asking a few key questions such as: – What is the value customers should expect from the business? – Why a specific company? – What is the underlying cost for the end product/service? – What is the appropriateness of the cost?
C3 - Organizing model	Analysis of the actors, roles and responsibilities in a value chain, and identification of the proper match between an appropriate actor for a specific role or responsibility.
C4 - Service offerings	Analyze all the key processes required by the business model to function effectively and determine whether there is an incorporating service component for each of the functions required.
C5 - ROI arrangements	Investigate whether every participant is getting sufficient ROI to stay engaged in the value chain by developing a complete revenue-cost map for the business model.
C6 - Interface	Easy to use, convenient, and accessible interface to the service; clear, complete, consistent and user-centric interface design.
C7 - Scalability	Welcoming, modular and flexible nature of the business model in order to facilitate the addition of services and resources.
C8 - Responsiveness to the market trends	Analyze the tendencies of a business model and adjust it according to changing market trends. Investigate how likely or how capable is a business model to change in response to market trends. More responsiveness implies more sustainability.
C9 - Dynamicity	Willingness and ability to change in response to a dynamic external environment (market needs, customer expectations, technology innovations, and changing business environment)
C10 - Collaborations and Partnerships	Existence of value based collaborations and partnerships which ultimately brings additional revenue to the entire value chain.

Table 2.1 Explanation of the evaluation framework (Sharma, S., Gutiérrez, J. A., 2010, 46-47)

2.4 SWOT-analysis

SWOT analysis is a widely used and accepted tool for analyzing businesses and organizations. Much of its popularity comes from the easiness of use and it's all embracing nature.

SWOT is an acronym that stands for *Strength*, *Weaknesses*, *Opportunities* and *Threats*, which is as well the four parts that are evaluated when doing a SWOT-analysis. The main idea is that the strengths and weaknesses will give a good picture of the situation today. This is very healthy since, since the ones in charge are often the ones who worked hard to where the corporation or organization is today. Mixing them together with others in a brainstorming group will give everyone a wider view of where they all are. After the current situation the eyes are moved to the future, which the opportunities and threats sections are supposed to enlighten.

The SWOT therefore clarifies the current position but also helps the brainstorming to become future centered. The SWOT-analysis is often viewed as a 2x2 matrix, see *figure 2.2.* (Fine, L. G., 2000, p. 6-13)

Strengths	Weaknesses
Opportunities	**Threats**

Table 5.4 Example on a SWOT-analysis table.

3. Dreamstar In-Depth

3.1 The Existing Business Model

The company this research will focus on is Dreamstar. The company was founded 2004 in Sundsvall, Sweden. The business plan is to *"approach companies that wants to advertise with discounts in a booklet and through sport clubs distribute these booklets to end customers"*. See *picture 3.1* and *3.2* to get an idea of how the booklets of discounts looks like.

Picture 3.1 Booklets of discounts made by Dreamstar

Picture 3.2 Example of one coupon, in a booklets of discounts made by Dreamstar. Eng. translation: "Buy 2 Pay for 1"

Below is an overview of Dreamstar's business model, see figure 3.1. With the *company advertising* in the booklet at the left and the *end customer* at the right, *Dreamstar* together with a *sport club* becomes the middle hands to fulfill *the end customer's* and the *company advertising*'s interests. We can see how this happen if we follow the service of discounts (thin black arrows) which transfers from the *company advertising* at the left through the different actors in the business model to finally end up at the right, in the hands of the end customer. In the same time the money (thick grey arrows) intuitively transfers the opposite direction. These three user groups defined will be important throughout the rest of this report, and will be marked in italic so you as a reader easier can follow them.

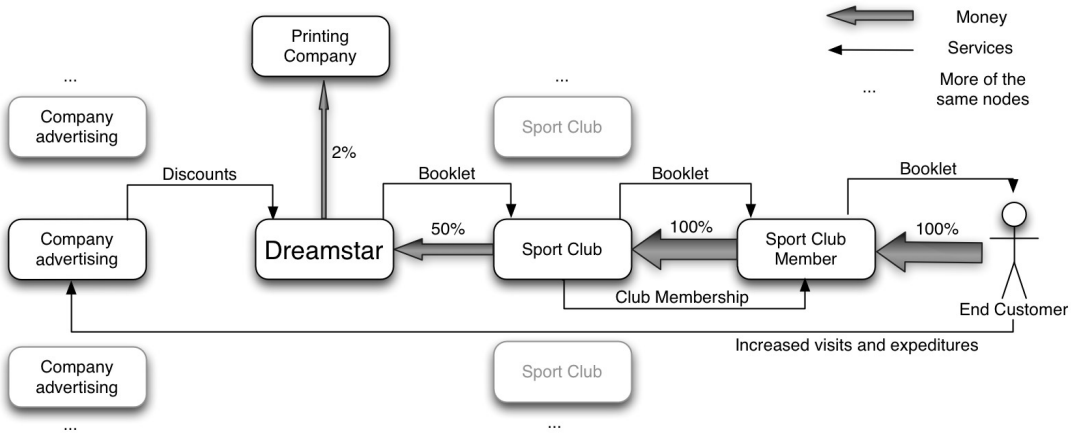


Figure 3.1 Dreamstar's existing business model

The *end customer's* interest is more complicated than it first may look like. One reason to buy the booklet can be that the discounts have a greater value to him/her then it costs to buy the booklet. The other reason can be to support the team selling the booklet. Or, as a third alternative, it can be both.

The *sport club*'s interest is to make money for their sport activities. As seen in the figure they get a 50% cut of the money for each booklet sold. The *sport club member's* interest is to stay a member of their *sport club*. This might seem as a non-financial interest but the players who do not sell their share of booklets instead pay a $100 fee. So in a sense they are working instead of paying for their membership fee and therefore this is a financial relationship as well.

There are no costs for the *company advertising* other then the actual discount on the products the *end customer* buys with a coupon. In return the *company advertising* expects an increased number of visitors. Not only the time the *end customer* use the coupon, but in the future as well.

Today Dreamstar is active in twelve smaller cities partnering with companies advertising and sport clubs that sells the booklets of discounts in each city. Each booklet of discount costs

$24 (150 SEK) for the end customer. A sport club sells in average 1,000 booklets per season, meaning 2,000 booklets each year. Since the revenue is divided in two between Dreamstar and the *sport club*, each *sport club* will then in average make $24,000 in profit yearly. Dreamstar on the other hand have twelve partnerships meaning $24,000 multiplied with 12, giving them yearly revenue at $288,000. Dreamstar's costs are mainly salaries.

3.2 The M-Commerce Business Model

Now, how would a straightforward transformation of the existing business model to an m-commerce business model look like?

Since the delimitation to the iOS platform it's guidelines and tools will be used. Apple had in Mars 200,000,000 individual active credit cards connected to their platform and offer simple services to use these when developing apps for the Apple iPhone (Apple, 2011, c). Figure 3.2 is an explanatory figure of such a service, namely the Store Kit API. Apple's interest in this a 30% share of payments made. In return the developers get a ready-to-use service and the *end customers* do not need to hand out their credit card information each time they want to do an In-App purchase. (Apple, 2011, c)

Figure 3.2 Apple's Store Kit API (Apple, 2010, d)

This leads to a change from the existing business model where the *end customer* received their booklet of discounts from a *sport club member*, now it will be distributed through Apple. Further, since Apple demands an agreement made with each app publisher and a single bank account linked to that publisher (Apple, 2011, d) there is no possible way the money can be distributed directly to each *sport club* as in the existing business model. Instead the developer

of the App, which in this case is Dreamstar, will have to be the one in a legal agreement with Apple. Then who will pay for the additional 30% cut Apple wants? To keep the transformation as straightforward as possible, the most obvious would be that the *sport clubs* and Dreamstar get the same amount of money for the same service sold. We will therefore proceed in that manner and let the *end customer* pay the additional 30%.

When buying a physical booklet, you pay for the discounts, not the paper booklet holding it. The same approach with the App seems to be the most straightforward option. In other words the App itself would be free of charge, but to buy a *booklet of discounts* the end customer will do an In-App purchase, which was just the system explained above. Another obvious consequence compared to the existing business model is that the *printing partner* now would have to be a *programming partner.*

The straightforward transformation from Dreamstar's commerce business model with these changes can be found in figure 3.3 below.

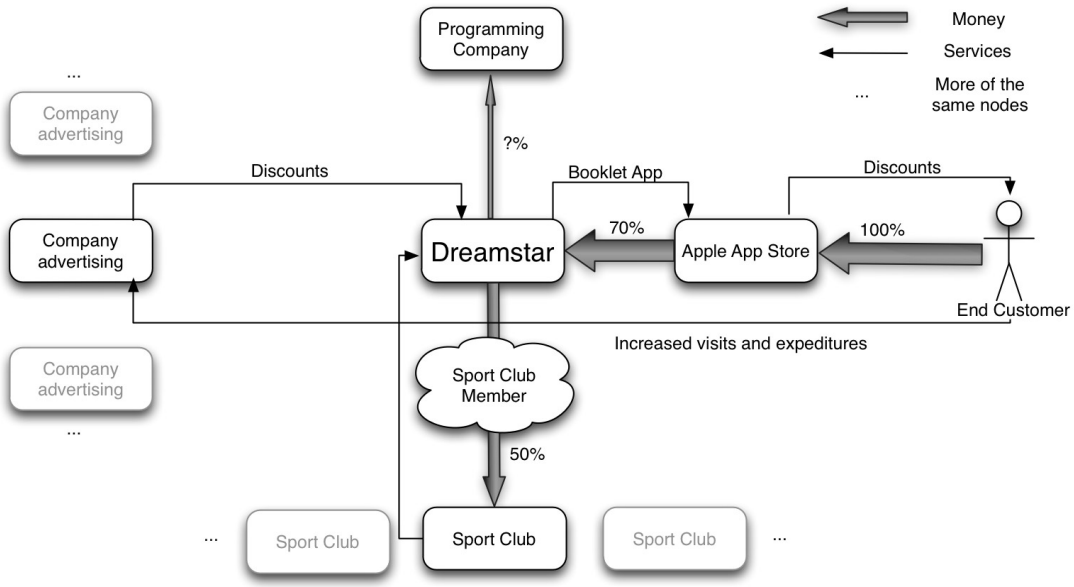


Figure 3.3 Dreamstar's m-commerce business model

Since Apple's App Store now will take care of the distribution of the coupons the *sport club* becomes more loosely attached in the business model, here viewed by a cloud connecting them only through the *sport club member*. Since the *sport club member* is the one actively selling the app and the booklet of discounts in it, it would also be up to them to make sure that the *end customer* wants to support their *sport club*. How this would be solved technically in the interface will be covered in *4.3 – Prototype development*.

4. The Case Study

4.1 Important Areas to Evaluate

As already mentioned this is a straightforward transformation and therefore some key areas will stay the same. In Dreamstar's case the areas that will stay the same are already proved to be successful for Dreamstar in building up the business to what it is today. Therefore the areas changed are the ones the viability of the straightforward transformation is dependent on. Only evaluating these areas will help us to focus our research to the key areas that will be interesting in the transformation. With the theory of the evaluation framework above and some basic understanding about the two business models, enough information is covered to sort out these important. The three user groups of *sport club members*, *companies advertising* and *end customers* will later be used to sort out three different sets of interviews.

In the criteria of *C1 user-centricity* we are to examine how our product is meeting the customers' requirements. Since the physical form and the usage of the product has changed in the new business model, this will be interesting to investigate for the *end customers*, the *sport club members* and the *companies advertising*.

In *C2 value proposition,* the focus is the value the customers receive. This is examined with questions as; why choose Dreamstar, what are the costs of production and are the customer's costs appropriate. The sport clubs in these cities have already chosen Dreamstar, but since the booklet changed form it will be interesting to see if this adds or remove value for the end customers and this might as well affect why *sport clubs* and *companies advertising* should choose Dreamstar. Costs for production is relevant but here we choose to look at the business model after the implementation of an app and therefore the need of initial funding will not be considered as a ongoing cost. The 30% additional cost for the app booklet compared to the increased value in having the booklets in the cellphone needs to be evaluated.

Regarding the *C3 Organizing model* we already mentioned that the *printing company* has been exchanged to be a *programming company* and that the distribution now goes through

the Apple App Store instead of directly through the *sport clubs*. Therefore this areas needs to be evaluated.

Regarding *C4 Service offerings,* none of the services has changed. *Companies advertising, sport clubs* and *end customers* are still offered the same kind of service. Except for the increased cost and a totally different interface, but this is covered under *C2 Value proposition* and *C6 Interface*. No evaluation of the service offerings will therefore be done.

C5 ROI arrangements is in the straightforward transformation not changed other then the additional 30% cut Apple receives, which we covered under C2 value propositions. The ROI Arrangements for *companies advertising* and *sport club/sport club members* will be the same.

One of the biggest changes in the transformation is the *C6 Interface*. Not only is this true for the most obvious case, the *end customer*, but as well for the *companies advertising* that will not receive a physical coupon anymore and the *sport club member* who will no longer have physical booklets to sell.

In *C7 Scalability* we are to examine the scalability of the business model in order to facilitate additions in services and resources. In this straightforward transformation we will look at this as an unchanged factor since the possibility to add more *sport clubs* and *companies advertising* stays equally possible in both cases. For a sophisticated transformation this would be interesting to evaluate further.

Possibilities for *C8 Responsiveness to market trends* and *C9 Dynamicity* would be created with the new app booklet. But again, since this is a straightforward transformation, the two seasons mentioned in Dreamstar's existing business model will be kept and therefore Dreamstar will continue to re-evaluate the market and future companies twice a year. So *C8 Responsiveness to market trends* and *C9 Dynamicity* will have great possibilities for a more sophisticated transformation, but in this study we will look at these as unchanged factors as well.

Further *C10 Collaborations and Partnerships* could be evaluated, since Dreamstar may want to partner up more closely with new partners, for instance with a programming partner. But, as already mentioned many times, this new business model will be evaluated as a straightforward transformation and therefore further partnerships and collaborations will not be evaluated for now.

To conclude, not all the areas covered by the m-commerce evaluation framework are important to evaluate in our case since the study will focus on a straightforward evaluation.

With the discussion above the remaining areas to evaluate are; *C1 user-centricity, C2 value propositions, C3 Organizing model* and the *C6 Interface*.

4.2 Case Study Design

With the usability theory in mind from *2.2 Usability defined* we remember that the idea is to give a specified user a specified task in their specific context and then observe how well they are doing.

The existing and planned business model defines three different user groups; the *end customers*, the *sport club members* and the *company advertising*, which will be represented with their *store personnel*. Their specific task is depending on the different contexts they are in. For the *end customer* this means buying and using the mobile app. For a *sport club member* it means not only using the app but also demonstrating the app. Lastly, for the *store personnel* it means in the easy case receiving a coupon viewed on the iPhone and in the worst case to find the coupon meant for their store on a customer's phone.

4.2.1 Usability Tests

This will be evaluated by *user tests* using the *think-aloud method*. The different user groups will be given a *low-fidelity prototype* together with an imaginary task close to the task they would encounter with a real mobile app explained above. The amount of time needed, their reactions and their process during this will then be documented. The test will be followed by interview questions about their experience. This will cover *C6 Interface* mentioned above.

Further, interview questions will be asked regarding the remaining areas of *C1 user-centricity, C2 value propositions* and *C3 Organizing model*. Thanks to the approach of my evaluation framework the questions to under these areas are somewhat defined and will be used for all three user groups, but again a little adjustment will be made to better analyze their opinions depending on their role in the business model.

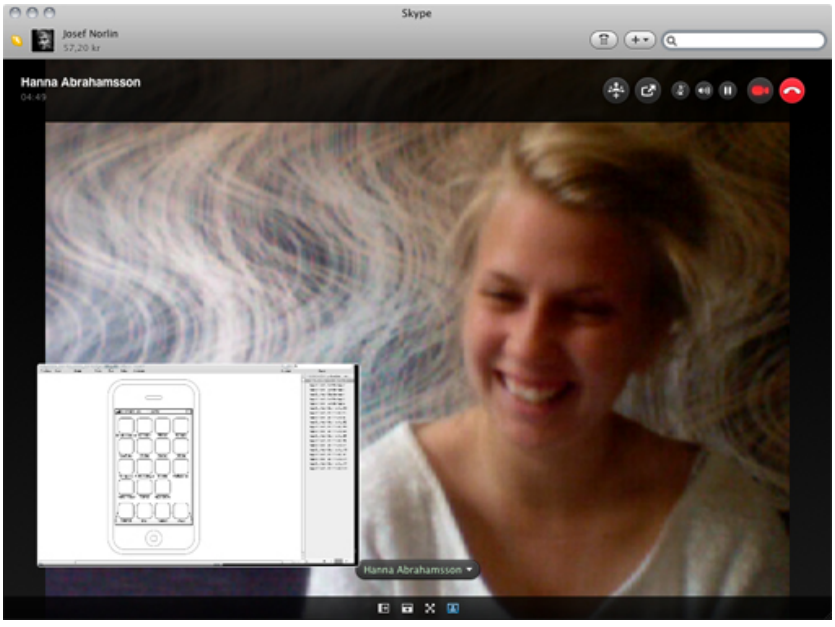
In *C1 user-centricity* the focus will be how well the new app are meeting the different requirements, expectations and experience. Some of these areas are as well covered by C6.

Regarding *C2 value proposition* the value for the customers is to be evaluated. In Dreamstar's case the *companies advertising*, the *sport clubs* and the *end customers* are all Dreamstar's *customers*. Questions about the value they receive from a physical booklet of discounts compared to an app booklet of discount will be asked. Where costs have been changed, which it has for the *end customer*, the appropriateness of the costs will be examined.

The *C3 Organizing model* evaluation criteria are to analyze the actors, their roles and their responsibilities. In the transformation that is most prominent, if not only, in the case of the *sport clubs*. Therefore the *sport clubs'* and their *sport club members'* reaction about this will be interesting. It will also be interesting to ask for the other actors' opinions about the *sport clubs'* role.

Some assumptions have been made, first of all that the sport club members would represent the opinions of the leaders of the sport clubs. This is believed since the sport club members are the ones actually selling the physical booklets, and the change to an app booklet would therefore be most prominent for them. As long as the club then earns the same kind of money the transformation would not affect the leaders of the *sport club* other then the easiness of the booklets sold, which will be declared by the *sport club members*. The same assumption could be made for the companies advertising, meaning that the owners' opinions would be the same as the *store personnel's* opinions. Since the transformation would mean changes in accounting and even how well the company get advertised I decided to make sure that at least 3 out of 10 of the store personnel were owners or managers.

Not all interviews may be possible to do face to face, but thanks to Skype's screen sharing function I can do usability test over distance, see this being tried out in *picture 4.1*.



Picture 4.1 Test of conducting usability interviews over Skype using Screen Sharing.

I will conduct ten interviews per user group, which will mean thirty interviews all together. The instruction, the tasks and the interview questions for each user group can be found in *attachment 4, 5* and *6*.

4.2.2 Group Interview

I believe that the personal interviews will tend to focus more on *C1 User-centricity* and *C6 Interface* since the prototype will be a big part of the interviews. Therefore I will do a group interview as well where I aim the focus on *C2 Value propositions* and *C3 Organizing model.* To do this I will conduct a group interview with six people, two representatives from *end customers*, two from *companies advertising* and two from *sport clubs*. Their task is to do a SWOT-analysis, as described in *2.4 – SWOT-analysis*, of their users groups' position in an m-commerce business model. After that the group will come together and discuss strengths, weaknesses, opportunities and threats from their point of view. This will be followed by a session where the user group's representatives share their suggestions and overall thoughts. This will give a good view of their reactions and point of views. To further lead the focus away from *C6 Interface*, and to not give them any preconceived ideas that might hinder their creativity, the prototype will not be present at all during the group interview.

4.3 Prototype Development

The ISO13407 process for *human-centered design* says that the first task in the cycle is to "understand and define the context", this was done in the introduction of *4.2 – Case Study Design.* The second step was to "specify the user and organizational requirements", this was done in *3.2 – The M-Commerce Business Model.* That leads to the third step, "produce design solutions".

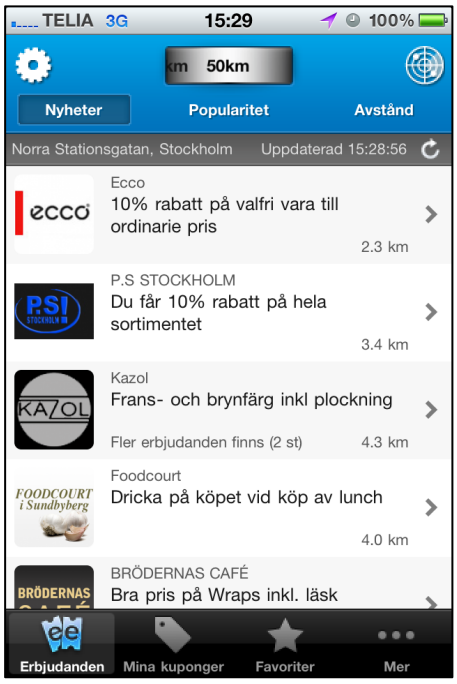
4.3.1 State-of-the-Art Apps

Before defining the basic design ideas for a low-fidelity prototype, it is often a good idea to look at the state-of-the-art. In the iPhone App Store in Sweden the three biggest apps regarding discounts are; *Sweet*, *Rabble* and *Let's deal*.

Sweet and *Rabble* let the *companies advertising* pay to advertise in their app. The mobile app functionality is to locate the *end customer's* position and advertise the closest discounts. This is achieved by a list of coupons grouped together depending on the distance from the user, see *picture 4.2* and *4.3*.

In *Rabble* there is as well a map-view that shows the discounts close to you on a map. Instead of signing coupons, which is used to make sure that paper coupons is only used once, the customer are obligated to take a picture of him/her and use that as a signature on the discount. Regarding the actual usage the coupon can only be activated inside the store, and is only valid 10 minutes after it being activated.

Picture 4.2 Rabble version 1.0.8



Picture 4.3 Sweet version 0.7

Sweet works almost identical although it does not have the personalization step with a picture of the user. Another difference is that it has a bit more advanced categorization of the coupons. Here you can sort the coupons by popularity, distance and date added.

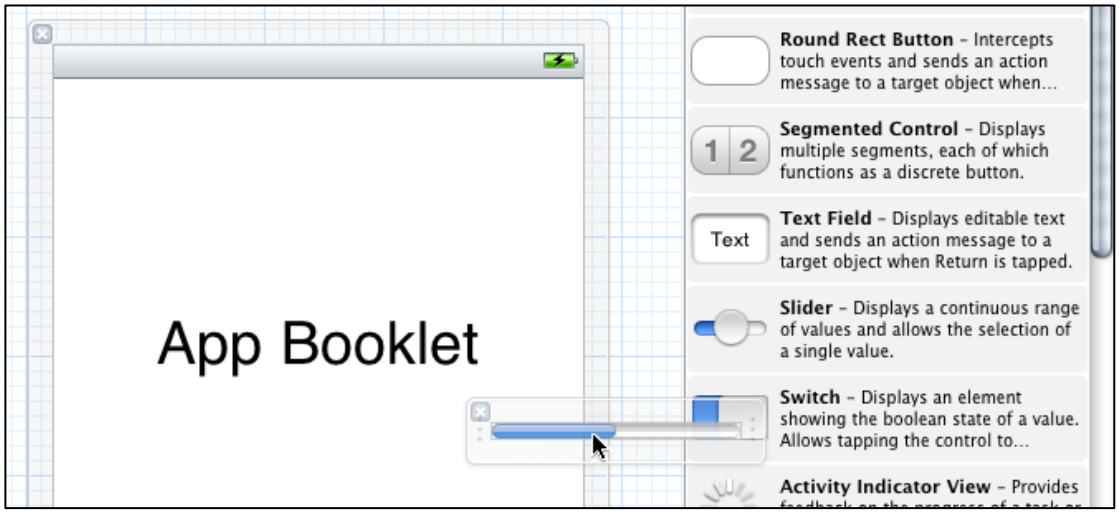
Picture 4.4 Let's Deal version 1.1

Let's deal in *picture 4.4* has a little different touch then it's competitors. They sell time and amount limited offerings. The time the discount is valid and the number of coupons is ticking down as time goes by and when customers purchase a deal respectively. The user buys the discounts in his/her cellphone and then shows a receipt viewed on the screen of the phone to the personnel in the store as a proof of the payment. These discounts are a lot more

expensive but save the end customer more money. While *Rabble* and *Sweet* have around thirty discounts each for a couple of the largest cities in Sweden, Let's deal only has four in the Stockholm area.

4.3.2 Basic Design Ideas

In Apple's iPhone documentation they write "People Expect to Find iOS Technology in the Apps They Use" (Apple, 2011, e). It is not only expected by the users, as Apple states, but it also makes it more convenient for the developers since then the basic controllers and objects already exists. When programming in Xcode, Apple's software development kit, SDK, for iOS programming, the common objects and controllers are at hand, all that is needed is to drag them to the app using Apple's *Interface Builder*. *Picture 4.5* is an example of this.



Picture 4.5 An example of dragging a standard Progress View in to an app in Interface Builder, which is a part of Xcode 4.0.2.

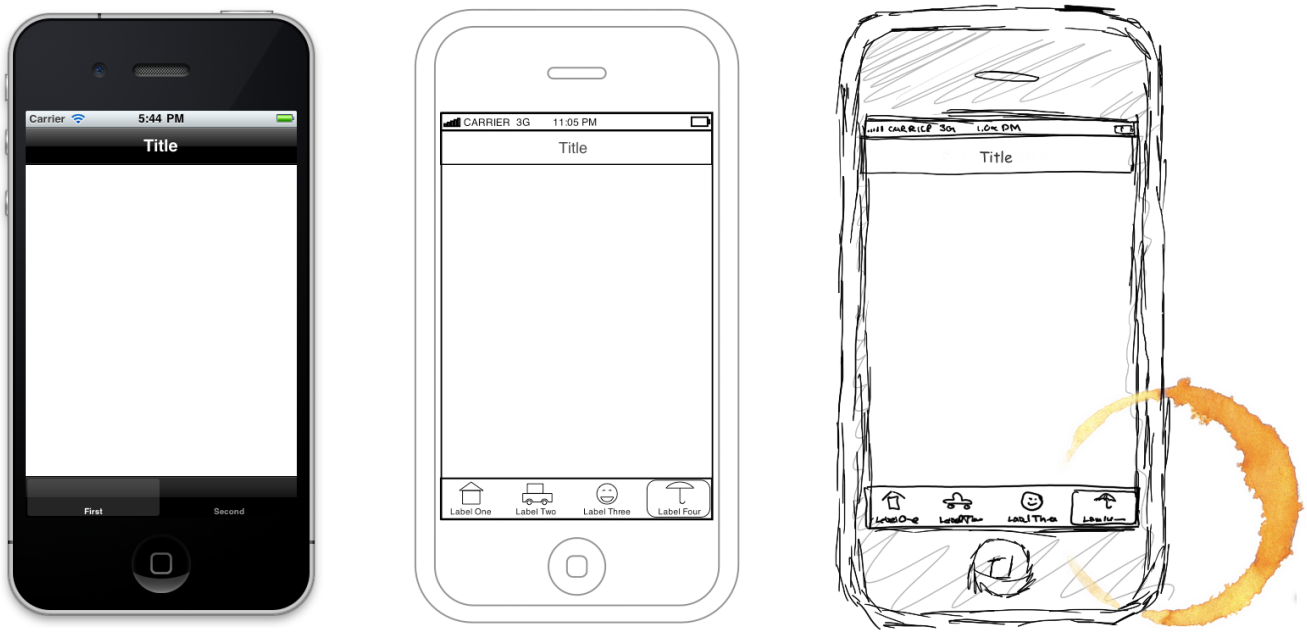
Therefore, standard controllers will as much as possible be used in the prototype. One such common controller, which can be created by default when starting a new project in Xcode is a *Tab Bar*, which is as well used in both *Rabble* and *Sweet*. That together with a *Navigation Bar* at the top, viewing either the title of the App or the chosen tab's name, will serve as the basic design even in the prototype and can also be seen as the basics of what people expects from an iOS app (Apple, 2011, f).

In the low-fidelity prototype the aim is to create an imitation of an app that is eligible to do the tasks the old physical booklet could do. In the *end customer's* case that means to buy the booklet from a specific *sport club member* and then use it to receive the discounts in a selected store. For the *sport club member* it means selling an app, and being able to explain the user interface. For *store personnel* it means receiving the coupon and sometimes even finding the coupon, when being presented with the app by an *end customer*.

The app will have the same functionality regardless if it is the *end customer*, *store personnel* or the *sport club member* using it since there is no simple way the notify the app who is using it, other then asking the user. This is no big deal since the app is generally designed for the *end customer's* need. But buying the booklets is the part that matters the most for the *sport club member,* and receiving the app is the part that matters the most for the *store personnel*. With this in mind we can develop the prototype with the starting point of making the app as easy as possible for the *end customer*, but consider the *sport club member* during the design of the purchase parts of the prototype and consider the *store personnel* during the design of the receiving parts.

As mentioned in *2.2 – Usability defined* it is common to use metaphors to help the user to know what to expect from objects in software. In the prototype I will therefore try to keep the physical booklets of discounts as a metaphor, in hope that it will make it easier for the user to know what to require of this app.

To design the prototype Xcode is not the optimal solution, since we want something not looking like the real thing as mentioned again in *2.2 – Usability defined*. To do this I have used a website with an iPhone Mockup tool. See *picture 4.6* for an app running in Xcode together with two mockups next to it to see the difference. The outcome of this design will not be the final product to develop, but just the first iteration of the design process as mentioned in the delimitation. In *attachment 6* you will find the first prototype iteration.



Picture 4.6 To the left is an actual app developed and viewed by Xcode, to the right of it are two mockups of the same app made with an iPhone mockup-website (iPhonemockup, 2011)

5. Results

5.2 Case Study Results

Each study will be represented with some overall statistics for age, gender, familiarity to smartphones and the tasks tested. This will be followed by observations made during the tests together with answers regarding *C6 Interface, C1 user-centricity, C2 value proportion* and *C3 Organizing model.* When referred to *Buy the* app – XX and *Use the app – XX* these sections can be found under *Attachment 6 – The App Prototype*. Quotations are freely translated from Swedish to English.

5.2.1 Sport Club Members

To find *sport club members* familiar with the physical booklets Dreamstar mediated me to a sport club called Team Hudik that let me do the interviews during of their soccer training. Each *sport club member* interviewed was familiar with selling physical booklets of discounts since they were obligated to sell 8 booklets per season.

	1	2	3	4	5	6	7	8	9	10
Age	18	20	20	16	17	16	16	20	20	20
Gender	F	F	F	F	F	F	F	F	F	F
Familiarity to smartphones	1	4	4	5	4	2	5	3	3	4
Finished task 1	X	X	X	X	X	X	X	X	-	X
Time needed for Task 1	1:30	1:12	0:59	0:37	0:56	1:46	1:01	1:15	-	1:21
Finished task 2	X	X	X	-	X	X	-	X	X	X
Time needed for Task 2	2:40	2:22	2:15	-	2:45	3:12	-	2:52	2:20	4:12
Ranked impression of prototype	4	5	2	3	4	4	3	3	4	2
Easiness to sell today's booklets?	4	5	5	5	3	2	5	5	5	4

Table 5.1 Overview over *sport club member* answers. F = Female. X = accomplished task. Familiarity to smartphones: 1 = no familiarity at all, 5 = excellent familiarity. Time is in minutes. Impression of the prototype: 1 = Very bad, 5 = Very good. Easiness to sell today's booklets: 1 = Too hard, 5 = Very easy.

Task 1: Observations

- “Oh no, it’s in English” was common.
- Finding App Store was easy for the most. Even when not used to iPhones.
- Fields like [*Explanatory text*] where confusing, better to use examples.
- Search was often the first choice.
- Biggest problem were to understand that to download the app you had to press the “FREE”-button in *Buy the app – 5.*
- Two users did not pass the task since the prototype was in English; I conveyed them to do task 2 at least and promised I would translate orally to them.

Task 2: Observations

- “Okay, I just press Begin then”; First image *Use the app – D1* were obvious to many, maybe too obvious since not many seemed to read the text.
- Many just followed the steps with no bigger problems.
- Users were surprised of the app’s functionality regarding their role as sport club members; “Aha, now I understand”, “So that’s how our team receives the money”, “Cool, my name will be in here” and comments alike were common. Shows that they did not really understand it when explained to them, but they seem to have no problem understanding what the functions would mean for them.
- One user wanted to buy discounts for another city but support her sport club in the same time. She found no way to do so but continued somewhat discouraged.
- Two users hesitated to press the Buy-button in *Use the app – B2* since they did not know how the money would be charged them.
- Even though the instructions were to buy a booklet and use it in an imaginary store, two users stopped after buying the booklet.

C6 Interface answers

- “I want it in Swedish”.
- “The app felt thought through”, “Little messy when showing all the coupons before buying them”.
- “Did I see the discounts?” said one user after reflecting of what the app did.

C1 User-centricity answers

- Here are some quotes: “It’s not I who sell them, my mom sells my booklets”, “Moms sells them to workmates when they are going out for lunch”, “Moms sells them to our relatives”. Two of them used to go knocking on doors and they felt it was harder to sell the booklets.
- “I have a wish to be able to sell these booklets in other cities but still for my team since I do not live where the team is”.

- "I think if I played around with it [*the app*] I would have no problem in explaining to others" and alike were common.

C2 Value proposition answers

- "If people believe they will make money they buy a them", "because of the discounts", "the discounts are the most important issue why people buy these", "Because of the coupons".
- "It will not be easier to sell [an app booklet] to older people", "to our age maybe", "my mother would never buy an app, she doesn't even know what it is" and alike were told in all interviews.
- When informed that they could sell these discounts over social networks some likek the idea: "Ah, can I sell it through Facebook? Yes that would be good for me", "Maybe", "Yes", "Probably".
- The answer was generally "yes" when asked if they believed their friends would pick their name when buying the app if it was optional. One girl said she believed the popular ones would get all the sales.

C3 Organizing model answers

- When asked if they would trust the developer of the app they were surprised about the question. Some of the quotes are "Oh, yeah, I think so", "yeah, this look pretty serious".

5.2.2 End Customers

After the first sets of interview above I translated the prototype to Swedish to eliminate the language barrier.

	1	2	3	4	5	6	7	8	9	10
Age	25	30	19	34	37	21	65	60	24	32
Gender	M	M	F	M	F	M	M	F	M	F
Familiarity to smartphones	5	4	3	4	1	4	5	4	2	5
Finished task 1	X	X	X	X	X	X	X	X	-	X
Time needed for Task 1	0:40	0:31	1:30	2:03	2:23	1:12	1:05	4:49	-	0:40
Finished task 2	X	X	X	-	X	-	X	X	-	X
Time needed for Task 2	06:34	1:58	08:02	-	3:21	-	3:45	9:37	-	8:43
Ranked impression	4	5	3	3	4	4	5	4	3	3
Localization service importance	4	4	4	4	4	3	4	3	3	2
Ubiquity importance	4	5	5	2	5	5	4	5	4	5
Social sharing importance	1	4	1	5	3	4	1	1	1	3

Table 5.2 Overview over end customer interviews. F = Female, M = Male. X = accomplished task. Familiarity to smartphones: 1 = no familiarity at all, 5 = excellent familiarity. Time is in minutes. Impression of the prototype: 1 = Very bad, 5 = Very good. Ranked importance: 1 = Not at all, 5 = Crucial.

Task 1: Observations

- In *Buy the app – 2* one user try to press the “news”-tab to find the app.
- Users accustomed with iPhone finished the first task on routine. The ones that had no experience were confused as in the first set of interviews about the *FREE*-button in *Buy the app - 5*. To download people instead tried to press the app icon or the app title.
- All users found the new app on the home screen after task 1.

Task 2: Observations

- In *Use the app – D1* some commented that they did not read the instruction before pressing *Begin*.
- Select a city for your coupons, *Use the app – B1*, were understood easily. Although some commented on the three different names used for the discounts, “I get confused by the names, is it coupons, booklets or discounts I’m buying?”
- In *Use the app – B2* one user just wanted to pick one of the discounts. Another user felt the price was way to cheap for all the discounts and therefore stopped here. Three people mentioned that the list of coupons was overwhelmingly filled with coupons. Two mentioned that from looking at the list in *Use the app – B2* they wanted

information about how much they had to pay in the stores as well: “2 for 1 is good but what does one item cost then”.

C6 Interface answers

- “This was pretty fun. I didn’t all the time know what I was doing though”, “it was an easy structure”, “it was easy”, “the App Store part was pretty hard”, “it was quite many steps until finish”, “when buying the booklet the text with all the coupons was pretty cluttered, and still not all information was there”.
- “I would like some more explaining texts”, “more images and colors”, “I would appreciate to just select the discounts I want to buy at and then pay less”, “I want to see the discounts directly, no information text”, “Change the name for D – Help to D – Instructions, using help is never a good option when working with computers”.

C1 Value proposition answers

- 4 out of 10 would buy a physical booklet today if it contained good discounts.
- No one of the interviewed bought it to support *sport clubs*.
- “I am planning to buy an iPhone soon, then it would be more interesting with an app booklet”, “Never bought one before but definitely more interesting as an app”. 4 users that recently bought booklet of discounts who had an iPhone would definitely buy it in the iPhone instead (if same price).
- All the users asked preferred to have the discounts in their cellphone.

C2 User-centricity answers

- Discounts were valuable to all.
- All the respondents said it would be much more valuable in cell phone. Many said so since it then would be with them all the time.
- For the ones who never bought a physical booklet, the only reason for them to do so was if the discounts were so great that it would exceed the price quite easy. Regarding the 4 interviewed who had bought a physical booklet; the new price of $34,9 would still be okay for 2 users if they still saved money on buying it. 1 user would hesitate and think about a bit more. The last 1 would not buy it.
- “I am a poor student, do not have $24 nor $34,9 extra, would never buy such a booklet”, “You usually get discounts for free, I would never buy them”, “I try not to eat out, that’s only in worst case, but valuable discounts on sport stuff or clothing stores would make me think about it”.

C3 Organizing model answers

- Most people were surprised about the question regarding if they trust money to be delivered to local *sport clubs*. Comments like “I think so”, “all is done by the web

these days so I believe it is as safe as anything else" and "yes, if it looks professional" and alike were common.

- "I rather give money to an aid organization", "if I had someone I knew played I would like to help them out". None of the asked *end customers*, even those who recently bought physical booklets of discounts would buy the booklet to just to support a *sport club*.

5.2.3 Store Personnel

	1	2	3	4	5	6	7	8	9	10
Age	31	25	20	26	22	32	26	19	37	25
Gender	M	F	M	M	F	F	F	F	M	F
Familiarity to smartphones	1	4	4	3	3	5	4	3	5	4
Manager	Yes	-	-	Yes	-	-	-	-	Yes	-
Business area	Hair	Café	Rest.	Retail	Café	Rest.	Café	Café	Rest.	Café
Finished task 1	-	-	X	X	X	X	X	X	X	X
Time needed for Task 1	-	-	1:31	0:47	1:20	3:55	0:39	1:09	1:36	2:14
Importance to support sport clubs	1	1	2	1	2	3	1	2	1	1

Table 5.3 Overview over store personnel interviews. F = Female, M = Male. X = true, - = false. Familiarity to smartphones: 1 = no familiarity at all, 5 = excellent familiarity. Time is in minutes. Impression of the prototype: 1 = Very bad, 5 = Very good. Ranked importance: 1 = Not at all, 5 = Crucial.

Task 1: Observations

- One user who did not complete the task opened the app and pressed *B – purchase* in the tab bar and found *Use the app – B7,* commented on the inactive *Active-button* "that was strange, the button doesn't work" and the user felt finished with the task.
- EAN-code in *Use the app A4* caused some confusion if it was going to be used or not.
- Two users commented on that the year was missing in the valid through in *Use the app – A4*.
- One user found the slider for the coupon in *Use the app – A4* but did not understand the what to slide, he tried sliding his finger over the whole view horizontally and vertically.

C6 Interface answers

- "If done it twice it's no brainer", "that was easy", "convenient to just slide to use", "was a little uncertain but I did ok I think", "very easy", "it was very easy, and if the customer shows the last step only [*Use the app – A4*] it is just to slide which ought to be the easiest yet".

C1 User-centricity answers

- When receiving physical discount coupons the personnel require valid thru date, which the person if needed signs it and that some coworker or supervisor can verify that it is accepted in the store.
- Same requirements were valid for an app discount coupon. “Use picture instead of signature” was one tip. The need of simplicity and a complement to the paper receipt was also mentioned.
- Regarding using app coupons instead of physical coupons comments like “There is no need for more training” were common. One user told us that older personnel would probably require more training.

C2 Value proposition answers

- Here are some quotations from the three managers interviewed about discount booklets in general. 1 – Hamburger restaurant: “we use them regularly to promote new products and to influence our customers’ behaviors, by that we can increase sales after lunch for instance, to get a higher revenue throughout the day”. 2 – Hair Saloon: I would never use them, if I want to advertise I press up flyers. 3 – Retail store: We do not use it today, but as the competition gets fiercer it is definitely something we would be interested in.
- 7 out of 10 asked was interested in using booklets of discounts for advertising, and these were found at the hair saloon, one coffee shop and one restaurant. One stated that discounts make the customers want to pay less even when out of coupons. One quote is: “it lowers the value of our products, but it is a good tool to make us well-known”.
- 7 out of 9 would enjoy receiving an app booklet more.
- An app instead of a physical booklet would give more value for the *company advertising* for 8 out of 9 companies interviewed. 1 employee for a small café said no, they want to keep the old simple style.
- If the coupons were unlimited there is no problem for the managers instead it was interesting that one was able to can change the offer if an item is sold out. It was also important that the advertising reached a big crowd.
- The possibility to receive a list of coupons used is important and would make it feel more secure said some. But this was not a big issue for them. They felt the prototype looked serious and it was good that an URL could confirm the legitimacy of the discount.

C3 Organizing model answers

- No one said that the app was less trustworthy then a physical booklet of discounts. Many said they would not even reflect on if the sport club team received their money

or not. One store manager said that they would rather then sport clubs support aid organizations, but would never support political organizations.

5.2.4 Group Interview

Two representatives from each user group were present at a group interview session. Each user group focused first on their users group's strengths, weaknesses, opportunities and threats (according to *2.4 SWOT-analysis*) with transforming physical booklets to app booklets, *see table 5.4*. After that each group presented their results and with that in mind the group discussed suggestions and thoughts of the transformation as whole. The group interview was held in Stockholm, whereas the individual interviews had their focus in northern parts of Sweden.

Strengths	Weaknesses
Sport club members • Don't need to be middle hand anymore • No storage and distribution problems of valuable booklets **End customers** • Easier to find right coupon • Coupons in your cellphone • Localization possibilities • Ubiquity **Store personnel** • Fast and simple receiving of coupons • Coupons can be updated • Good advertisement	**Sport club members** • How to make money • What to sell? • Impersonal **End customers** • The price is high compared to other apps **Store personnel** • More possibilities to fake it feels like • Feels harder to receive the first time • Hard to sign coupons
Opportunities	**Threats**
Sport club members • Promoting the idea rather then selling • PR and advertising **End customers** • Better search • More quality then quantity	**Sport club members** • Will the sport clubs be needed when the app becomes well known? **End customers** • Too much junk discounts **Store personnel**

• Most popular right now • Get discounts in other cities as well • Notices when passing selected products or discounts **Store personnel** • An app may spread more which may mean more customers for stores	• Harder to control the discount made in cash desk • Technical problem may hold up the lines

Table 5.4 Strengths, weaknesses, opportunities and threats for each of the user groups: *Sport club members*, *end customers* and *store personnel*.

Suggestions and thoughts

- "Consider skipping the *sport clubs"* (suggested by the sport club representatives).
- "If other has it, more stores and customers will join". "It is important to get momentum".
- "Companies are keener on paying for advertisement then the end customers are of paying for discounts".
- The price is too high since good free apps for discounts are already available. Not only that the price is too high it is as well only valid for a half year. Apps for $1 use to be awesome, to charge something at $34,9 it needs to be awesome discounts. "Why would someone buy it when it is for free in *Rabble*" was one comment. "I may consider buying coupons for $1-$2" was another.
- When questioned why people pay money for the booklets, one answer was that you buy everything if your granddaughter sells it.
- "Make it possible to give away booklets".
- "Many of the discounts in the physical booklet is from the same *company advertising*, in an app these get grouped on a list and the amount of coupons look to be a lot less in amount then the same amout in a physical booklet that grows in size even it is the same store advertising".

6. Discussion

Now, the results gathered can help us answer the questions defined in *1.3 – Problem Definition*.

6.1 Sub-question 1

First we have sub-question 1: *Would a straightforward transformation of Dreamstar's existing commerce business model to an m-commerce business model be viable for all its partners and customers?* I will discuss the results looking at one user group at the time.

6.1.1 Sport Clubs and their Sport Club Members

The usability of the prototype affects the viability of the business model, which is mentioned in *2.2 Usability defined* and *2.3 Evaluation Framework*. Obstacles and suggestions found all affect the viability for the *sport club members* since it will affect the feeling they have about explaining the interface to others.

Looking at the *sport club members* and mainly their comments on *C2 Value proposition,* it is clear that the booklets of discounts today used is quite easy to sell. In average 4.3 out of 5, where 4 means *easy* and 5 *very easy*. The high number may correlate to the interesting fact that many of them were not the ones actually selling the booklets. Instead many of them claimed that their moms did the job for them. Correlating to that, they did not believe that an app booklet would be something for older people, including their moms. Explaining the app concept to an *end customer* or sell it through Facebook were possibilities they would have no bigger problems with and might do and might use. That then gives good credit to the app booklet as whole, despite the suggestions and observations above. Still we need to remember the statement shared by many regarding this: "to our age maybe".

In the *group interview* regarding *C3 Organizing model* the sport clubs' representatives stated questions in *weaknesses* that indicated that the transformation would not be as intuitive as

the old one regarding *what they would sell* and therefore even *how to make money*. They even questioned if they were needed in the new business model.

Therefore I would say that the new business model would not be very viable in keeping the *sport clubs* as partners. Even if Dreamstar still would consider them very valuable they seem to look at themselves as less needed. In addition to that the *sport club members,* who doubt that their moms will switch to an app booklet, regard it as additional work if they will have to sell app booklets on their own instead of leaving the responsibility with the physical booklets to their mothers.

6.1.2 End Customers

What about the viability in the business model regarding the *end customers?* First of all it might be interesting to look at how the differences in smartphone familiarity correlates to the impression of the prototype, the time it took to perform the task and whether they succeeded with the task at all. Unfortunately in the study there are not too many with low familiarity to smartphones to say something definite, but some diagnoses may be set.

The impression of the app seems quite stable regardless of the users' earlier experience with smartphones. One reason for this might be that if a user fail to accomplish a task, they believe it is their fault instead of questioning the prototype. Regarding the time measured I would argue that it is not a very indicative measure on how well the users performed with the tasks. User 10 for instance used 8:43 seconds to complete task 2 only because she was very good on explaining her thinking and sharing suggestions of improvement during the process, not because the task was too difficult for her. One thing can be said though regarding the correlation between smartphone familiarity and the completion of tasks. For users below 3 in familiarity to smartphones the percentage of failed tasks is 50% compared to users at 3 in familiarity and above the same percentage is 12.5%. This therefore indicates, not surprisingly, that there is a higher entrance barrier for users with low smartphone experience to use the app booklet.

Would then the low familiarity to smartphones affect the likelihood for *end customers* to buy an app booklet instead of a physical one? Of course the user base for an app is smaller since not everyone has an iPhone. Interesting though is that the two users with low familiarity to smartphones said they rather would buy the app booklet if they had the possibility. This could give us a hint that an app booklet would be more appreciated then the physical one, even if it today is not available for everyone.

Regarding users who have good familiarity with smartphones we could see that the same is true for them, all five users who recently bought a physical booklet of discount would rather buy an app booklet. Even the ones who never bought a physical booklet would as well rather

have it in their cellphone. This might mean that they all liked the prototype but most definitely they liked the idea of it.

Further, one key factor that could question the viability of the business model is the price point. As stated in *4.2.2* the group interview focused more on the area of *C2 Value proportions* and their opinion were that users expect a whole other price point when using mobile apps then in regular commerce. Compared to free apps with discounts as *Sweet* and *Rabble,* shown in *4.3.1 State-of-the-Art Apps,* $34.9 for Dreamstar's booklet is quite expensive. This was as well commented on in the group interview were someone expressed a concern why anyone would pay for such a service when other discount apps as Rabble are free.

Generally an increased price point is not so well endured by customers. The question is if the increased value of having the booklets in your cellphone is worth the additional price. Two out of the four who recently bought a physical booklet of discount thought so; if they could save more money then they spent on the discounts. One would hesitate and the last one would not buy it for the increased price. Therefore it seems to be worth it for some, although a bigger research would be necessary to draw any definite conclusions. It might be so that when asked in the interviews if the app booklet is worth the additional price, the user compares the value of these two alternatives and finds that one is better for them, and therefore would be able to pay more for it. By that, nothing is said what the same users pick would be when faced with one free alternative and Dreamstar's $34.9 in Apple's App Store, which seems to be the starting-point for the group interview's perspective above.

6.1.3 Companies Advertising and their Store Personnel

Looking at the c*ompanies advertising's* interest will show the viability of the new business model regarding them.

That seven out of ten were interested in using discounts as an advertising tool is interesting for the business model. Important to c*ompanies advertising* is according to the hamburger restaurant manager, number 9 in the interview, that the discounts are being well spread. He also emphasize, mentioned under *C2 Value proposition* that they want to use discounts to try to influence the customers' behaviors. Even more interesting for our transformation of the business model is that eight out of the nine who considered advertising with discounts claimed that an app booklet would be more valuable for them as company.

In despite of my preconceived idea that an app booklet would demand more training for the personnel, this was not the general opinion. Although one stated that older personnel might need that, and with older I think he meant personnel without good smartphone familiarity. It is

good to remember that nine out of ten in my study had smartphone familiarity 3 and above, which may play its role regarding their view on how much training is needed. Generally, we can see that the evaluation of *C6 Interface* was well received by the store personnel. We can see this from their comments but as well that seven out of nine would enjoy receiving an app booklet over a physical booklet. Neither was it a big problem that they did not receive a paper coupon for accounting purposes since they could receive a list of the coupons used and had the ability to control the legitimacy of a discount if something seemed suspicious.

One trend is visible in the row of importance to support *sport clubs*. In average they responded 1.5, where 1 is *not at all important* and 2 is *not much*. Same figure for the three managers would be 1 in average, since all of them responded that is was *not at all important*. Instead they mentioned supporting aid organizations as interesting. This is interesting since it seems to indicate that the *sport clubs* are hanging loose in this end as well.

To sum up this discussion of sub-questions 1 I would like to quote one sentence from the group interview, which I think sums up both the *end customer's* and *companies' advertising* viability in the new business model: *Companies are keener on paying for advertisement then the end customers are of paying for discounts*.

6.2 Sub-question 2

In sub-question 1 the viability of the new business model were discussed for the *companies advertising*, the *end customers* and the *sport clubs*. This leads to sub-question 2: *What changes in the straightforward transformation and the implementation of it might improve Dreamstar's possibilities for an overall viable business model?*

Regarding updates in the *interface* many things can be said. In *5 – Results* both suggestions and obstacles are found that suggests new possible design solutions. The material is precious for a second prototype iteration but here we will focus on defining more overall improvements based on the first usability study.

A common statement was that app contained too many steps. A solution to this would be that instead of trying to explain the discounts for the user's city in a single view, see *Use the app – B2*, the users would see *Use the app – A2.* Which views the list of coupons as they were paid. That way the user could check out the discounts by sorting the discounts on distances, choosing a single coupon to look it up more closely and see an overview on the map view in *Use the app – C1*. The only difference could then be, compared to when the booklet have been bought, that the "let the personnel slide"-slider in *Use the app – A4* would be inactive, and instead a text would state: "to use this and all other coupons, buy them for $34.9 by clicking here". If *Use the app – A2* as well would be used as the start view, another step would be eliminated. Since many seemed to skip to read *Use the app – D1* anyway, the *Use*

the app – D2 could then be user driven, so that when wanting help it can be selected by pressing the Tab Bar.

Such a change together with other solutions derived from the study made would create an interface better suited for the *end customers*, the *sport club members* and the *store personnel*. But, looking at *6.1 Sub-question 1*, the interface was not the biggest concern for the viability of the business model. Much more significant seemed to be the *end customers* thinking the price was too high compared to other apps. As well as the concerns about the *sport club members'* role in the new business model.

Regarding the *end customers* price complications one could, in a more sophisticated transformation, consider cutting costs to be more competitive in the App Store. Since half of the profit today is shared with the *sport clubs,* a first thought might be to eliminate them from the business model. To let them go would not be a big surprise since their role already have been questioned by both the *sport club members* as well as by the *companies advertising*. Looking at the viability for Dreamstar the *end customers* are far more valuable then the *sport club members* since their role now have been replaced by the App Store.

But, there are great advantages having the sport clubs involved instead of running without it. The App Store is outstanding in making it possible for anyone owning an iPhone to buy the discounts wherever they are, whenever. But unless the app gets enlisted in the "top 25"-list it will not do much for increasing Dreamstar's sales. The opposite is true for the *sport club members* that actively would sell the app booklets. If the sport clubs therefore are going to be replaced we do not need to look for another distributor, since that is what the App Store will do even better then the *sport clubs*. Instead it is the *sales job* the *sport clubs* do that Dreamstar will have to find a replacement for. One might consider *advertising* or *word of mouth*. Both are good ideas, but not always as easy to perform successfully and efficiently. And would that sell more booklets then the sport clubs do today?

If the *sport clubs* were removed the app booklet would instead cost $15,9. $24 divided in two, with a 30% add-on for Apple's part. The question is if the same amount of booklets will be sold to keep the new business model viable even for Dreamstar's part.

If we consider further price-cutting, we could look at a scenario were the discounts were charged one fifth of the price today. At $3.18 we are coming closer to what apps usually cost, but we are still not in the price range expressed in the group discussion of $1-$2. And we still have a long way down to $0 that *Rabble* charges for their discounts. At $3.18 Dreamstar would have to sell five times as many booklets as at the price of $15.9 to keep the same revenue. If we divide it in two again it would be sold for $1.59, meaning Dreamstar would have to sell ten times as many discounts compared to the initial price to stay at same

revenue. Another price cutting action would be to try to eliminate Apples 30% cut for In App purchases. This may affect the first time buyer's user experience quite much, but it would definitely be worth to examine the possibilities since it is quite a huge cut Apple wants. It is also interesting to see that the *C7 Scalability* could be improved. Instead of Dreamstar contacting the *companies advertising* this m-commerce business model opens up the door for technical solutions where they could enlist themselves, which would as well enable a lower price for the app booklet.

When we are expanding the possibilities for a more sophisticated transformation why not consider keeping both of the business models side by side. A scenario would be that a sport club member, or their mother, sells the physical booklets as usuall. But if the proposed *end customer* has an iPhone, he or she is presented with the alternative to buy the discount in their cellphone instead. That way the initial price seem reasonable, although if the price is higher for the app booklet some interested buyers may buy the physical booklet instead. Many problems is as well solved regarding the mothers not familiar with iPhones demonstrating the app, all they need to know is the app name and the iPhone accustomed end customer can try to search for the app themselves. If then an app booklet sold would be linked to the sport club member selling it, as it is in the prototype, the number of app booklets sold can be counted. Therefore the same amount of booklets would be sold, if not even more then today. One could even evaluate if the *sport club members* could receive the money for the additional booklets sold. For future studies it might as well be interesting to evaluate the voluntary work the mothers do for their children, since the result of this study shows that they are a driving force in the existing business model for Dreamstar. What are their interests in being a driving force? Do they do it because they are the ones paying the membership fee if their children do not succeed in selling the booklets? Do they do it out of pity? Do they receive some kind of status distributing discount booklets to their workmates? Do they receive status since their kids are active in sports?

Although, as time goes by the core foundation of this business model will be challenged in the same time as free apps with discounts as *Rabble* and *Sweet* continue to flourish. At the point of the writing of this study these discount apps are only available in bigger cities in Sweden, whereas the focus of the individual interviews in this study were in smaller cities. *Rabble* and *Sweet* can keep the discounts free since they charge the *advertising company* instead. In the long run I think it is hard to compete with that. Again, as one store personnel representative from the group interview said: "Companies are keener on paying for advertisement then the end customers are of paying for discounts". When these free discounts hit smaller cities it will be hard to charge either $34.99 nor $24 for something others give away for free, which is an example of how the *C5 ROI arrangements* change even if we have the same product as before.

So what about imitating the business model of these free discounts apps? In my opinion that would not be a straightforward nor sophisticated transformation anymore, more like a 180°-turnaround. It is a possibility but not only would that undermine the price of Dreamstar's existing physical booklet and therefore eliminate their current paycheck. It would also strain the relations with the existing *sport clubs* and *companies advertising* already partnering with Dreamstar. The *sport clubs* do not exist in such a business model which today are the ones linking the *end customers* to Dreamstar. *Companies advertising* might get less friendly when they now are going to pay for something they ahead of the change received for free. It would also mean that the core idea of letting *companies advertising* which differentiate Dreamstar against these competitors would be lost. Instead they would join a field where big players already moved in. What are then the odds of Dreamstar surviving as time goes on and these players gets momentum.

To fully predict the future viability of Dreamstar's possibilities are impossible. But with this discussion in mind, we can point out some suggestions for a more viable transformation. First of all, in my opinion, it seems reasonable to not discard the advantages already given. Keep the existing business model running which is the current paycheck for Dreamstar. Add the planned m-commerce business model in addition to that, the choice whether to buy a *physical booklet* or an *app booklet* is then up to the *end customer*. Why change a concept that is proven successful. Of course the prototype first needs to go through more design iterations, using the material found from this first evaluation, before it would be developed as an iPhone app.

Secondly, when, or if, the competition of free discount apps begins in these smaller cities, that is when their *free-for-end-customer business model* will start to fight against the core logic of Dreamstar's both existing and planned business model where the *end customer* pays for the discounts. Then Dreamstar will have to prove that the discounts they sell are worth the price for the end customer. A threat mentioned in the group interview is that the apps could get cluttered with junk discounts. Since Dreamstar does not charge the *advertising companies* for advertising they could put a higher pressure on the discounts they allow in their app booklet. In time, price reductions might be needed for the *app booklets* to be competitive. Then the choice of supporting a *sport club* or any other organization can become optional and come with a 50% higher price, that would mean half the price for the end customer that are not willing to support a sport club. Or as already mentioned a fifth of the price can charged if five times as many app booklets are sold to perform the same revenue. This is risky since it devalues even the physical booklets and therefore it should be something not acted on if not needed. It ends up being a question of supply and demand regarding the market of discounts. As long as Dreamstar can keep it's monopoly in these twelve cities the *m-commerce business model* does not threaten anything, but add some competitors to the field all conditions changes.

6.3 Sub-question 3

We have now discussed the viability for Dreamstar's partners and customers in an m-commerce business model in *sub-question 1* as well as discussed suggestions that would make the straightforward transformation evaluated even more viable in *sub-question 2*. This has been done to prepare the ground before a discussion can be held about transformations of *commerce business models* to *m-commerce business models* even outside this case study. The question to be discussed is: *Are there additional aspects to the evaluation framework used that are important for viable m-commerce business models when a transformation is made from regular commerce?*

The method of using an evaluation framework and then look at the areas changed has had its advantages compared to looking at a completely new business model using the same *evaluation framework*. It has made it possible to keep some variables constant, making the study more effective. It has also helped to keep a focus on the things changed. One disadvantage might be that when we keep some things constant we limit ourselves in the changes that could be made. It would be interesting to evaluate all different business models possible when transforming commerce to m-commerce in such a case study as this, but that would call for a much bigger research.

Regarding an evaluation frameworks overall it seems wise to include as many areas to evaluate as possible to keep it holistic. The evaluation framework in this study is no exception, and it has indeed given us many important aspects on how to find an m-commerce evaluation framework. In despite of that, when looking at a transformation of business models, there are two additional areas that may question the viability of a business model transforming to m-commerce.

Both in *5.2.4 Group Interview* results and in the prior discussions the viability has been dependent on the *competition.* Dreamstar would meet fierce competition from free-for-end-customer competing apps when moving to m-commerce in the App Store market. In one-way Dreamstar is lucky since these competitors have not yet, or will never, spread to the small cities Dreamstar is active in. What the introduction of global, and partly national, software distribution systems as Apple's App Store has done is bringing all mobile software for their platform to one marketplace. For commerce moving to m-commerce this is a new possibility as well as a threat. If one opens a shoe boutique one will most likely compete with other businesses in a close range from the physical store. But moving that shoe boutique to m-commerce would mean that the store now competes with all the shoe boutiques in the world. One might argue that it is just the same as when a global actor starts up a shoe boutique

close to your store, and in one way it is. But it is more like moving your little shoe boutique to the same mall as all big actors of shoes are in or are planning to join in to.

This leads to a new kind of *competition*. Looking in to that will give information about how customers and partners see things in this new eco-system of m-commerce. Now, some would argue that the scope of the business model ends where the implementation of it starts, and meaning that looking at the competition would be part of how to implement the business model into a business plan. That definition is not what is being discussed, what I argue for is that when *evaluating* the business model we need to consider the market we are in. The existing competition will give information on how people look at our *C4 Service offering* as well as our *C5 ROI arrangements* in our business model. Therefore I would argue that evaluating the competition in the market would as well help in determining the viability of the business models.

Another area discussed in *sub-question 2*, but maybe not as obvious for making the transformation more viable was the *implementation*. In the case with Dreamstar it was evident that the implementation was important since if a transformation were done over a night, the *end customers* and the *sport club members* would not be ready for the transformation. Adding the area of *implementation* to the evaluation framework as well would give that question focus through the whole evaluation process.

Are there areas in the existing evaluation framework that are obsolete or redundant? I still believe that Sharma and Gutiérrez evaluation framework is a step forward in combining human-computer interaction theory with the management theory. It has been a great foundation for finding key areas to evaluate in this case study. And much because it has included key areas from both management theory and human-computer interaction, it gives a great width to areas important to evaluate. I therefore see no reason in removing any of the areas suggested by Sharma and Gutiérrez. But I do encourage others as well to handpick the areas important in that specific transformation, which most likely, are the areas that will change in a transformation.

7. Conclusion

Finally the conclusions for this case study will be expressed. First, I would like to conclude that the discussions above prove that transforming a commerce business model to m-commerce might not be such a faultless success, as it first may seem.

One example of this can be found in *sub-question 1* where the viability of a straightforward transformation for Dreamstar's partners and customers is discussed. There it is found that the *sport club members* are quite happy with the physical booklets used today and, to my surprise, since their moms are the ones usually selling the booklets of discounts they will not be very keen on switching to an app booklet until their moms and their moms' friends switch to smartphones. With that said they personally liked the idea and would feel secure enough to sell the app booklet and explain how the app works. In addition to that the sport club members felt that their role in the m-commerce business model was not as obvious as in the old. *End customers* new to smartphones had some more trouble using the app prototype but all of the interviewed would prefer to have the discounts in their cellphone if possible. The high price of $34.9 was not appreciated, especially not by the ones accustomed to apps with free discounts. But *Companies advertising* prefer to advertise in an app booklet to advertise in a physical one. The fact that the there would be no physical limit in how many discounts spread was not a big issue, instead it was important that the discounts got well spread and that if a discounted item could be replaced if it sold out. This leads to that the viability of the m-commerce business model would only be prominent for *companies advertising*. The *end customers* might consider it but does not think it is worth the extra fee nor pay such a high price for something in your cellphone, and *sport club members* are worried about their moms not ready for selling app booklets.

Now, what changes in sub-question 2 were found that would improve the viability in this transformation? For C6 Interface one bigger design suggestion was to skip some steps and let the app do the explaining by letting the user try it out. Instead of starting up with a view of instructions it is then the user's choice if he or she wants to read it, which will give the user both a more user centered and user driven interface. To solve the concerns from *end customers* regarding the price, different price cutting suggestions were discussed. In the end, since no competition exists today in the cities Dreamstar is active in the final suggestion was that the m-commerce business model should be implemented side by side of the existing business model. In that way the existing beneficial business Dreamstar is having today would not be questioned. In that way, when and if competition strikes in their cities they have build

up and infrastructure and can start evaluating price-cuttings, but only then. When that day comes they can use the differentiating force in their business model, which is that they are charging the end customer for discounts and by that they can create better discounts then competing free-for-end-customer discount business models. Who is going to win that war is out of scope for this study, but regarding the situation today, and if Dreamstar wants to keep their existing business, that is what this study suggests for them.

What additional aspects to the evaluation framework are important for viable transformations from commerce to m-commerce is discussed in *sub-question 3.* The conclusion from that discussion is that the use of an evaluation framework is suggested to give a holistic view of the viability of a transformation from commerce to m-commerce. With that said, it is as well advised to handpick the areas of the evaluation needed for the transformation that is going to be done. The extreme cases would be to look at all areas if everything in the transformation is going to be changed or to use none of them if none of the areas are to be changed. Regarding transformation two additional areas were added that helped in sorting out the viability for this case study's viability, namely *competition* and *implementation*. A suggested evaluation framework model, based on Sharma and Gutiérrez evaluation framework, for transformations from commerce to m-commerce with these areas added can be found in *figure 6.1*.

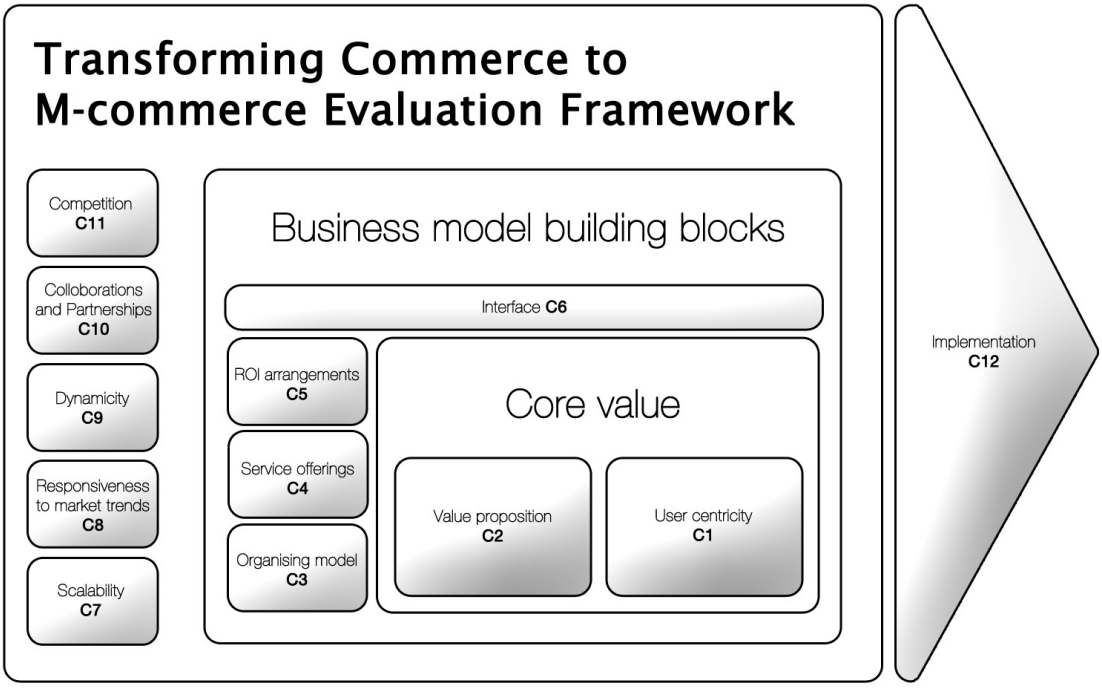


Figure 6.1 Sharma and Gutiérrez evaluation framework for viable business models extended with C11 Competition and C12 Implementation to further evaluate a transformation from Commerce to M-Commerce.

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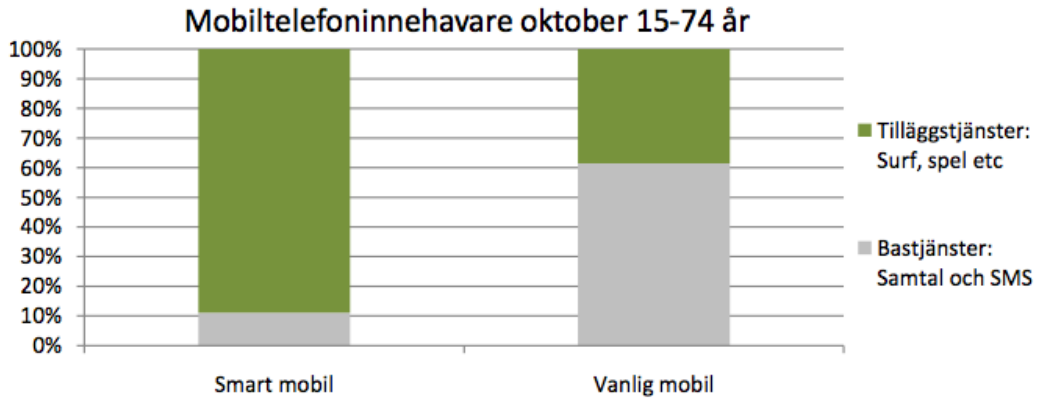
Attachments

Attachment 1 – Smartphone Usage

Here is a diagram of how smartphone users use their phones compared to owners of “dumb”-phones. It turns out that 90% of the owners of smartphones use their cellphone for other services then calls and SMS, for example surfing the web, playing games etc., whereas that is true for only 40% of the owners with “dumb”-phones. The definition of a smartphone is phones with the possibility to download your own apps.

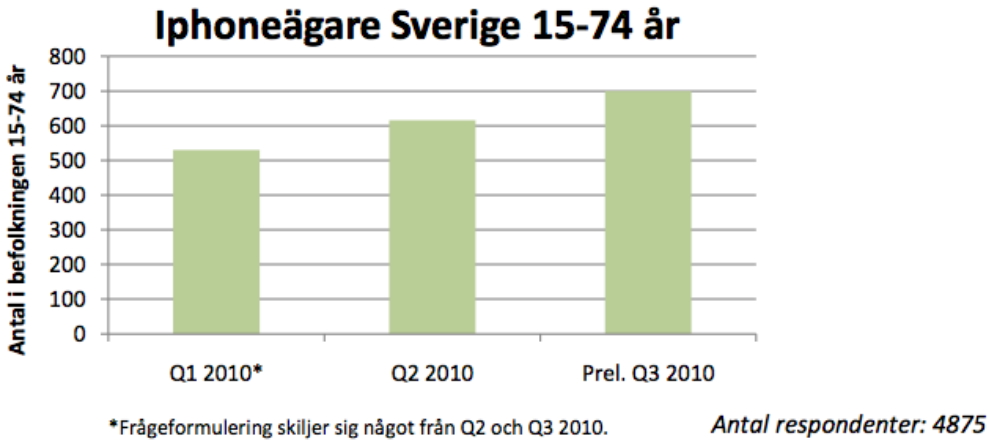


Antal respondenter: 1625

(Mediavision, 2010, a)

Attachment 2 – iPhone Owners in Sweden

In the y-axis the amount of iPhone owners is expressed in thousands, quarter and year at the x-axis.



(Mediavision, 2010, b)

Attachment 3 – Sport Club Member Interview Material

Person interviewed

Name	
Gender	
Age	
Familiar to smartphones?	☐1 Not at all ☐2 Not much ☐3 Average ☐4 Good ☐5 Excellent

Part 1, Think aloud - usability test

Overall instructions	The interviewed is given the following information: "You will be part of study where a transformation from sport clubs selling physical booklets of discounts to sport clubs selling an app booklet of discount is examined. This is not a test of you, but of a future business model and linked to it an app prototype. In part 1 you will be given 2 tasks and in part 2 there will be some interview questions regarding your experience and your opinions about the transformation to an app. When performing the tasks given in part 1 you are asked to *Think aloud*, in other words speak what you are thinking when performing these actions. This will take 10-15 minutes"

Task 1: Instructions	Buy an app called "Booklet App"
Observations C6 Interface	

Task 2: Instructions	Buy a booklet of coupons for your city and try using it in an imaginary store.

Observations C6 Interface	

Part 2, Interview questions

Were you able to complete the tasks when using the prototype? C6 Interface	
What is your overall impression about the app? C6 Interface	☐1 Very bad ☐2 Not good ☐3 It's OK ☐4 Good ☐5 Very good
Did it live up to your expectations? C6 Interface	
What could be done better? C6 Interface	

What requirements do you have on a physical booklet when selling it? *C1 User-centricity*	
What requirements do you have on an app booklet when selling it? *C1 User-centricity*	
After the explanation you received and some minor testing, would you feel comfortable selling an app booklet? *C1 User-centricity*	
What would impress you when selling such an app booklet? *C1 User-centricity*	

How easy is it to sell the physical booklet? *C2 Value proposition*	☐1 Too hard ☐2 Hard ☐3 It's OK ☐4 Easy ☐5 Very easy
Why do think people buy the physical booklet? *C2 Value proposition*	
Do you think it will be easier to sell an app booklet then a physical booklet? *C2 Value proposition*	
Would you enjoy being able to sell booklets on distance? For example on Facebook. *C2 Value proposition*	
Do you feel safe in that your friends would pick your name when buying this booklet if it was an optional pick and you were not there? *C2 Value proposition*	

Would you trust the distributor of the app	

booklet to give you and the club the money you were promised? C3 Organizing model	

If complimentary questions come up, would it be okay if you get contacted?	☐ Yes ☐ No
E-mail address/ Phone number	
Would you mind joining in for a focus group with two other sport club members and representatives from companies advertising?	☐ Yes ☐ No

Attachment 4 – End Customer Interview Material

Person interviewed

Name	
Gender	
Age	
Familiar to smartphones?	☐1 Not at all ☐2 Not much ☐3 Average ☐4 Good ☐5 Excellent

Part 1, Think aloud - usability test

Overall instructions	The interviewed is given the following information: "You will be part of study where a transformation from physical booklets of discounts to app booklets of discounts is examined. This is not a test of you, but of a future business model and linked to it an app prototype. In part 1 you will be given 2 tasks and in part 2 there will be some interview questions regarding your experience and your opinions about the transformation to an app. When performing the tasks given in part 1 you are asked to *Think aloud*, in other words speak what you are thinking when performing these actions. This will take 10-15 minutes"

Task 1: Instructions	Buy an app called "Booklet App"
Observations C6 Interface	

Task 2: Instructions	Buy a booklet of coupons for your city and try using it in an

	imaginary store.
Observations C6 Interface	

Part 2, Interview questions

Were you able to	

complete the tasks when using the prototype? C6 Interface	
What is your overall impression about the app? C6 Interface	☐1 Very bad ☐2 Not good ☐3 It's OK ☐4 Good ☐5 Very good
Did it live up to your expectations? C6 Interface	
What could be done better? C6 Interface	

Would you buy a physical booklet if offered one today? Why? *C1 User-centricity*	
Would an app booklet attract you more or less? Why? *C1 User-centricity*	
Do you feel that the prototype is fulfilling these requirements? *C1 User-centricity*	
What would impress you when using such an app booklet? *C1 User-centricity*	

Is a booklet of discounts something that is valuable to you? *C2 Value proposition*	
Would it be more valuable for you carrying your discounts in your telephone? *C2 Value proposition*	
How important would the localization service in an app be for you? *C2 Value proposition*	☐1 Not at all ☐2 Not much ☐3 Somewhat ☐4 Very ☐5 Crucial
How important would the ubiquity with an app be for you? *C2 Value proposition*	☐1 Not at all ☐2 Not much ☐3 Somewhat ☐4 Very ☐5 Crucial
How important would the possibility to share your savings on social networks be for you? *C2 Value proposition*	☐1 Not at all ☐2 Not much ☐3 Somewhat ☐4 Very ☐5 Crucial
Can you see any other positive or negative things using an app booklet versus a physical booklet? *C2 Value proposition*	
Do you think 150 SEK	

($24) is appropriate for a physical booklet of discount? *C2 Value proposition*	
Would be willing to pay 195 SEK (34,99) for the same service in your cellphone? *C2 Value proposition*	

Would you trust a third part organization to give the money to the sports club as you were promised? C3 Organizing model	
What do you think about the possibility to support local sport clubs? C3 Organizing model	

If complimentary questions come up, would it be okay if you get contacted?	☐ Yes ☐ No
E-mail address/ Phone number	
Would you mind joining in for a focus group with two other sport club members and representatives from companies advertising?	☐ Yes ☐ No

Attachment 5 – Store Personnel Interview Material

Person interviewed

Name	
Gender	
Age	
Familiar to smartphones?	☐1 Not at all ☐2 Not much ☐3 Average ☐4 Good ☐5 Excellent
What is your working position?	
What business area does your store work with?	

Part 1, Think aloud - usability test

Overall instructions	The interviewed is given the following information: "You will be part of study where a transformation from physical booklets of discounts to app booklets of discounts is examined. This is not a test of you, but of a future business model and linked to it an app prototype. In part 1 you will be given a task and in part 2 there will be some interview questions regarding your experience and your opinions about the transformation to an app. When performing the task given in part 1 you are asked to *Think aloud*, in other words speak what you are thinking when performing these actions. This will take 10-15 minutes"

Task 1: Instructions	You have been informed that your store gives discounts through an iPhone App called "booklet app". A customer with this app hands you his phone. Find the coupons for your store.
Observations C6 Interface	

Part 2, Interview questions

Were you able to complete the tasks when using the prototype?	

C6 Interface	
What is your overall impression about the app? C6 Interface	☐1 Very bad ☐2 Not good ☐3 It's OK ☐4 Good ☐5 Very good
Did it live up to your expectations? C6 Interface	
What could be done better? C6 Interface	

What requirements do you have on a physical booklet when receiving it? *C1 User-centricity*	
What requirements do you have on an app booklet when receiving it? *C1 User-centricity*	
Do you feel a greater need of training when receiving an app booklet compared to a physical one? *C1 User-centricity*	
What would impress you when receiving such an app booklet? *C1 User-centricity*	

What is your overall feeling about discount booklets? *C2 Value proposition*	
Does it give you more value when advertising with discounts if associated in an app booklet instead of a physical booklet? *C2 Value proposition*	
Would you enjoy any of the two ways of receiving coupons more then the other? *C2 Value proposition*	
Do you feel secure in not being fooled when receiving coupons? Would you feel more or less secure with an app booklet? *C2 Value proposition*	
What would make you feel more secure handling with an app booklet? *C2 Value proposition*	

Would receiving an e-mail or the possibility to look up the coupons used on a website be more or less valuable for you. *C2 Value proposition*	
What more would be valuable for you and your store regarding these discounts in an app? *C2 Value proposition*	

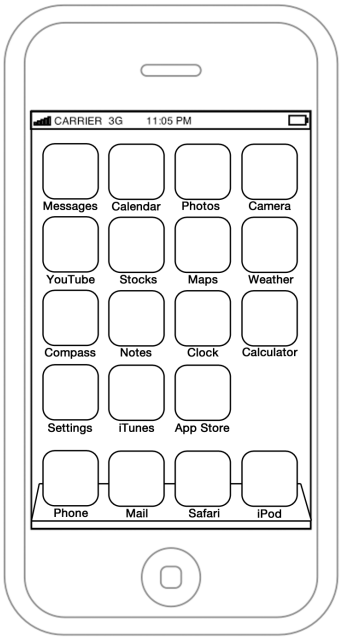
Would you trust the distributor of the app booklet to give the sport clubs the money as promised? C3 Organizing model	
How important is it for your company contributes to the local sport life? C3 Organizing model	☐1 Not at all ☐2 Not much ☐3 Somewhat ☐4 Very ☐5 Crucial

If complimentary questions come up, would it be okay if you get contacted?	☐ Yes ☐ No
E-mail address/ Phone number	
Would you mind joining in for a focus group with two other sport club members and representatives from companies advertising?	☐ Yes ☐ No

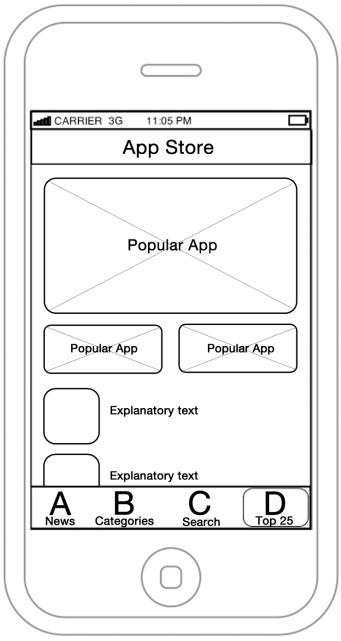
Attachment 6 – The App Prototype

Generally the interaction in a view is viewed by the view to the right. If not this is explained below the view. If a button do not have a function in the prototype the user gets informed that the prototype do not cover that option.

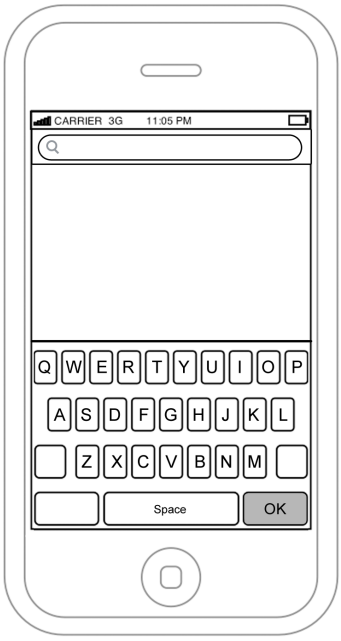
Buy the app



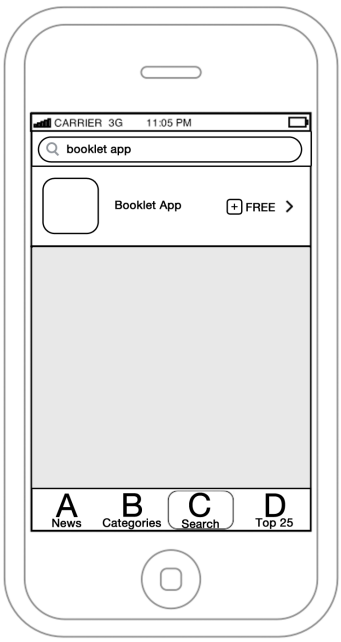
Buy the app – 1
(Only App Store is valid)



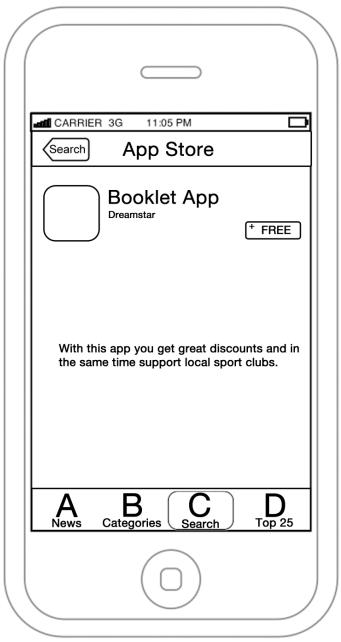
Buy the app – 2
(Only Search is valid)



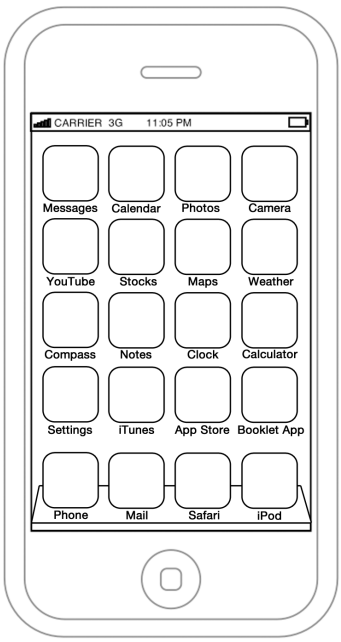
Buy the app – 3



Buy the app – 4
(Only pressing the square with text is valid)

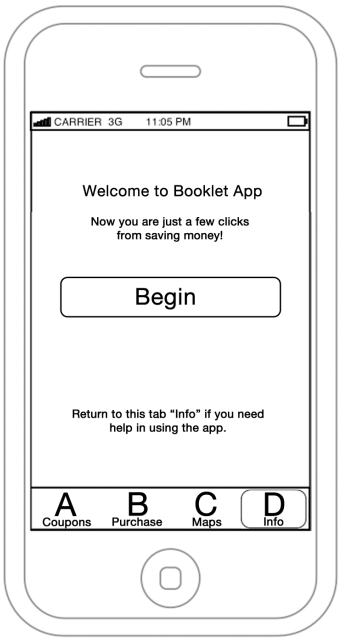


Buy the app – 5
(Only pressing FREE is valid)



Buy the app – 6
(App Store – views view 1, Booklet App views D1)

Use the app

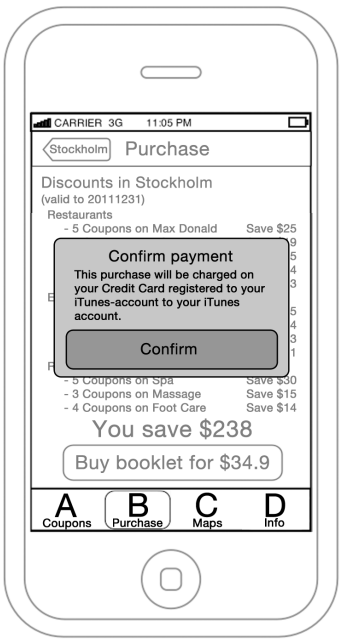


Use the app – D1
(First time start-up screen, Begin jumps to B1)

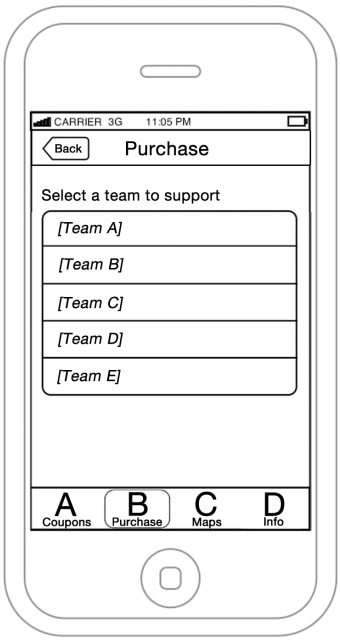
Use the app – D2
(viewed when returning to "D – Info"-tab)

Use the app – B1

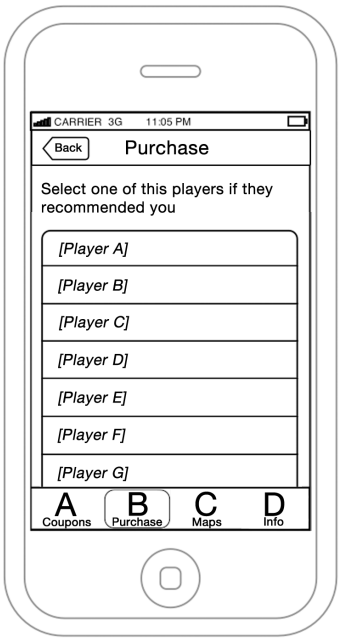
Use the app – B2



Use the app – B3



Use the app – B4

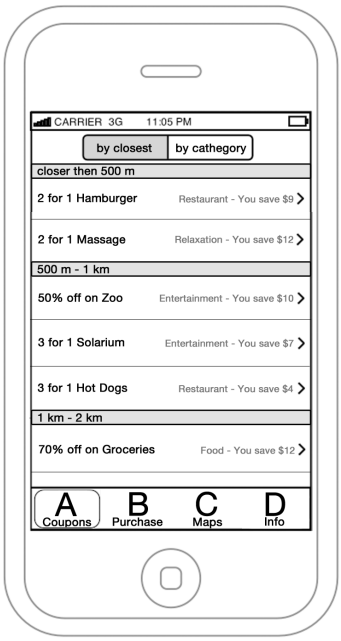


Use the app – B5

Use the app – B6

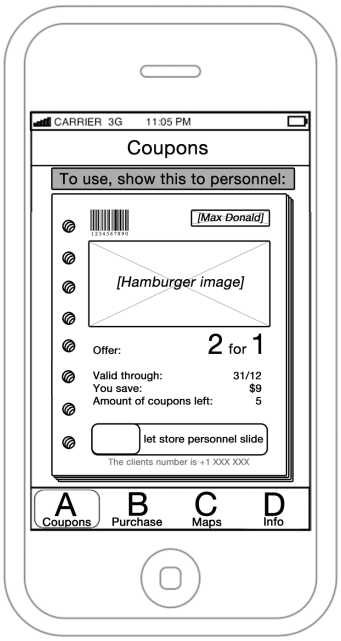
Use the app – B7

Use the app – A1



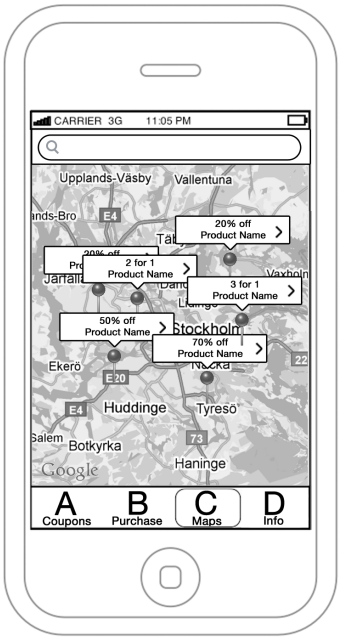
Use the app – A2

Use the app – A3



Use the app – A4

Use the app – A5



Use the app – C1