Design and development of interactive web site based on a customer-oriented business model for the multimedia application C3LOOPS

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The goal of this thesis is to develop and implement a prototype that is validating a specifically suggested customer-oriented business model for the interactive multimedia iPad application C3LOOPS. The starting point of the design process is the development of a business model. This is a novelty in the community of interaction design. I explain the basis of the business modeling in order to understand this important part of every successful business. I perform a research in the theory of customer behavior and applied psychology and based on it and on the new theory of neuro-linguistic programming, I design a customer-oriented business model for accomplishing a win-win strategy for this new application. This business model includes a development of a web site. It is my background for defining an interactive design for the web site. Based on the requirements that I define for a design, I implement a prototype of the main component of the design – the interactive C3LOOPS navigation menu. This way I validate the design and I proof a novelty in the community of interaction design.
Abstract

Contents

ABSTRACT ............................................................................................................................................................................. 0
TABLE OF FIGURES ................................................................................................................................................................. 4
PURPOSE AND METHODOLOGY ............................................................................................................................................ 5
1. PURPOSE OF THIS THESIS .................................................................................................................................................. 5
2. USED METHODOLOGY .......................................................................................................................................................... 6
PART I. DEVELOPMENT OF BUSINESS MODEL .................................................................................................................. 8
1. INTRODUCTION .................................................................................................................................................................... 8
2. BUSINESS MODELS ............................................................................................................................................................... 8
  2.1. HISTORICAL BACKGROUND ........................................................................................................................................... 10
  2.2. THEORETICAL BACKGROUND ......................................................................................................................................... 10
    2.2.1. Traditional business models and strategies ............................................................................................................... 11
    2.2.2. The new business models .......................................................................................................................................... 14
    2.2.3. Other issues related to business models .................................................................................................................. 21
  2.3. CONCLUSION .................................................................................................................................................................... 23
3. CONSUMER BEHAVIOR .......................................................................................................................................................... 25
  3.1. GENERAL CONSUMER BEHAVIOR .................................................................................................................................. 25
    3.1.1. Segments ...................................................................................................................................................................... 26
    3.1.2. Motivation ................................................................................................................................................................. 27
    3.1.3. Learning ....................................................................................................................................................................... 28
    3.1.4. Needs ............................................................................................................................................................................. 29
    3.1.5. Involvement ............................................................................................................................................................... 29
    3.1.6. Conclusion ................................................................................................................................................................. 30
  3.2. THE INNOVATIVE CUSTOMERS ("OTAKUS") ................................................................................................................... 31
    3.2.1. Otakus ........................................................................................................................................................................... 31
    3.2.2. Conclusion ................................................................................................................................................................. 32
  3.3. APPLIED PSYCHOLOGY ...................................................................................................................................................... 32
    3.3.1. Basic comments .......................................................................................................................................................... 33
    3.3.2. Influence Overview ................................................................................................................................................... 33
    3.3.3. Conclusion ................................................................................................................................................................. 35
  3.4. NLP ...................................................................................................................................................................................... 35
    3.4.1. What is NLP? ............................................................................................................................................................ 35
    3.4.2. NLP and Sales .......................................................................................................................................................... 37
    3.4.3. Conclusion ................................................................................................................................................................. 37
  3.5. CONCLUSION .................................................................................................................................................................... 38
4. ANALYSIS WITH REGARD TO C3LOOPS ............................................................................................................................ 39
  4.1. CONSUMER BEHAVIOR IN REGARDS TO BUSINESS MODELS ..................................................................................... 39
Table of Figures

4.2. NLP TO EARN CUSTOMERS .......................................................................................................................... 42
4.3. INTRO TO C3LOOPS .................................................................................................................................. 45
4.4. C3LOOPS REVIEW ................................................................................................................................. 45
4.5. CONCLUSION ......................................................................................................................................... 47
5. C3LOOPS BUSINESS MODEL ......................................................................................................................... 47
   5.1. BUSINESS MODEL ................................................................................................................................. 47
      5.1.1. Business model .............................................................................................................................. 48
      5.1.2. Activities and Resources ................................................................................................................ 49
      5.1.3. Value proposition ........................................................................................................................... 51
      5.1.4. Target Audience ............................................................................................................................. 51
      5.1.5. Partner network ............................................................................................................................. 52
      5.1.6. Finance ......................................................................................................................................... 52
      5.2. CONCLUSION .................................................................................................................................... 53
PART II. DESIGN OF WEB SITE BASED ON THE DEVELOPED BUSINESS MODEL............................................. 54
1. PROBLEM DEFINITION .............................................................................................................................. 54
2. ANALYSIS FOR THE DESIGN PROCESS .................................................................................................... 56
3. DESIGN IDEAS .............................................................................................................................................. 57
   3.1. CONTENT ............................................................................................................................................... 58
   3.2. NAVIGATION ........................................................................................................................................ 59
   3.3. COLORS ............................................................................................................................................... 60
   3.4. NAMES FOR THE MENU ITEMS .......................................................................................................... 61
   3.5 VISUAL REPRESENTATION OF THE INFORMATION ............................................................................ 64
4. PROPOSITION FOR A DESIGN. SKETCHES ................................................................................................. 65
   4.1. PRE SKETCHES ...................................................................................................................................... 65
   4.2. PROPOSITION SKETCHES ................................................................................................................... 68
   4.3. THREE USAGE SCENARIOS .................................................................................................................. 69
   4.4. DESIGN RESULTS .................................................................................................................................. 71
5. PROTOTYPE .................................................................................................................................................... 73
   5.1. TECHNOLOGY ANALYSIS AND SUGGESTIONS .................................................................................. 73
   5.2. IMPLEMENTATION .............................................................................................................................. 75
6. CONCLUSION .................................................................................................................................................. 79
III. CONCLUSION ............................................................................................................................................ 80
1. FUTURE DEVELOPMENT ............................................................................................................................. 80
2. CONCLUSION ............................................................................................................................................... 81
BIBLIOGRAPHY ............................................................................................................................................. 82
APPENDIX A ..................................................................................................................................................... 86
## Table of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Business model framework</td>
<td>9</td>
</tr>
<tr>
<td>1.2</td>
<td>Traditional business models and strategies</td>
<td>11</td>
</tr>
<tr>
<td>1.3</td>
<td>Disruptive technology</td>
<td>15</td>
</tr>
<tr>
<td>1.4</td>
<td>Organization of the consumer behavior research</td>
<td>26</td>
</tr>
<tr>
<td>1.5</td>
<td>Relationship marketing values</td>
<td>39</td>
</tr>
<tr>
<td>1.6</td>
<td>The process of taking action</td>
<td>40</td>
</tr>
<tr>
<td>1.7</td>
<td>The diffusions of innovations [68]</td>
<td>41</td>
</tr>
<tr>
<td>1.8</td>
<td>The technology adoption lifestyle [69]</td>
<td>41</td>
</tr>
<tr>
<td>1.9</td>
<td>Building feedback experience</td>
<td>43</td>
</tr>
<tr>
<td>1.10</td>
<td>The process of developing creativity</td>
<td>44</td>
</tr>
<tr>
<td>1.11</td>
<td>C3LOOPS web site life cycle</td>
<td>49</td>
</tr>
<tr>
<td>2.0</td>
<td>The business model development</td>
<td>54</td>
</tr>
<tr>
<td>2.1</td>
<td>Modern software engineering practice [78]</td>
<td>55</td>
</tr>
<tr>
<td>2.2</td>
<td>Common Web design sketches, part 1</td>
<td>66</td>
</tr>
<tr>
<td>2.3</td>
<td>Common Web design sketches, part 2</td>
<td>67</td>
</tr>
<tr>
<td>2.4</td>
<td>Common Web design sketches, part 3</td>
<td>67</td>
</tr>
<tr>
<td>2.5</td>
<td>Design proposition for the C3LOOPS web site.</td>
<td>69</td>
</tr>
<tr>
<td>2.6</td>
<td>DJ/VJ and User scenarios based on the business model.</td>
<td>70</td>
</tr>
<tr>
<td>2.8</td>
<td>The design of the menu buttons</td>
<td>72</td>
</tr>
<tr>
<td>2.9</td>
<td>Different appearance of the entire menu during the design process</td>
<td>72</td>
</tr>
<tr>
<td>2.10</td>
<td>Source code of the content of the index page</td>
<td>76</td>
</tr>
<tr>
<td>2.11</td>
<td>Source code of the menu of the index page</td>
<td>76</td>
</tr>
<tr>
<td>2.12</td>
<td>A sample code from menu.css</td>
<td>77</td>
</tr>
<tr>
<td>2.13</td>
<td>View of the implemented Scenario two</td>
<td>78</td>
</tr>
<tr>
<td>A1</td>
<td>Home page source code</td>
<td>87</td>
</tr>
<tr>
<td>A2</td>
<td>Creativity page source code</td>
<td>88</td>
</tr>
<tr>
<td>A3</td>
<td>View page source code</td>
<td>89</td>
</tr>
<tr>
<td>A4</td>
<td>How to page source code</td>
<td>90</td>
</tr>
<tr>
<td>A5</td>
<td>Source code of menu.css</td>
<td>93</td>
</tr>
</tbody>
</table>
Purpose and methodology

1. Purpose of this thesis

I would like to start with an overview of why I decided to do this paper. I want understand more about how the innovations can be applied for a successful business in the IT industry. I am interested to understand why some businesses are prosperous and other, good as well, fail. I find it a challenge to learn how to connect better to people, to users and cooperate with them while offering them an innovative product. I consider that it is a must to make your users involved into the idea that you are selling. This way they will be pleased and connected to the product and participate in its future improvement.

The purpose of this paper is to show that an interaction design can start with a business model as a starting point. This is a novelty and a contribution in the community of interaction designers. I will develop and suggest an appropriate business model for the innovative C3LOOPS application. This will be achieved by giving an understanding of the business modeling generally and after that applying new approaches and tools in designing how to reach and connect to the customers. One of these approaches is the psychological analysis of the users in order to provide them a way to improve their personality and social status through the tools that C3LOOPS can offer to them.

To start with I will review and take in consideration the history of the most popular and successful business models. I will give an overview of the latest knowledge in the areas of the Internet business models and consumer behavior. Along with the general consumer behavior from a psychological perspective I will introduce and explain the power of one new theory of human understanding and developing– the neuro-linguistic programming applied in business.

When I have explained the theoretical background of business models and the usage of the web, I am going to explain the term ‘Web 2.0’ as it refers to changing the ways the end-users and service providers use the Web. The web is in the life of every single person from our generation and that is why I consider that it is very important to understand the basic characteristics, concepts, usage and technologies about the ‘Web 2.0’ term.

After that I will focus on the consumer behavior theory that is a huge field, and is the most important part when it comes to a successful business in the era of information. I will provide basic knowledge and I will focus more on the new approaches towards users and people. One of them is the NLP theory that is quite practical and person-orientated when it comes to building a business strategy.
Purpose and methodology 2. Used Methodology

Based on analysis on how the psychology, and especially NLP, can apply in business model that is adding creative value to the user, I am going to develop suggestion of business model. My suggestion will be based on understanding the potential of the person and suggestion how we can create value for the user and how we can initiate cooperation with him in building a powerful community.

I have selected to provide a research in these fields because I find them a backbone in developing a reasonable model with expected positive added-value. History is where we can always find the key issues and the important knowledge that we need in order to predict or decide the future development. Today’s models give us an idea of where we are now and we can see what we need, what we have, what we can expect and what we cannot or should not do.

My purpose is to design a creative software solution for the proposed business model suggestion that will cooperate with users in letting them apply their creativity and imagination. That is why I need deeper analysis of the consumer behavior and perceptions, respectively expectations. I want to apply the principles of the interaction design for the purpose of making a profitable design of the business idea. I want to implement a valuable prototype that proofs that the starting point of the interaction design can be a business model.

I will provide an analysis about the technology specification and requirements for the implementation. I am going to make a research on good practices for the modern software engineering, so that I can suggest an accredited proposition for a constructive implementation.

As Rogen Martin, Dean says:
“Business people don’t just need to understand designers better; they need to become designers.”

2. Used Methodology

In order to introduce the reader to my research I will give basic information regarding my resources. I have used books in the fields of business modeling, user behavior and psychology, NLP, interactive design, design of web sites, software technologies as well as online resources like Wikipedia, the free encyclopedia, and published interviews on these topics. I have selected to use only what I believe to be helpful for the purposes that I stated previously.

In the beginning of every chapter I will give an introduction and I will specify the scope of the problems that I will research or analyze and respectively discuss them in the conclusion.
When I am done with the theoretical background, I am going to analyze the consumer behavior and NLP techniques in regards to business modeling.

The methodology that I am using in building my proposition for a business model is a part of the nine building blocks offered by Alexander Osterwalder and Yves. To define the customer segment I discuss the question for who are we creating. After that I will explain the services and offers that would create value for the target clients. The next question that I am answering is how we will be reaching the clients. This includes a couple of phases that I will develop later in this paper. I am going to describe the type of relationship the client segments expects us to establish and how are they integrating with C3LOOPS business model. I am showing how a practical solution could be successfully applied to find the positive way of getting revenue streams. Based on the research, I will analyze and draw conclusions regarding the developed C3LOOPS business model. This will help me to estimate the importance of the conclusions by stating the expected result of the solution proposition.

I am going to use the interaction design theory in collaboration with the web design of web sites and the requirements defined from the business model in order to suggest a simple, but interactive and original, easy to navigate and use web site. I will give some more analysis about the content, the navigation, the colors selection for the web design.

In order to validate the proposed design, I will draw three usages based on the business model idea. I will demonstrate a prototype of the key functionality for one of these three uses. I will build the prototype by implementation of the functional requirements of the main navigation menu.
Part I. Development of Business Model

1. Introduction

I will develop and suggest an appropriate business model for the innovative C3LOOPS application. It will serve as a starting point for an interaction design of the proposed web site. This will be achieved by giving an understanding of the business modeling generally. After that I will introduce new approaches and tools in reaching and connecting to the customers. One of these approaches is the psychological analysis of the users. It is used in order to provide them a way to improve their personality and social status through the tools that C3LOOPS can offer to them.

To start with I will review and take in consideration the history of the most popular and successful business models. In this section I want to explain how and why the business models work. I will give an overview of the latest knowledge in the areas of the Internet business models and consumer behavior. I will talk about the internet business models. I will explain what the impact of Web 2.0 is in our daily life. Along with the general consumer behavior from a psychological perspective I will introduce and explain the power of one new theory of human understanding and developing– the neuro-linguistic programming applied in business.

2. Business models

Nowadays the business model is very important part of the business plan. It is the key element of how the business is built. While the business plan is the key factor in raising the financing, by specifying how the business would generate profits, the business model focuses on the way how the value is created.

The business model describes how the value is created or captured. The process of business model design is part of the business strategy. The term business model is used for a broad range of informal and formal descriptions to represent core aspects of a business. These aspects are purpose, offering, strategy, infrastructure, organizational structure, trading practice, and operational processes and policies [34].

Whenever a business is established, it either explicitly or implicitly employs a particular business model that describes the design or architecture of the value creation, delivery, and
Part I. Development of Business Model  2. Business models

capture mechanisms. The essence of a business model is that it defines how the business delivers value to the customers, how it makes customers to pay for the value, and how it converts those payments into profit: this reflects the management’s research about what customers want, how they want it, and how the business can organize to best meet those specific needs. It gets paid for doing so, and therefore it makes a profit. Business models are used to describe and classify businesses better [34].

There are all the kinds of business models that you can imagine. That is why it is important to build your individual one, which fits best to your ideas and expectations. Following the rules is not safe anymore, because in the business field boring means failure. This is the era of information and infinite opportunities where an alternative can be found easily (Figure 1.1).

The business model would focus on market segment, revenue generation and competitive strategy in the recognized market. It is a tricky to understand and know when a business model is good. Joan Magretta, former editor of the Harvard business review, highlights that when business models don't work, it's because they don't make sense and/or the numbers just don’t add up to profits. [21]
2.1. Historical Background

Business models have changed and they have become more sophisticated over the years. The bait and hook business model was introduced in the early 20th century. Its strategy is offering a basic product at a very low cost, often at a loss (this is called "bait"). Then the company starts charging for refills or associated products or services (this is called the "hook"). In the software industry we can see an interesting variant of this model. It is a software developer that gives away its word processor reader for free but later starts to charge for its word processor writer [34].

In the 1950s, new business models came from McDonald's Restaurants and Toyota. In the 1960s, the innovators were Wal-Mart and Hypermarkets. The 1970s saw new business models from FedEx and Toys R Us; the 1980s from Blockbuster, Home Depot, Intel, and Dell Computer; the 1990s from Southwest Airlines, Netflix, eBay, Amazon.com, and Starbucks. Poorly thought out business models were a problem with many dot-coms [34].

2.2. Theoretical Background

The purpose of every business is to satisfy a particular need of a particular group of people. When defining a business model it is effective to see why the successful companies are what they are today, how they reached their clients and what is their business model. This could save time.

I am going to give some detailed information about the business models in the history. I have selected some business models and strategies that I have found related to consumer interaction and that have impact on consumer development, as well as business models introducing new technologies and practice.

In this section I want to explain how and why the business models work. For this reason I have selected emblematic customer-oriented business models and strategies that have changed a lot of lives. They have originated years ago, but they are still recent. They have helped companies to survive many crises and to build the way to their current market position. The loyalty business model, relationship marketing and the network effect model are applied by a lot of companies that are very popular and successful today. Today supermarket chains, bars, airlines and other companies are giving away loyalty clients cards. Relationship marketing is not just loyalty programs – it creates communications that increase relationship value and so
the benefit for the business. The network effect is often a result of word-of-mouth communication, where the user satisfaction and interest are the most important.

I want to introduce the reader to the disruptive business model, because the disruptive innovations are the ones that create new markets and change the ones that already exist.

I will talk about the internet business models. The internet business model helps the firm to take advantage of the properties of the internet [1]. I will explain what the impact of Web 2.0 is in our daily life.

I will finish this section with an overview and explanation of what business model innovation is and how it can develop a successful and up-to-date business strategy.

2.2.1. Traditional business models and strategies

Loyalty business model

The loyalty business model is a business model that is used in strategic management. The company resources are applied in order to increase the loyalty of the customers, to meet the expectation that audience. The loyalty business model put attention on the quality of product or service, because this leads to customer satisfaction, which leads to customer loyalty, which leads to profitability [35].
Customer satisfaction is first based on a recent experience of the product or service. If the recent experience is better than the expectations, then the customer satisfaction is more likely to be high. This model proposes that the strength of business relationship is determined by the level of satisfaction of the customers and the overall perceptions of quality. [35]. (Figure 1.2)

The fundamental assumption of all the loyalty models is that keeping existing customers is less expensive than acquiring new ones. But the relationship must be profitable. Striving to maintain the loyalty of unprofitable customers is not a viable business model. That is why it is important for marketers to assess the profitability of each of its clients.

The often used example of loyalty business model that Simon Sinek uses in his presentations is the way that Apple makes its clients. Usually the business is answering 3 questions – what they do, how they do it, and why they do it. But all the inspiring leaders are acting inside out – they are all doing exactly the opposite. They all start with answering the question “why”. They start with “We believe in challenging”, “we believe in thinking differently”, after that they say that they challenge by making their product beautiful and easy to use and so comes up that they make great computers. This business model sounds totally different from the ordinary one. It sounds different and people are joining the same believe, not the product itself. By joining the belief, they became loyal customers.

As another example of loyalty business model I would give Nokia. It provides a quality product that is easy to use and they offer new models with the latest innovations in the field.

Another example is General Electric, which the loyalty is determined by performance.

An example of employee loyalty is the Southwest Airlines. After the 9/11 attack they did not fired anyone through voluntary employee pay cuts. During the same time every other U.S. company laid off employees.

Relationship Marketing

Relationship marketing is a form of marketing developed for customer retention and satisfaction [36].

The main goals of this business strategy are to attract and win new clients. Together with this it acts to retain those that the company already has, and so it reduces the costs of marketing and client service. According to Liam Alvey, relationship marketing can be applied when there are competitive product alternatives for customers to choose from. When there is an ongoing and periodic desire for the product or service [36].
"The first principle in the Art of War is to concentrate your forces" Sun Tzu. This is what relationship marketing is exactly doing.

Examples of the most popular brands that use the relationship marketing model are Coca Cola, Kodak, NesCafe. Elements of relationship marketing are anchored in the core business model of DELL, the Direct Model.

**Network effect**

A network effect is the effect that one user of a good or service has on the value of that product to other people. The network effect brings that the value of a product or service increases as more people use it [37].

The expression "network effect" is applied most commonly with positive meaning. It can have negative network externalities, where more users make a product less valuable. Network effects become significant when a critical mass has been achieved [37].

Many web sites, like marketplaces and exchanges, also feature a network effect. The collaborative encyclopedia Wikipedia also benefits from a network effect. Social networking websites are other good examples. Network effects were used as justification for some of the dot-com business models. They operated under the belief that when a new market comes into being with strong network effects, firms should care more about growing their market share than about becoming profitable. This leads to the conclusion that if a company whose benefits are based on network effects starts to lose market share against a challenger, the benefits of network effects will be for the challenger [37].

In the market for widely used computer software there are operating strong network effects. Microsoft Windows is one very popular and good example of network effect. The most-vaulted advantage of Windows is that Windows is compatible with the widest range of hardware and software. Thus, Windows is popular because it is well supported, but in the same time it is well supported because it is popular [37].

Another example for applying the network effect is the Mirabilis - an Israeli start-up. They pioneered instant messaging (IM) and it was bought by America Online. They were able to temporarily dominate the market for instant messaging by giving away their ICQ product for free and preventing interoperability between their client software and other products [37].
2.2.2. The new business models

First I would like to explain the definitions about the different types of relationships in the commerce area:

- **B2C**: Business-to-Customer model describes activities of businesses serving end consumers with products and/or services. An example of a B2C transaction would be a person buying a pair of shoes from a retailer. The Amazon.com is an example of B2C business; [38]

- **B2B**: Business-to-business describes commerce transactions between businesses. The volume of B2B transactions is much higher than the volume of B2C transactions. B2B is also used in the context of communication and collaboration. Many businesses are now using social media to connect with their consumers (B2C). For example product supply and procurement exchanges between companies [39].

- **C2C**: Consumer-to-consumer – a model that involves transactions between consumers through some third party. A common example in the electronic commerce is the online auction, in which a consumer posts an item for sale and other consumers bid to purchase it. Usually there is a commission for the third party. It does not have to check quality of the products being offered. An example of consumer- to-consumer model is the model of EBay. [40]

The internet market today is a competitive market where the marginal cost of an item is eventually reaching zero. If it does not cost anything to add one more user, then in a truly competitive market, there will be a race to add users, even if the next one does not add any revenue.

Seth Godin concludes that if the company wants to get paid, its goal is to create a dynamic where the market is not competitive. The other necessary condition is that users have to believe that payment is an option as the web, like Google, like EBay, like Facebook has trained us that those interactions online should be free [57].

One way around this is to provide free samples, in which the software is free for a month, connections are built, utility is created and then it begins to cost money. Businesses must encourage customers to upgrade from the basic free-of-charge level, or subscribe after a specified trial period. The idea here is to give needed something valuable for free, after that understand and influence the market [57].
Another way is to move to a platform where commerce is expected. The app store for the iPad is like the bookstore cash registers where people are in the mood of buy. That is way it is easier to sell a serious app for the iPad than it is on the web, because the platform is organized around commerce. [57]

Disruptive software business models

A disruptive innovation is an innovation that disrupts an existing market. In business literature this term is used for describing innovations that improve in unexpected ways. Typically it does this by lowering price or designing the product or service for a different set of consumers [41] (Figure 1.3).

Information and Communication Technologies (ICT) is the backbone of the new customer-centered strategies. Disruptive strategies greatly increase the odds of competitive success. New market disruptions compete against non-consumption in their unique value network. It pulls customers out of the main stream value network as it is easy to use the new product. I can mention three disruptive software business models [41][42].

- The Open Source is gaining profit by providing additional tools, support and licensing. Pretty much always it is accepted as free.
- The Web 2.0 advertising and subscription. Usually the small companies that are good are bought by Yahoo or Google.

- The software as a service seems to have realized how to attract users, but it is better for packaged apps that do not need connecting internal systems.

Other disruptive models are the Toyota’s first car. It was introduced in 1950s to the American market. In 1980s Cisco Systems made it possible for different departments to interconnect and it put the very basic resource of networking business. In 1990s eBay began selling over the internet allowing sellers and customers to communicate with each other [42].

**Business model Innovation**

Some venture capitalists, as Guy Kawasaki, state that business model innovation is not needed. He insists that such an innovation can only bring uncertainty and the entrepreneur’s efforts should be invested in product innovation. But for others it is the whole new field of creation value and they consider that an idea can come at any time.

The four main types of business model innovation are: resource-driven, offer-driven, customer-driven and finance-driven. Usually the area when innovation is need is identified through a SWOT analysis [24].

An example for resource-driven innovation is the Amazon Web Services that offer server capacity and data storage to other companies. 23andMe brought personalized DNA testing to individual clients and made a customer-driven innovation. In 1958 Xerox invented a machine that was very high priced for the market, so Xerox developed a new business model by leasing the machines and including free copies per month. They made a finance-driven innovation [24].

**Web 2.0 Business models**

First I am going to start with the description of the buzzword Web 2.0.

What is Web 2.0?

“The central principle behind the success of the giants born in the Web 1.0 era who have survived to lead the Web 2.0 era appears to be this, that they have embraced the power of the web to harness collective intelligence”, Tim O’Reilly.
Definition

From Wikipedia we can find these definitions:

“The term Web 2.0 is commonly associated with web applications that facilitate interactive information sharing, interoperability, user-centered design, and collaboration on the World Wide Web.”

“The second generation of the World Wide Web, especially the movement away from static webpages to dynamic and shareable content and social networking.”

On www.headland.co.uk we can find this definition: “A term used to describe a new generation of Web services and applications with an increasing emphasis on human collaboration.”

On www.twinity.com: “Web 2.0 does not refer to any specific change in the technology of the Internet, but rather the behavior of how people use the Internet.”

On www.webtrends.about.com: “While there is no set definition of Web 2.0, it generally refers to the use of the web as a more social platform where users participate by generating their own content alongside the content provided by the websites.”

If we look at the opinion of Bill Gates:

“The Internet? We are not interested in it.” – BILL GATES, 1993.

In the very beginning of the computer history it was not even thinkable that the computers are going to spread at all, and now the unbelievable happens – every day, in every home, with every person. But the computer now is not the same computer that it was then. Now the computer for everyone is not the machine, it is the interface, the connection, the friend.

The key factor for it in spreading so fast was the society, the human ego, the relationships that it makes possible and the easy access to information. In the core of it is the human, not the technology itself. As we can notice there are some key words: human “behavior” and “collaboration”. I will make deeper analysis of this later in my paper.

Typical characteristics

Typical characteristics of “Web 2.0” technologies that we can recognize in today’s business models are:
Part I. Development of Business Model  2. Business models

- Dynamic and adaptive,
- User driven technology and value,
- Bottom-up orientation is priority,
- Open borders,
- Simplicity.

In its origins the collective intelligence emerges from the collaboration and competition of people. The one that we are observing now is the integration of individual and computer intelligence, using the means of a network.

The basic interaction styles that are used in Web 2.0 are direct manipulation, the mouse pointing device, drawing, text editing and spreadsheets. The technologies that will likely have the biggest impact on interfaces of the future are believed to be gesture recognition, multimedia, and 3D [43].

The web is a platform, but now we can perceive the web more as a human. Web 2.0 decreases the cost of communication. It does this by scaling relationships. The customer wants to know the opinion of other customers. Related to this I can mention social networking strategy - the process of building online communities [44].

Today it is important to create a powerful network built on user-generated content, giving the users what they want, after that multiply the networks power and measure it. Now the software is connecting many devices and this gives the user the freedom to do some artwork and to show and share what he has done with other enthusiasts [45].

In the means of this paper I am reviewing the applied Web 2.0 software – benefits and opportunities, needs, expectations. And the view on these points is by the user’s perspective based on the theoretical studies of NLP and the practical results from the marketing field.

**Web 2.0 Business models**

There are mainly two types of Web 2.0 business models today, one based on technology and the other on network effects [46].
The main streams of the popular and actual models are containing the letter ‘e-’. We should consider standards, participation, identity, user control, modularity, openness. The users could generate different type of content: text, images, videos, and interactive media.

**Business models focus**

Typical business models are designed to create a focused niche user community in these main streams:

- Sell API access
- Sell services
- Sell data to partners
- Get a revenue share from transactions
- Sell advertisements
- Sell value-added platform
- Sell premium membership
- Sell the company

The online delivered content is considered to be the basic of the intangible economy. The business of intangible goods is different from the product and services in the conventional electronic areas and so it requests new business models and processes. A definition of online delivered content would be a good, the whole lifecycle of which is via the internet or similar networks. Typical examples are music, knowledge and online information.

The electronic commerce intermediation or the eBay model is executing both linking and information functions. There are four strategies that are used with this business model – partnering for access, licensing, partnering for content and for application development. The first mover in the online market is Amazon.com and it put its name successfully as a recognizable brand in online commerce.

The main strong points of the business model according to the venture capitalist Guy Kawasaki are to be specific about who is buying the product, to be simple and to ask women for feedback.

According to Chris Anderson, the author of “Free: The Future of Radical Price”, the future of business is $0.00 – free. The more successful companies today like Google, like Yahoo,
like Facebook are offering everything free, software, services, information, content – all is for free. Their entire business models are built on giving everything for free. The difference between 1 penny and free is the difference between having to make a conscious decision to purchase the product and just doing it. Wikipedia is an example for a gift economy – entirely free label consumed without any expectation for payment. He states: “Every industry that becomes digital eventually becomes free”. He called this model “Freemium”. To him the two biggest interesting markets to look at “freemium “business models are the video games and the Apple iPhone apps.

When discussing and building the business model it is important to do a particular research, to discuss the antecedents and potential outcomes and gather knowledge for history examples.

Practical examples

New approaches

On http://www.boardofinnovation.com there can be found analysis on the most popular business models on the current market [48]:

- Hollrr.com business model is about paying bloggers when they spot new products. Early-adopters spot new products, and actively spread the word about their ‘discovery’. Hollrr’s system rewards them for their exposure [49].

- The In-Game Advertising to In-Game Selling model is known as a brokerage service. The game offers a platform to bring together buyer and sellers, and brings benefits to both.

- The Online Auctions are really popular. We can start with products like eBay and finish with experiences’ auction like Sweemo [50]. In their own words: “Sweemo is the live auction community where people come to trade real-life experiences”.

- Although the venture capitalist do not like “unique” business models, the Niiu.de, unique businesses model looks promising. Their product is personalized newspapers printed on paper and combines customized news with the classic paper experience.

- Razwar with their razor-blade model disrupted by subscription service are breaking the traditional bait-and-hook model (that Gillette uses), Razwar markets razors as a convenient subscription service [51].
• On MyStarbucksIdea.com people can post their ideas to improve their Starbucks experience and see how Starbucks puts those ideas to work [52].

• Nexicon is turning fear into catch – Their monitoring service tracks down IP’s of illegal content distributors on bittorent and other peer-to-peer networks. It threatens with legal action if distributors don’t settle within 10 days by paying 10 dollar per illegally shared item.

• Kickstarter.com business model is to help find community funding. It lets people reach out to the masses and community to fund their extraordinary dreams and projects.

• Quirky is a social program development company and it has a very intriguing multi-level business model and they get paid to influence product designs [53].

• TruGenetics has a free business model, without advertising, and it gives away free individual genome tastings to its users, in order to build up interesting group data to sell [54].

All these examples are unique, they are all innovative and they are using the new information infrastructure. That is why the opportunities for defining new business models are infinite.

2.2.3. Other issues related to business models

According to Gordon (1999), the marketing mix approach is too limited to provide a usable framework for assessing and developing customer relationships in many industries and should be replaced by the relationship marketing alternative model where the focus is on customers, relationships and interaction over time, rather than markets and products.

Groups that targeted through relationship marketing are large, but the communication and overall relevancy to the customer is higher than that of direct marketing. Still it has less potential for generating new leads than direct marketing [36].

A key business concern must then be how to attract users prior to reaching critical mass. One way is to rely on extrinsic motivation, but a more natural strategy is to build a system that has enough value without network effects, at least to early adopters. Then, as the number of users increases, the system becomes even more valuable and is able to attract a wider user base [37].
In communication and information technologies, open standards and interfaces are often developed with the participation of multiple companies and are usually intended to provide mutual benefit. But, in cases in which the relevant communication protocols or interfaces are closed standards the network effect can give the company controlling those standards monopoly powers [37].

Seth Godin states that software alone is not the point and the business of software is now marketing and design. According to him the Internet has transformed the software industry in two ways [55]:

- It makes it far more efficient to communicate with people who might buy your software
- It enables software’s most powerful function: communication between users;

The important questions are who can reach the user, is the product remarkable to talk about, can it earn permission to continue conversation and will the users pay for it. He explains that the holy grail of software is to enable communication between users.

Twenty years ago, the purpose of software was to interact with a device, not another person. Old software had no network effect. If one user of software is lonely, a million is a sea change in the way we communicate. Software enjoys a central role in the network effect. If you can improve productivity or satisfaction by connecting people, then people will gladly help you do your marketing.

Some authors, as Jay Allyson, states that running a successful internet marketing business and making money online is simply a matter of following a proven model. According to him essentially a profitable online business needs three components. With so many internet business ideas and scams out there, and even with so much information, the smartest entrepreneurs of today are making better connections with people via the internet.

The three steps that he defines are:

Step 1: Lead Generation

A steady flow of leads is the lifeblood of your business.

Step 2: Personal Branding

The main point here is that people follow people. People do not join companies, they don't join products, and they join other people who they know, like, respect and trust.
Step 3: A Profitable Business Model which is driven by technology, training and leadership.

The main important question is whether the connection between the business and the customers creates value. Other questions are if there is an easy way for someone to recruit someone else to join and is it opened enough to be easy to use. EBay, for example, is a business because Pierre Omidyar built a piece of software that was easy to use and open to changes in content - but in the same required all the users to use his software. He could develop an open protocol that would have enabled anyone to run an auction anywhere on any platform, but he did not. It is essential to build utility in a way that consumers couldn’t without you, so it will be worth paying for and not worth switching out of [57].

2.3. Conclusion

In this chapter I gave basic overview on the theoretical background on the Internet business models. I made analyses on the impacts that the business models give to companies. I have discussed what are considered to be the vital requirements in order to drive a successful business. After that I mentioned some new approaches in business development as well as the new tendencies in companies’ strategies.

The technology business model is based on innovation, and this allows it to offer a unique value proposition. Skype, for example, has a technology business model, but the adoptions and the value of the service are helped by the network effects. The network effects business model is important today, because it is based on the user and user interaction. Although the technology is still a key factor, it has not the focus any more [58].

In the provided information you can notice that the world, as well as the virtual world, is changing, it is not the same any more. The belief is changing, the perception is changing, the resources access is changing, the consumer is changing, and the business has to change in synchrony in order to remain consistent with the consumer. For the new and small companies it is very important to find the right path to the user. The favor of the user is the needed resource that a new company should gain.

Even though Edmund Burke would say “Those who don’t know history are destined to repeat it”, now the history is repeating from a different point of view. The basic of business models is the same, but the ways and tools to achieve the goals require more creativity, more imaginary and respect. For first time in the history – the general information is freely accessible
and there are sufficient prerequisites to have natural and successful communication all over the world.

We can see the traces of the network effect all over the ‘virtual space’. We are all connected in the net and that is why we continue applying this model further and further. When this is in alignment with a well-developed and proofed relationship marketing model, it could be the most important competitive advantage of the company.

The different business models have different challenging areas. The models that combine product innovation and customer relationships have too high costs because conflicting organizational structures are combined [59]. The models which value proposition targets the most profitable clients are not able to easily start targeting less profitable segments. The models that used to sell high value for high price are changing to free-of-charge as a business model [41]. Recently the Research and Development Resources and Activities were closed inside the company, but now the times are changing and the business models are changing to open ones, because the R&D is costly and leads to lower productivity. This opens wide opportunities in front of the competitive business models.
3. Consumer Behavior

The psychology of consumer has been researched for many, many years and it will continue to interest marketers and respectably companies.

In this chapter my purpose is to give an understanding on customer insights. I would like to view through customer’s eyes and I expect that this will lead me to discover new opportunities. I believe that in order to suggest a successful innovation I should have a deep understanding of customers, including their concerns, inspirations and daily routines. At Intel, Nokia and several other leading companies work with social scientists to achieve this understanding in order to develop better products.

I will start with research on general consumer behavior and I will explain more about target segments, motivation, learning, needs, involvement and communication with consumers. After that I will give more information about specific, innovative customers.

Then I will provide a theory from applied psychology that will help me to communicate with and influence to consumers. I am going to introduce one new theory in this field that is gaining popularity and that is promising positive results when applied in building successful business strategy.

3.1. General Consumer behavior

The internet is morphing from a collection of data to a user-driven platform.

The power of consumer is arising with every day. In order to survive and grow in the age of the consumer, companies need a drastic action. According to Stefan Engeseth in his book “One: A Consumer Revolution for Business” the companies must change impersonal environments into ones designed to interact with customers. Companies must let customers into the process of creating new products and services, and even into marketing and selling. The future is to work with the consumer and there are many researches on how to bring customers closer to the company.

Users like to have "cool" services and a customized experience from their own computer or mobile device at will. They want flexibility and in the same time services that are free-of-charge, until they are convinced that a service is worth paying for. Users also want to enable
other users to send them videos and interact with them. Ambitious users may want to develop interfaces for voice, video, but at a very low cost [60].

I am going to provide some theoretical and historical background on the general consumer behavior.

Whatever the company do it should be with consumers in mind. The modern consumer wants to tell what he or she wants, and if the company cannot supply it - the competitors will. The marketing concept requires observing everything from the viewpoint of the consumer.

Consumer behavior is dynamic, it involves interactions and exchanges. It is important to understand what consumers think, feel and do.

I will describe the basic facts and tendencies concerning consumer behavior and I will try to give some simple examples from the daily life in order to understand the reason why these characteristics continue to be true, and will continue to apply in our lives. (Figure 1.4)

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**Figure 1.4: Organization of the consumer behavior research**

### 3.1.1. Segments

The consumers can be grouped into segments by their similar needs and desires. The performance keys of segments are that they must be measurable, accessible, and substantial. Usually the narrower the segment is, the fewer are the customers. This leads to greater
satisfaction and therefore the customers are willing to pay more. Market segmentation could
differ from everything that you have seen before. Customer orientated marketers would try to
get a picture of the best customers and try to fit the activities to them, to make them feel that
they are special. The essence of relationship marketing is to find out which customers are going
to be the most long-term value to the company, willing to establish relationships and remain
loyal [6: ch. 10].

3.1.2. Motivation

Some of the problems with understanding the customers are that all they are different
individuals, with different values. They act emotionally, not rationally. It is usual for the human
beings that they act differently at different circumstances. They learn and they improve and
change their attitudes and behavior. That is why the customer research improves the odds
everly, although it is costly.

Consumers have motivation to satisfy their desires and their needs. When the individual
realizes that he lacks something means that the need has come into being. The need can be
classified in two ways, as 'utilitarian', when it leads the consumer to consider the functions of a
product, and as 'experiential', when it leads the consumer to consider the pleasurable aspects
of the product. To process can be described as <need -> drive -> learning -> motive ->
expectancy -> goal -> motivated behavior>. Motives are the reasons why people take action,
but motivation cannot be inferred from behavior. The cult of pleasure concerns the fun of
owning something. In this case usually the people are prepared to pay a small premium in order
to have it.

People like to create and project images of themselves to other people. They enjoy play
different social roles. Personality is integrated, self-serving. Personal characteristics are to be
individualistic and unique. It can be observed and it is consistent. By knowing what a person's
basic lifestyle is, we can make a fair prediction what his purchasing behavior would be.

“Of all the personality concepts which have been applied to marketing, self-concept has
probably provided the most consistent results and the greatest promise of application to the
needs of business firms” (Gordon Foxall). Self-concept is the person's ideas and feelings about
him. He is motivated to build the desired image of himself.

For example some man would have the motivation to visit Facebook every morning and
to stay there every day and he would not use the web for education. Sometimes researcher can
3.1.3. Learning

The people are learning every day. They are learning how to be consumers. In the psychology practice it is usually necessary to repeat the stimulus a number of times in order to establish a conditions response. Classical conditioning operates on the emotions. Some advertisements use this and their ads are evoking nostalgic feelings, will generate warm feeling towards the product. There are conditioned stimulus and unconditioned stimulus. In forward conditioning the conditioned stimulus will come before the unconditioned stimulus. In backward conditioning the unconditioned stimulus comes before the conditioned. In simultaneous conditioning both they are represented at the same time. The most used in the advertising are the forward conditioning and simultaneous. When a consumer buys a service and he is pleased with the result, then he is likely to buy again.

When it comes to how the customer learns about the product, we should consider the cognitive learning, where the emphasis is on how it is learned, not what. There are three factors in the learning process:

- familiarity with the domain;
- what the motivation to learn is;
- informational environment.

Sometimes consumers give up on the process of learning if the information is hard to be understood. The four elements of the learning process are:

- Drive – the stimulus that impels action
- Cue – external trigger that encourages action
- Response – the reaction of the consumer
- Reinforcement – get consumer to associate the product with certain benefits.

For example some people prefer ‘Ubuntu’ operational system or Linux although they need to learn how to use it then use the familiar and widely spread ‘Microsoft Windows’ operational system that is easy to use, with very intuitive interface and that is very user-
friendly. They not only learn how to use the basic functionalities – but as well how to perform advanced actions [6: ch. 4].

### 3.1.4. Needs

Humans have five senses, and a lot of information is gathered, that is why the brain selects from the environment around and makes decisions what information is relevant and needs to be saved and what – not.

When talking about an individual we should consider these factors

- Subjectivity
- Categorization – how he associates the information, especially with emotional memories
- Selectivity
- Expectation
- Past experience

Needs became activated when there is a divergence between the actual and desired states. Customers “hire” products to do different jobs. It is important to consider the way the customer experience life. First the company should connect to the right customer to create a foothold in a market, so that it can grow profitably afterwards. The psychology of complication says that people complicate their lives by seeking new products, even when they are satisfied with the old one.

The person is learning from his experience. He is trying to save energy for the important actions and make the daily and repeatable actions easier and easier. For example the reason why people like to use the speller–checker for Microsoft Office is that this is making their life easier, because they do not need to look up in the dictionary every word that they are not sure how to spell. And this way they have more time for fun, instead of searching words [6: ch. 1].

### 3.1.5. Involvement

Involvement is about the degree to which the consumer feels attached to the product or brand. It is about the loyalty felt towards it. It has both cognitive and affective elements: it plays on both the brain and the emotions. When we attract the consumer through involvement we
use a positive way to achieve recognition, loyalty and to build a brand name. High product involvement comes when the consumer feels that product attributes are strongly linked to his own end goals or values. High involvement purchases are those which figure greatly in the lifestyle of the consumer. There are different levels of involvements. They are influenced by two sources: personal and situational. Personal sources are the means knowledge in the memory of the individual. The situational sources are concerned with aspects of the social surroundings. In the decision-making framework the self-image consideration takes part– the kind of image the buyer has of him, or the image to be projected to others [61]. Seth Godin states that we should effectively communicate a story about benefits to the people who will appreciate them [57].

Involvement is a major force. The influencer is actually interested in the subject area, and he wants to share the excitement with others. In services markets, consumers rely much more on word of mouth. Consumers tend to be more loyal to service providers.

For example when someone buys a Porsche, this is a very high involvement. If we think about online resource – I would give the example of Wikipedia – where the people are involved to use it and to create the content in it.

3.1.6. Conclusion

In order to succeed in our business idea we should find the right path to the heart of the users and so earn our users as clients. This analysis shows that it is essential to identify a group of people who will allow us to educate them about our product. In the previous chapter I showed that there are a lot of opportunities for software that are still not exploited. In this chapter I gave information how the business reaches the people who would try and benefit from product designed for their needs.

In order to create a customer-orientated, or consumer-driven, business model, we need to follow the understanding of the user. We need to find a way to connect his emotions. The only way to succeed is to work together with the users for one better world for every one of them.
3.2. The innovative customers ("Otakus")

The early adopter will be a customer who, in addition to using the product or technology, will also provide considerable feedback to help the vendor refine its future product releases. In exchange for being an early adopter, he is given especially attentive vendor assistance and support. The vendor, benefits from receiving early. Acquiring the attention of these customers is a common step in new product development and implementation. This type of relationship can help the vendor to focus in the real-world [62].

3.2.1. Otakus

What is otaku?

Otaku is a Japanese term. It is used to refer to people with obsessive interests, particularly anime, manga, or video games. In modern Japanese slang, the term otaku refers to a fan of any particular theme or hobby. Some of Japan's otaku use the term to describe themselves semi-humorously, accepting their position as fans. Some of them use the term proudly and they are attempting to reclaim it from its negative connotations. In general most Japanese would consider it undesirable to be described in a serious fashion as "otaku"; [63]

“The otaku, the passionate obsessive, the information age's embodiment of the connoisseur, more concerned with the accumulation of data than of objects, seems a natural crossover figure in today's interface of British and Japanese cultures. I see it in the eyes of the Portobello dealers, and in the eyes of the Japanese collectors: perfectly calm train-spotter frenzy, murderous and sublime. Understanding otaku-thood, I think, is one of the keys to understanding the culture of the web. There is something profoundly post-national about it, extra-geographic. We are all curators, in the post-modern world, whether we want to be or not“, Spook Country, April 2001 edition of The Observer [63].

Their consumption behavior is driven by admiration and pursuit of their “ideals”. Their passion and creativity can be the driving force for innovation. It is important for businesses to study their consumption behavior, because this way it can improve an innovation better. The otaku keep pursuing their ideals, they keep giving themselves new tasks. As I mentioned earlier the main point here is that people follow people. People join other people who they know, like, respect and have good experience with.
The otaku group is very attractive for testing innovation. They play certain roles in industry while establishing a community within the market. They can suggest new concepts and methods of use and present them to the market. Sometimes they are capable to create markets for secondary products. Businesses should evoke strong feelings. The enthusiastic consumers are strongly oriented towards forming a community. They have a high degree of IT literacy [12].

In the same time there are many cases of product development in which general consumers have not accepted products based on functions desired among otaku. [62][63]

### 3.2.2. Conclusion

The ‘Otakus’ are powerful and important, especially when it comes to development of new products that are still in the beginning of their development. At this time the products need to gain a market share and popularity while improving specifics and adapting the proposal in order to understand and satisfy the unconscious needs of the consumers. In my opinion these are the customers, whose cooperation is of a big importance for the business model that I suggest. That is why I believe that the design of our business model should attract the attention of these consumers.

### 3.3. Applied Psychology

“Civilization advances by extending the number of operations we can perform without thinking about them” Alfred North Whitehead, Introduction to Mathematics (1911).

“We think in generalities, but we live in detail.”, Alfred North Whitehead

In this chapter I made an introduction to applied psychology and especially how it affects the consumers and how it is used to influence us in our daily life.

I will start with some theory about the influence. In his movie “Inside Your Mind” Daren Brown says:

“Everything is designed to influence.”, Darren Brown.

I will explain the main and most popular tactic of influence and how it affects our daily lives.
3.3.1. Basic comments

Researches who study animal behavior, have noticed that very often the animals’ behavior occurs in rigid and mechanical patterns. These patterns are called fixed-action patterns and they are very similar to certain automatic responding by humans. The automatic behavior patterns tend to be triggered by one feature of the relevant information in a particular situation. By reacting automatically the individual saves crucial time, energy and mental capacity. This, sometimes, causes silly and costly mistakes, when the individual is reacting mindless, skipping the already known experience, he increases the chances of error.

Most individuals have developed a set of trigger features for compliance and each of these triggers can be used and is used to stimulate people to agree to requests and to accept ideas.

For example if one product is cheap it is believed to be not of a good quality and the opposite – when people don’t have enough knowledge to decide they assume that the most expensive is the best one. In the internet space the principle of the most expensive product is not working - there the consumers expect everything to be free of charge. They have learned that it should be that way – all the companies like Google, Yahoo, Facebook, and YouTube have showed them that the content and services are free.

The applied psychology investigates what perception the people have about the surrounding world. One definition for perception is the way the physical sensations are selected and interpreted, how the object around us get a meaning. Typical example is the one with hot, warm and cold water. If you put you left hand in hot water and your right hand in cold water, after that you put both of them in warm water – you will have the feeling that your left hand is in cold water and that your right hand is in hot water, no matter that the temperature of water is the same for both.

3.3.2. Influence Overview

Reciprocation

According to sociologists and anthropologists, the rule of reciprocation is one of the most spread norms of human behavior. The rule is that one person tries to repay, what another person has provided. This future obligation within the rule makes possible the development of various kinds of continuing relationships and exchanges that are beneficial to the society.
Part I. Development of Business Model  3. Consumer Behavior

For example if someone gives us a gift, in most cases we respond with a gift as well and we feel this as the natural reaction as we were taught to behave since we were small children [9].

**Consistency**

The people try to be consistent in their words and actions. This is highly valued in the society, it provides a beneficial approach to daily life and it provides a valuable shortcut in the complex modern life. After the choice is made it is much easier to follow it and to establish solid habits.

The commitment is a key factor. After making a commitment, people are more willing to agree request, connected to the prior commitment, especially when it is active and internally motivated. People often add new reasons to support the wisdom of the decision that was already made.

Walter Lippmann, an American writer, said:

“Where all think alike, no one thinks very much.”

In most of the cases we tend to view and estimate a behavior as correct in particular situation, depending on how much we see the others doing it. The way others behave help us determine proper behavior. This can be noticed in every popular area around us – as many people like it as popular it becomes. This is known as “social proof”. It is more influential when there is similarity: people like to follow the lead of similar others. This is simply because we tend to like people who are similar to us.

For example after we choose to use something, after that we continue using related products even if we are not so happy with our choice. This happens because we try to remain consistent with our previous choice [9].

**Liking**

People like when they see a known and nice face, offering or suggesting them a service. The good relationship holds true when the contact is under positive circumstances. Very important factor, connected to liking is association – the people prefer connecting to positive and well accepted information.

For example when we like someone we trust him and we are glad to make good impression to this person in response. So we easy accept invitations and suggestions from this
person, as we value him and his opinion. This is how “word-of-mouth” works – we are more likely to believe to people who we know and like [9].

3.3.3. Conclusion

I suggest a customer-driven strategy and this theory is important when it comes to customer-driven business, where the perception and imagination are more important than the facts.

I conclude that in order to suggest a business model that reflects how the consumers respond to the world and all the available propositions, we need to consider this influence theory. It would be appropriate to have it as a starting point when I suggest a specific business model.

3.4. NLP

I will explain a new psychology study in order to introduce different techniques that could be successfully applied in designing a customer-oriented business model. The purpose of this business model is to create positive believes and to create value for all the participants in the developing process. This is the way to make the sales successful.

3.4.1. What is NLP?

There is one quite young psychology technique that is called NLP. NLP stands for Neuro-Linguistic Programming. It studies the three most influential components in producing human experience: neurology, language and programming. The neurological system regulates how our bodies function, language determines how we interface and communicate with other people and our programming determines the kinds of models of the world we create. Neuro-Linguistic Programming describes the fundamental dynamics between mind and language and how their interplay affects our body and behavior [64].

Its co-founders are Richard Bandler and linguist John Grinder. They claimed it would be instrumental in "finding ways to help people have better, fuller and richer lives". So far NLP had greater influence in management training, life coaching and the self-help industry [64].
The identity of the human is a complicated system. In the feeling of a human being are involved many levels. They influence the decisions that one makes. NLP works on the development of behavioral competence and an understanding of the mental and cognitive processes behind the behavior. NLP provides tools and skills for developing a system of beliefs and presuppositions. NLP is about self-discovery and about self-improvement. Very popular and desired knowledge for the today's population is to find their mission in life. It also provides a framework for understanding and improving us as individuals. It affects our family, community and buying behavior. It is about wisdom and vision. It is very powerful tool for creating and changing perceptions [65].

In essence, all of NLP is founded on two fundamental presuppositions:

- The map is not the territory. We experience and respond to the world around us primarily through our representational systems. It is our understanding of reality that limits us or empowers us;
- Life and 'mind' are systemic processes. The processes within a human being and between human beings and their environment are systemic [65].

In the belief system of NLP it is not possible for human beings to know the objective reality. The goal is to create the richest possible map that respects the systemic nature and ecology of ourselves and the world we live in. The people who are most effective are the ones who have a map of the world that allows them to perceive the greatest number of available choices and perspectives. NLP is a way of enriching the choices and perceive them as available in the world around you.

As a result of this earlier work, Grinder and Bandler formalized their modeling techniques and their own individual contributions under the name "Neuro-Linguistic Programming" to symbolize the relationship between the brain, language and the body. Through the years, NLP has developed some very powerful tools and skills for communication and change [65].

NLP is an approach towards developing mental strategies which combines aspects of behavioral psychology, linguistics, hypnosis, modeling and common sense. Personalities such as Tony Robins, Derren Brown and Paul McKenna use aspects of NLP to motivate and entertain.

It takes into account how we connect to the world through our sensory experience and how we store and change that experience through our minds [65].
It is highly effective at connecting conscious and unconscious resources. NLP combines different types of thinking. It helps the individuals to discover their hidden potential and it enables the people to reach their goals more easily. NLP is a study for building relationships, inspiring and motivating people. It can be successfully applied for learning and accepting something new.

3.4.2. NLP and Sales

The influence of the sales person to the customer is wide spread in the sales business. I will try to explain some up-to-date information about sales theory. The typical definition for sales would be:

“An exchange of goods, services or other property for money.” [67].

It is obvious that people want to get the most and pay the least for their choices. The sales can be as well described with “Persuading someone to buy your product or service” [7]. This term has a common accepted meaning, but now the meaning of it is changing, because more and more remarkable and not recognizable sales models are occurring. This is driven from the great variety of information that is available all around us. Sales are not anymore about shifting products – it is about making clients. A client will come back when he is happy and this target is profitable. When you give your clients enough and they win on every occasion they are going to refer you among their community. This is why nowadays probably more accurate is this definition: “Sales is helping the client to buy” [7]. NLP helps the sales by providing psychology techniques for easier communication with the clients.

The practice shows that the only strategy that is successful for a long term period is “‘Win-win’ or no deal”. Creating customers and not clients is a must. It is so powerful to know what your clients need and to help them get it, to see them satisfied and pleased, to build friendship and community among the clients. Correct attitude to the customers, action orientated to them, transform any negative to positive attitude, uncover hidden talents, support what they need and they will develop a habit to use your product. [7].

3.4.3. Conclusion

As we want to sell the C3LOOPS application, we are interested in the question how to gain better sales results.
I am considering the NLP as a practical tool that can help us achieving the goals that would make us successful. We can apply its exploring attitudes and that will lead our business to success. I believe that our business model will be successful if it is a product of good communication with the users about why we offer this application to them. I support the idea to touch the emotions of the user and help him to buy. This could be successfully applied to fans and customers, who need some passion and self-expression.

Using NLP we can develop a successful “win-win” strategy that to be applied to our business.

### 3.5. Conclusion

The companies really invest in market research, but very often neglect the customer perspective when designing the business model. The models are mainly focusing on existing customer segments and this seems to stop them as this way they cannot satisfy the unmet needs of new customers.

To develop understanding of customers is a challenge in developing a business model. It is tricky to know the customers and to decide which one to focus on and which ones to ignore. The business will be successful when it knows what the customer thinks and feels, what influencers say, what attitude he has, how he wants to look like toward others, what appearance to have in some field. It is difficult to understand and structure what the customer really want to achieve and what is important for his feeling of success. The reviewed theory gives an overall idea that we could use the psychology theory and NLP studies in order to define a successful strategy towards the future clients. In order to connect to a person and customer we should develop additional skills in sales and persuasion. Then the successful business strategy can be achieved.

When designing our web business model to reach collaboration with the users through NLP we can achieve our goals and make profit out of them.
4. Analysis with regard to C3LOOPS

4.1. Consumer behavior in regards to Business models

In the previous chapters I gave an essence description of the most popular and commonly used models. There are quite recent examples. We could relate this positive feedback to our business model and to design it appropriately in order to avoid waste of time and losses. We have a lot to learn and we should take a note from what is already a fact, and this is the point where we are learning from the history. Some consequences happened, because of the human being’s characteristics and subconscious determined reactions. The basic instincts and the processing of the mind will continue to be almost the same for the future. That is why the reason why and how we accept and follow ideas remains the same.

This is why the disruptive models today are focused on the consumer, the user, the client. Disruptions are often connected with technology, but they not always make technological breakthroughs. It is more about business model and playing the business game. The disruption can be associated with four words: simplicity, convenience, accessibility, and affordability. It is essential to understand what that problem would be. Here the knowledge of the consumer is what matters. If we make a relation with the proven model of Relationship Marketing, we will see that its three main blocks are customer equity, customer motivation and customer expectations (Figure 1.5).

![Figure 1.5: Relationship marketing values](image)

If we compare this with the network effect business model, we see that it relies on word-of-mouth method at the beginning and it is very influential then. Later, the analysis of the market and the consumers’ needs play a significant role.

I explained simple what the situation now is and what is the impact of Web 2.0 on customers, what is the basic idea behind it. The improvements in IT allow coordinating different
business models at lower cost. These key factors allow delivering value propositions to many new customers at a low cost. Now the way of earning revenues is changed – the products and services can and should be offered free for some segments. The companies get paid for providing information more than for selling a product or a service.

For the business model that I will suggest for C3LOOPS I will put an emphasis on C3LOOPS as an art instrument. This involves creating emotions in the inner world of the users. I want to find out and create a suggestion how to show to users why we believe in this instrument and to make the users attend. The factors that can motivate us to attend are cultural, symbolic – when we use the arts as a tool for communicating personality, and as a social – when building our relationships with people with consumption of the arts. There are two kind of motivation that makes customer act: intention and impulse. They take action to respond to their goals and triggers (Figure 1.6).

![Figure 1.6: The process of taking action](image)

Today the arts are widely perceived as an industry and they are usually linked to the cultural and creative industries. As the globalization is a fact, we can only take a benefit from it. In this environment I want to find the online activities that engage us and they link us to people and activities throughout the rest of the world. Because in my belief one business is successful when it makes profit for the individual person and for the development of the society. When we can make our users contribute for one better world.

This is when the business models are successful. We can find this picture when analyzing all of the business models that I described in the theoretical background.

When analyzing the target segment we should consider the following analysis (Figure 1.7):
According to the analysis of Rogers the first 2.5% of the population are the innovators. The next 13.5% are early adopters. They are followed by 34% for the early majority and the same for the late majority. At the end of the lifecycle are 16% - laggards.

The chart on Figure 1.8 shows that in order to have mass market success we need to achieve the point where we have between 15 and 18% market share. The early majority is buying when they see that someone else is buying first. If we want to cross the chasm we should attract the early adopters.
The innovators and early adopters are more comfortable to make initial decision. Their
decision is driven by what they believe about the world. They buy what they buy not because
the technology is great, but they do it for themselves – they want to be first.

4.2. NLP to earn customers

I am going to explain two strategies based on the Nlp theory. The first one is regarding
getting better feedback. The second one is to teach us how to develop and how o encourage
creativity in our users.

In order to create a good communication channel with the members of C3Loops
community the NLP theory suggests having at least three main capabilities:

- To know exactly what feedback we want to get;
- To notice the reactions of the members;
- To be flexible and easy to adapt to the dynamic changes; [27].

Prof. George Miller has proved that the human can process seven +- two pieces of
information. But the brain notices around two billions of information every second. That is why
it sifts it and the person is aware of only seven plus/minus two basic pieces.

There are several ways for building a good feedback experience (Figure 1.9):

- To be interested in what is important for the person. Be the first one to understand
  the rich inner world of the members;
- To mark key words and try to interpret them and to use them more often;
- To notice how someone prefers to receive the information – does he like the details
  or he prefer to have just the overall picture of the situation?
- To be careful about the intentions, every person expects his very deep desire to be
  satisfied.
- To show respect to the person’s time, energy, loved ones and finances. These are
  important resources for him. [27].
Part I. Development of Business Model  4. Analysis with regard to C3LOOPS

Figure 1.9: Building feedback experience

Up to a research of prof. Albert Merabian, the University of California, Los Angelos, influence depends on three factors: visual (how you look like), sound (how you sound) and content (what you say). Now I am projecting this on the virtual world. From the feedback perspective the web space (fan web site) needs all parts to work in synchrony – words, pictures, sounds. The feedback includes to be convincing, to connect to people as they want, to give the opportunity to the person to share his thoughts and believes, to accept everyone as a unique individual, who actually he is.

Adaption and reflection

The adaption and reflection occur when we understand someone’s life style, his behavior and abilities, values and beliefs, in order to connect with his world. It is very important to reach the tempo of the people you are in relationship with. [27].

In the business, the successful companies are introducing the big changes in very well measured steps. This allows the changes to be accepted. The people do not like to be forced to do something they do not fully understand and when they are not heard. The most effective leaders are those who can understand the world of the closer interested people. The key factor is to listen, and listen for the needs and desires of the client. The people like to talk, to describe, to join persuades.
Part I. Development of Business Model  4. Analysis with regard to C3LOOPS

When communicating in the virtual “world” you can create an individual approach depending on the style this person has, what type are his best preferences and continue the discussion.

When we want to develop creativity, we can apply the following plan (Figure 1.10):

• First it is important to put the user in the role of dreamer. Make him write down the ideas that come to his mind. Help him to suggest many free associations. Explain to him how to let his thoughts flow and he not to worry on how to put these ideas into action.

• Show the user the role of the realist. So that he would start asking “How can I put these ideas into a reality?” Let him write these down.

• Put the user in the role of the critic. Let him try and find the flaws of his strategy that includes our product. What he doesn’t like. What potential obstacles are there? What needs improvement?

• Make him involved to the product development and then allows him contribute and show him results.

• Make him take his ideas to action. Publish his actions and give him feedback.

![Figure 1.10: The process of developing creativity](image-url)
4.3. Intro to C3LOOPS

“C3LOOPS presents surface interaction as an interface paradigm for graphical user interfaces of creative applications. The users' content is the basis for surface interaction, and all content is presented on an infinitely large two-dimensional surface. The surface is an interface to a database, and is navigated by zoom, pan, and text filter. Text filter is to display which content elements match a text string, the more characters of the string the less matching element. Surface interaction allows users to share and edit content collaboratively via synchronous collaboration. Surface interaction was examined by developing an interactive prototype for collaborative live multimedia. The prototype was designed in collaboration with music and video artists within the genres of electronica and club music. It can be used either with a touch screen or with a monitor, mouse, and keyboard. The result of the design process was evaluated in a case study which included the artists' preparations for and carrying through of live performance at a festival. The analysis of data yielded five utility values; instrument value, communication value, preparation value, live value, and entertainment value. The main utility value of the interactive prototype was that the artists saw it as instrument. The design of the prototype made communication easier in the live situation on stage. The instrument value made it easier to play live which consequently entertained the audience. Cognition in the interactive prototype and surface interaction has been created with research through design where action research was the overarching framework.”, Rikard Lindell, the abstract of his PhD dissertation [18].

C3LOOPS allows the DJ to be a VJ as well. It makes it possible one person to be a group. The audience can see what you do and this visual contact is enriching the feeling that the listener get from the performance. It provides the benefit of visual instruments, like guitar, where the view of the instrument is enough visual representation.

It is designed especially for live performances. C3LOOPS can be a good tool for preparing for action. When the loops are ready for use, the artist can concentrate much more on improvisation.

4.4. C3Loops review

Here I am going to give more information regarding the application for which we are going to create a web site. I consider this as important, because on this web place we want to
represent and enrich the positive sides of the application, we want to explain it and to allow the
users contribute for developing of this instrument.

C3LOOPS application is designed for the area of DJ’ing/VJ’ing party organizing and fancy
celebrations. So the target group would be towards night clubs/DJ’s or VJ’s/ and not regular
people. But the ones who will listen to and who will feel it are the ordinary people who enjoy
parting and enjoy music at all. Although the product is targeted to a particular group segment,
it can be related to almost every person in the web space as everyone is listening to music.

There should be appropriate demo that shows the positive and strong features of the
product. If we can imagine the future interactions we could agree that this way of
communication is very powerful and easy to learn and use. It is more natural when we use all
our senses and even when the people are away from its nature, they are still missing it and it is
advantage that we are trying to get closer to it and to break the limitation that the ordinary
instruments are sometimes applying to us.

This touch-driven interface for professional DJs and VJs is the first step to this new kind
of playing with the music, one new instrument that is so close in usage to the traditional
musical instruments as you are using both your sound, picture and touch and feel senses. You
can create your custom music, you can create your sounds, intuititionally mix whatever you can
imagine, while creating a really art work.

The application needs to be attractive, to have easy to understand and intuitive
interface, to make nice impression, to leave the feeling like ‘iPhone’. It is crucially important
that it works fine, without break-downs and strange problems. The zoom needs to be fast, the
loops to be felt clear. Although the interface is simple, there are enough easy reachable
controls in order to have enough functionality.

C3Loops would be the right choice for the people involved in creation and showing
music when it allows good control and more opportunities than the traditional instruments that
they have been using until now. Now with popular mixers you are not able to be so many
things. In comparison if you use a notebook then you do not have fast controls and you cannot
make a good performance.

In order to have a fan site it is important and necessary that the product has fans, and it
will have fans if it is “cool” and “reliable”. Here I am not going to investigate how the C3Loops
application could be cool – instead I will put more research on the fan web site, and product
related additional offerings and especially how to get good feedback from the valuable
individual opinions regarding further improvements and developments of the offered products and services and of the entire business strategy.

### 4.5. Conclusion

Consumer behavior is expected to have a great impact on entertainment and media industry in the next five years [72]. The history shows us that the business models today put more attention to the individual user than ever.

I can see that the psychology techniques could be very useful when we want to connect with the user, especially with his desires and believes. I see that the Nlp and consumer behavior studies have a powerful impact on businesses today. That is why I consider it important to keep such studies in mind.

### 5. C3LOOPS business model

#### 5.1. Business model

The people will pay attention for things they love, for status or if you make them pay after they are interested. Therefore we are going to understand what they love, how to improve their status and how to make them want to be part of the C3Loops idea.

People buy why you do something. They don’t buy what you do. The best way to do business is with people who believe what you believe. The “what” matters for the rational decisions that we make. The ‘how’ and ‘why’ are connected to our feelings like trust, like loyalty. These are feelings that control behavior more than the rational benefit that we can understand, but cannot feel. We want to give the people the opportunity to do something with their heart. It is more important that the costumers want to be a part of what we do, because they believe the same that we believe. It is more natural to sell to people what they believe into. In this case they are doing what their heart wants. They would buy the product for themselves, for their belief. Typical example for applying this strategy is Apple. They are much more than a successful computer company. They are name, they are authority, and they reach other markets, like phones market, like mp3 players market. Markets those are not typical for a computer company.
In many cases the history shows that it is more about what we believe in, what is our cause, and not what we will gain from the deal. For example some years ago in Switzerland there was a vote for building an NPP (Atomic Energy Center). There were two regions, where the outcome of people reaction was documented like a research. In the first area it was the individual’s moral that was primary, in this region 50% of the people vote ‘Yes’. In the other region in addition to the moral duty, the government offered additional six weeks’ salary in compensation. It was surprising that the votes decreased to 25%.

The people love to buy dreams. One executive manager of the perfume company Channel once had said that their business cannot fail because they are not selling products, they are selling dreams (I cannot find this quotation). It is important for us, the people, to make an emotional commitment with the product, to see it as a friend and a tool helping us to achieve our dreams.

The facts are no longer as they seem to be. There are no facts, there are actions.

5.1.1. Business model

I suggest that we create a fan web portal. Its purpose will be to show to the audience why we believe that C3LOOPS is an interactive, multimedia instrument.

The business model is based on four main points (Figure 1.11):

1. Free performance overview
   1.1. Professional videos
   1.2. User’s videos (uploads)
   1.3. Parts of performance
   1.4. Result of a live performance in front of an audience.

2. Connect to users
   2.1. Video manuals to show the users how they can use C3LOOPS as a musical instrument
   2.2. Allow the users to be creative and artistic. Show them how to be designers
   2.3. Test them with interactive games
3. Selling the application and ready loops

4. Analyzing feedback
   4.1. for the application
   4.2. for the musical industry

The highlights that I would like to mention are:

- The services and the performances should be for free for the individual users;
- Music companies pay millions for getting feedback to know what is the audience ‘taste’ and what new artists and new music will be well accepted. If we can provide what they need, in return they will pay for this.

![Figure 1.11: C3LOOPS web site life cycle.](image)

### 5.1.2. Activities and Resources

I consider some key activities that are necessary to provide in order to execute the business model successfully. What people would want to see on the fan page would be popular artists’ performances. These performances will be an output content which purpose is to make the people that like mixing music, and have favorite artists, to understand about C3LOOPS
application and to associate their favorite DJ or VJ with it. Here a network effect can be applied as the site will advertise the artist and the artist will popularize the use of the application.

The best way for spreading and advertising the idea would be the “mouth to mouth” approach. This can happen when the people are passing links to the music that they like to their networks of friends.

The resources that are used to create value for the customers will be development of a knowledge system that should be applied in order to create a motivation for creating or enjoying musical art like a dream, and not like something normal. The users, or clients, or just community members should actively participate in developing of the services related to C3Loops. They can improve the C3Loops environment, they can suggest changing the product as well, or they can share how they would like to build a good relationship and how they want to be pleased. They can practice some self-development and enjoy their time appropriately while playing a game that is related to their hobby. Interactive games for testing how deep are the mixing competence of the users will gain interest. Then there could be developed games for developing particular skills, which will give the users the chance to improve their practice and abilities to create their own content, their own work. This work that is a reflection of what they are. There should be applied some design for developing attractive old-fashion, but funny and active games, like the ones from our free childhood.

The feedback given by the ‘early adopters’ is of a great importance. The business strategy is to implement and change services according to received feedback analyses. There should be intuitive way to allow the members to freely show what they appreciate. Sometimes the person does not know exactly what he wants, but in the appropriate environment and conditions we can help him to achieve his dreams. This could be done in an interesting games, competitions and good videos showing what fun this is.

The people are naturally curious and it would be interesting for them to see “How-to” articles and examples that are created with this tool. Demo videos can show and explain why this application is interactive, visual and what performance can be achieved with it. They can show how this application can increase the performance of live events and improvisations on stage. For the people who do not know anything about C3Loops, or especially about music mixing, it will be necessary to have simple, easy to understand, and detailed, but short study videos that describe the possible usage. For the ones who have idea – it is important to can provide advanced section with videos showing new, inspiring approaches, tricky ways and examples of making impression with the tools of C3Loops. Very powerful demos should be everywhere – at the web site, in YouTube, everywhere. They should show some tips, something more to be done with this application. And this should continue until it becomes “byword”. Like
Xerox or Microsoft Office Word. There should be a section where a comparison to the ordinary ways and tools of mixing can be found. In this section it will be possible to see, feel and hear something more than just theoretical material.

The people who can create music will value the opportunity to create their profile and to share there their own art works or ideas to the public. This is interesting for the companies that organize parties or have music recording practices.

I suggest that everyone should be welcomed to participate in the activities, make reviews and comments, but if he or she wants to publish something, than a registration is needed.

5.1.3. Value proposition

When we offer a service in the web pages we should investigate the value proposition very well. As Osterwalder (2004) states, a value proposition "is an overall view of products and services that together represent value for a specific customer segment. It describes the way a firm differentiates itself from its competitors and is the reason why customers buy from a certain firm and not from another." C3Loops is a new product, but the blogs and fan web sites are very popular. There are plenty of them and they are innovating content every day. The web site culture is what is not established everywhere. When the members of C3Loops community can find people with the same believe as them and they can interact every day, using their meeting place, and they like this place – they are going to develop it and to return to it every time they need to share their inspiration. What differentiates this site from the competitors is that it has an individual approach toward the values of its members and is focused on their interests.

5.1.4. Target Audience

The target audience for web site and services will be people that love music, that live with music and that have music as a hobby. They are ordinary people who are interested in innovative approaches and better interaction with electronic devices. The Otakus are intended to make the road toward a known and wanted product. They can increase spreading the web community by making it more popular among their member’s networks and connections.
Different segments can be targeted: the passionate music enthusiasts, DJs, VJs, the business, the musical companies as investors in human capital. I suggest that the main target group is the ordinary people with their individual dreams and creative power.

The links a company establishes between itself and its different customer segments are based on NLP research and practices. It is intended to be based on good communication, as well as, win-win strategy. Win-win strategy is when both the business and the client are benefited from the communication and the both sites are pleased with the result of their cooperation.

5.1.5. Partner network

The partner network will be YouTube, the Apple’s established network as well as every network that the mouth-to-mouth model could reach. In the future there could be a partnership with Spotify (www.spotify.com), where the custom created music can be popularized.

5.1.6. Finance

People do not want to pay for web content or services any more (Should I give arguments why this is true?) We can see this when we look at Google, when we look at Facebook, when we look at EBay. They love to use “free” goods, until they decide themselves to pay before they are pleased with the results of using the product or service.

According to Chris Anderson: “Every industry that becomes digital eventually becomes free”. The more successful companies today like Google, like Yahoo, like Facebook are offering everything free, software, services, information, content – all is for free. Their entire business models are built on giving everything for free. He sees the future of online business as free and explains how huge the difference between 1 penny and free is. This is the difference between having to make a conscious decision to purchase the product and just doing it. To him Apple iPhone apps are an interesting market to look at “freemium”.

When we decide how to price the products and services that we offer, we should consider this from the perspective of the customer and from that of the business. As our target customers are ordinary, young people, the new generation, that has a lot of influence, but not a stable finance – they would value free products. They would pay only when they feel that they have to have the product. We can earn more if we have these clients on our side and they
populate and accept our idea. Customer can perceive value in three ways. First he would ask himself what the product can do for him - this is known as functional question. Second he will be interested of the economic perspective –if it saves him money. The third and strongest level is the emotional. How we connect to him. Example of a product that is sold on an emotional level is the car. Although all the cars are doing the job of transportation, there is a huge difference between the cars. [-37]

The way the company will make money is through selling the C3LOOPS application and ready prepared loops as well. All the information and the chance to create your own loops, as well sample loops will be free of charge. Later it is possible to start selling feedback to musical companies who want and need a lot of feedback regarding what music the people like and want to listen to. The consumer feedback provides reliable guide what would be very powerful on the way of running a successful business. It is so important, because when new offerings and consumer models are tested, they are tested through the view of the global consumer.

5.2. Conclusion

In this chapter I suggested a customer-oriented business model (Figure 1.12) based on the direction where the business models are going. I made a parallel with business and client, and how this interaction is defining the new rules in business.
Part II. Design of web site based on the developed business model

1. Problem Definition

My suggestion is based on a customer research and it is relying on the new psychology techniques suggested by the Nlp theory. I tried to look through the point of view of the client and I want to give him not just what he wants, but what he will want on every step of his self-developing. I want to make the customer believe in our product. I want to make the customer believe in what we believe. I believe that the C3LOOPS can be much more successful with the cooperation of the users.

Part II. Design of web site based on the developed business model

In the previous part of my paper I have suggested a business model, developed about the multimedia instrument for iPad C3LOOPS. This was my starting point. I will use the business model as a background for defining a customer related solution and suggesting a proposition for the design. This design will serve as a validation of the business model idea. I will start by defining requirements about the web design based on the business model. I am going to make an analysis why these requirements are important and I will show how they are practical. Based on my analysis and on a theory on web site design and interaction design I will suggest a proposition for a design. I am going to suggest different technologies that can be used in the implementation of my proposition. I will compare and discuss the implementation technologies and I will show some sample code.

1. Problem Definition

My final goal is to show a sample, prototype implementation of a main component from the interactive design that I suggest. This is a novelty strategy in the practice of interaction design.

Interaction design is a systematic and iterative process for designing highly interactive user interfaces. Methodology includes research and discovery techniques. These techniques are requirements analysis, and task analysis, as well as prototyping, inspection and evaluation.
Part II. Design of web site based on the developed business model  2. Analysis for the design process methods [74]. It is the process of creating an engaging user interface for a web site functionality and content. It is interested mainly in facilitating the goals and tasks of the users.

In general, the interaction design starts with an idea of a new interaction principal or technique. The first step is to make analysis on what design is good, what is needed and what will be well accepted. The second step is to give an answer to the question how interactive design should look like. The third step is to define the design. I am going to use the business model as a starting point and based on it I will design an interactive web site.

My purpose is to suggest an interactive web design for the web site of the interactive C3LOOPS application, based on the customer-oriented business model that I developed for it. This design should be the meeting point between the web design, interaction design and C3LOOPS look and appearance (Figure 2.0).

![Figure 2.0: The business model development](image)

I have developed the business model, now I will define requirements. Based on them, I am going to provide analysis and make a proposition for a design.
2. Analysis for the design process

I will apply the principles stated in the business model proposition when designing the web place. In the next iterations of the development process the design and the implementation can be developed more based on the feedback, which is received.

The main idea that I am trying to follow in defining the design is the idea of iterative development. It is explained by 1997, Rational Unified Process. The Rational Unified Process (RUP) is an iterative software development process. RUP is not a single concrete prescriptive process, but rather an adaptable process framework. It is intended to be tailored by the development organizations and software project teams when they are selecting the elements of the process that are appropriate for their needs. [76].

RUP defines six best practices for modern software engineering [77] (Figure 2.1):

- Develop iteratively, with risk as the primary iteration driver
- Manage requirements
- Employ a component-based architecture
- Model software visually
- Continuously verify quality
- Control changes

![Figure 2.1: Modern software engineering practice](image)
This diagram is based on RUP idea and shows how the different activities on the project are moving with the development of the project. Most of the activities are done in synchrony. There are, however, moments when one particular is leading, or more active.

In order to keep the user interested on the web site and to attract him to stay and return there again, we should give him a good reason. That is why on the main page we should mention the main user attractive activities for the user. I suggest that on the main page is the answer of the question “why” we believe that C3LOOPS is an interactive multimedia instrument and then we provide links to the artist’s page. There we are going to allow the user be an artist.

On the same, main page, but in next, separate, section, we can continue with answering the question “how”. Here is the most appropriate place where we can provide the links to the page, where the professionals are giving tips.

At the end we can answer the question “what”. This can be represented by giving basic information about the product and providing link to the page where more interesting details can be found.

The design of this page is so important, because it is the place where the visitor will decide if he wants to know more. This is the place where he will decide if he will allow you to teach him more. The home page is the entrance. That is why I would put text links and pictures, with short description next to them, giving overall information about what the picture is related to.

We can use some fractal motive images in the background, as well as the images of the controls of C3loops.

3. Design ideas


In his book, The Semantic Turn, the author talks about the semantic turn that the design is taking. It is correlating with major intellectual, cultural and philosophical shifts. He considers that it is coming with radical changes in the social and technological environment in which design is practiced. The software and the new web technologies allow the development of every idea. They can provide a solution for almost every design that is given as a requirement. [13].
I am suggesting a design that looks different from the common one. It is still easy to use and to orientate, it is simple, but it has more interactive appearance and leaves three-dimensional impression. The main menu is in the same form as the graphical loops used in the C3LOOPS application. It remains of its primary source. I am trying to emphasize the symbolic impression of the functionality.

“Designers create and work out realistic paths from the present toward desirable futures...”, [14].

The design should be simple, and after that original, interesting and practical, easy to navigate and use. It should enrich the practicality. I suggest creating a united design, where the different parts are back grounded with the same theme, with repeating images and colors.

I will give some more analysis about the content, the navigation, the colors selection and the choice of the menu names.

3.1. Content

There are two types of content on the web site – the content on the home page and the content on the other pages. As I have mentioned earlier in the text on the main page there should be placed the answers of the questions “why” C3LOOPS, “how” it works and “what” this application is.

I would recommend using hierarchal structures, because they are easy to understand as we, the people, think in hierarchies. If the web site is big we can add submenus, but for this web site I suggest to add only sub links (submenus) to different parts that are on the same page. In case that the content of some section is big enough and deserve special attention - we can put it in a new subpage.

The site map is very helpful in showing the relationships between the pages and is especially useful when the user wants to find specific information quickly. It should be hierarchical and one piece of information should be located only in one place – the most logical place. It could be represented as an ordinary one or as an image map. If we use an image map – it will use controls from the application. The user can click on it with the mouse and this will effect in going to the selected place in the site. This image should give the user an idea about the organization and information on the web site.
The menu buttons can have a little hint picture, but it should be very light in order to be loaded quickly.

We should add a search tool. It can be the ready one. This way the user can enter some keywords and see a list of pages that are containing these key words. The site map and the search tool help the good navigation of the site. [33]

3.2. Navigation

The navigation is so important because if the users cannot orientate and if they cannot find the information that they are interested in, they cannot use it. The users should know that they are on our web site and they would like to know where exactly they are. There is a three clicks rule – everything important should be accessible by the most of three clicks.

For the same navigation elements we should use the same words and pictures for all the pages and we should place them on one and the same place. The elements should have text, they can have an image as well, but the clear text message is very important. If we have external links then they should be put after the important information. This has the purpose to make the user to want to come back to our site after visiting the external one. In general I would not use external links unless it is needed.

Regarding the inner pages – the links in the sections should be put into the end of the section, not inside it. If the links are placed before the logical end of the thought, then they will interrupt the message.

I suggest that we make recognizable the difference between the links that has been already visited and the other links. The choice of the colors for visited and not visited links should be appropriate.

A few people read all the content on a web page, that is why I suggest the most interesting and influential information to be in the top of the page. I would put the entire conception on one page with links to the subtopics on the same page. The main menu can show this sub links as well. This way it is easier for the visitor to concentrate and understand the message without an interruption.

The content should be placed into tables. This is going to solve several problems regarding formatting and different screen sizes. But this would be problem for the text browsers.
I suggest having less text and more touch and feel content, the text should be not more than 30% of the page. It is better when the content first starts with an image. If the image allows we should use text to explain it. Always we will use alternating text. The text that is related to the images should be near them. The long list should be grouped and the text in the lists should be short and clear. [33].

As important as the text selection and positioning are the colors. I will investigate them further.

### 3.3. Colors

The colors give life to the web site appearance and initial perception. That is why I was interested in what is the impact of the colors on the people. I would like to give some suggestions about the color selection.

I found out that it is better to use lightly colored theme. I suggest having green for the menu items and light brown or black as background. It can have the same C3LOOPS motives positioned symmetrically. The text should be with high contrast. Probably white or purple would be appropriate. For the fonts I would use sans serif, like Arial. It will be bold only if some text needs to be highlighted as important.

For the C3LOOPS web site I suggest using the colors that are near to the colors used in the application design itself. The background color is dark brown, or black. The menu items will be green. The letters on the buttons will be white. When the mouse points on a menu button, as well as when the menu item is selected, the text will be lighted in orange. This way it will leave the feeling that it is lightening.

For the home menu item I suggest it to be in a different color. For it I found more appropriate to use the orange color. The orange is the color of the creativity and it leaves warm associations. It will be named Home. For the names of the other menu items I did additional research.

[28][33]
3.4. Names for the menu items

When I have selected the color of the menu, I needed to decide what the names of the menu items would be. I did a research regarding what would be the appropriate names for the menus. I have summarized my results in the table below (Table 2.1). In the first column I have explained the purpose of the page where the menu item is redirecting. In the second column I have given the dictionary explanation of the meaning for the words that I have found appropriate. In the last column I explain the meaning of the alternative that I did not select for using.

The names that I selected for the menu items are Creativity, Expert, View, How to, Rate and Shop. [79][80]. (Table 2.1).

After writing down different scenarios I found out that the most appropriate button to be put on first place is the Creativity button. It is like this because it explains the main purpose of this web place. The creativity page is the place where the visitors can show their own ideas. They can play different games, where they will be challenged against visitors with similar passions. Information about different activities can be placed there.

I decided to place the Expert menu button right after it, where the visitors can look at the experience of the specialists. There they can see interviews with famous DJs or VJs. This is the place where the professionals share their knowledge and they can give tips regarding the application.

Right after that follows the View menu button. In this section the curios visitors can see interesting articles that they can comment and participate actively in evaluating what has been done. They can view related videos about music creation. They can listen to short examples of created loops and find out more information about why they would like to try to make their own artistic work.

I decide to place the link to How to page - the place where the user can learn - after the View item. It comes when the user is curious how he can make the loops himself. This page will show basic and advanced videos that explain how to create loops. There will be published “recipes” and tips about showing creativity.

After this is placed the Rate menu button. This button links to the Rate page, where the user can share his opinion about the application, about the use that he can experience of it. He can judge us, he can give suggestions how he would like to improve the application or the web site.
The last menu button is Shop. I put it at the very last position because it is more common that the visitor will be interested to buy only when he understands what the product is and how this product, this application, can help him and can give him pleasure. On the Shop page he can find more information about what the product is, what the features and requirement for using it are. It is the end of the menu structure and closes the process of investigating the web place.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Suggestion</th>
<th>Alternatives</th>
</tr>
</thead>
</table>
| Place where visitors can: Show/share their ideas | **Creativity**  
the ability to create new ideas or things using your imagination | **Artist**  
a professional performer in music, dance, or the theatre  
**Talent**  
a natural ability for being good at a particular activity |
| Can be dreamers | Show imagination | Participate in games/challenges  
Take part in activities |
| Place where the professional artists can share their knowledge. This can be through interviews. | **Expert**  
someone who has a particular skill or who knows a lot about a particular subject | **Professional**  
showing a high level of skill or training |
| About curious users | **View**  
to look at or watch something  
a personal opinion, belief, or attitude about a particular situation or subject | **Explore**  
to examine or discuss a subject  
**Preview**  
an opportunity to see something such as a play, film, or work of art before it is shown to the public |
| Show performances | Show loops | Show “how to” videos  
Post interesting articles, related to music and creativity |
**Table 2.1: Selection of names for the menu items**

The analysis that I did in Table 2.1 helped me to choose the words that show clearer what the content of the page that will follow is.

I estimated different suggestions about what to be the word order in the menu. My purpose was to place the items in such an order that they follow naturally. I wanted to place them so that they are easy to navigate and slightly suggesting to the user what he can find interesting to look at next. For this purpose I need to represent well the “key” information.
3.5 Visual representation of the information

I concluded that when all of the key factors in the layout of a web site are good, it is only the representation of the content that needs to be well positioned. I would like to finish my analysis regarding the visual appearance of the web site with a quotation by Eduard Tufte who is noted for his writings on information design:

“Information itself cannot inherently be misleading or difficult to understand, but its visual representation or interpretation can be.”, Eduard Tufte [81].

In his book “The visual display of quantitative information”, Edward Tufte explains the visually represented information. It should:

- Help visual compare
- Show consistency
- Integrate graphics, text and data
- Provides quality, relevance and unity of the content
- Show the information related in the space and in order in time

I agree with him and that is why I would consider the following characteristics of the visitor:

- He summarizes mentally similar elements
- He summarizes in one group the nearest neighboring elements
- Design becomes clear to the observer by rising slightly
- Expect the information categories on permanent positions on the screen

The interest of the visitor is the purpose of the web site. If we make the information easy to be perceived, the visitor will appreciate this with his attention. When we have his attention, he is more likely to allow us to teach him. It is more natural that then he will understand what we want to share with him. He will accept our idea and he will contribute only if he can feel this idea like as if it is his own idea and believe.

My goal is to show the purpose of the web site. That is why on the main home page there should be information why we believe that C3LOOPS deserves attention. After we show why it would be valuable to the visitor, we are going to explain how it adds additional, creative
value. In the end of the main layout there is information about what is the application. I believe that this way of representing a new product is easy to be understood by the visitors.


My purpose is to define a design that is valid in its ecosystem. During the design process I sketched my ideas. First I started by sketching how an ordinary web site should look like. I wanted to show what would be most appropriate to be the content layout. I made some analysis how the content should be presented and after that I have applied them in my sketches.

4.1. Pre sketches

After I did analysis on the theory of web design and interaction design, I started sketching the view of the web site. First I was thinking about what would be the appearance of an ordinary C3LOOPS web site. Ordinary means that its design is the common accepted and expected looking for a web place.

My goal is to show the purpose of the web site. That is why on the main home page I placed information why we believe that C3LOOPS deserves attention. After we have shown why it would be valuable to the visitor, we are going to explain how it adds value.

The web site consists of six content pages and one home page. The pages are: Expert, View, Creativity, How To, Rate and Shop. In the first sketches the page names and positions of the menu buttons still vary a little bit.

On the main home page I have designed to place information why we believe that the C3LOOPS application is an interactive multimedia instrument for mixing music. This shows the main purpose of the web site and gives a reason why this information would be interesting and why this site deserves from the valuable time of the visitor.

On the pictures of drawings on this page you can see the first sketches of what content I have planned to put (Figure 2.2, Figure 2.3, and Figure 2.4).
I sketched the content of the pages as I suggested it previously. I tried to represent the information with pictures so that they to be talking themselves.
Figure 2.3: Common Web design sketches, part 2

On the next sketch you can see what I consider appropriate for the content of the main page. Right after this there are 2 sketches about the appearance and the content of a site map. On the second image it is the usual site map that shows the organizational view. On the third image it is a second possible appearance that uses the images used in the application C3LOOPS.

Figure 2.4: Common Web design sketches, part 3

These sketches were the first ones that I made when I started drawing the design. Although they are not perfect, they gave me a visual idea of what content I would like to put on the pages. They helped me building more clear idea of the web space representation in my mind. They gave me a good starting point to continue with the proposition sketches.

4.2. Proposition sketches.

When I was designing my suggestion for a design I had the goal to come up with an idea that follows the C3LOOPS interaction design ideas. When I was ready with the idea of what content to put, I started thinking on how to make the design more surface interactive. I believe that it would be better if the web site appearance look like C3LOOPS. I have tried to make a proposition that is between web interface, surface interaction look, and C3LOOPS look.

Still I was aware to provide clear information and to design the content to be consistent within the site. The proposition that I made consists of home page and six content pages. It has a home logo in the upper left corner of the visible screen. I suggest that on the upper right corner of the screen a search engine is placed. It will provide an easy and fast way to find a specific content that the visitor is looking for. On the bottom left corner I suggest to have a link to Frequently Asked Questions (FAQ). This link would serve providing immediately information regarding the most common points of interests among the users. On the bottom right position of the window I suggest that we place a common bottom links menu that will provide a link to a site map.

The menu is in a form of a loop. It follows the form as it is used in the C3LOOPS application. The menu is in a circle form and it is divided into eight equal parts. The top-left quarter part that consists of two ordinary parts is the Home menu item. The other six parts are menu buttons that provide a direct link to the content pages.

When a menu item is clicked there is a submenu arc that appears under the menu item, following the same circle form. This sub menu contains quick links on the content that is under the selected page. Its tone is brighter than the tone of the main menu item, but it is the same color. This submenu provides an easy way for the visitor to select to go directly on the part that he considers to be most interesting. It looks beautiful as it follows the shape of the menu and it is good addition to the main menu functionality.
I have represented my idea for the content using both text and pictures. I tried to limit the text usage and to show the content visually. Although I suggest that on the web site there is more visual representation, it should be accompanied by enough describing text (Figure 2.5).

![Design proposition for the C3LOOPS web site.](image)

**Figure 2.5: Design proposition for the C3LOOPS web site.**

I find this menu more interactive, more interesting and more attention gathering. It is intuitive, because the menu sequence is following the clockwise direction and it is going from the interests and knowledge of an individual user to the collective experience and development of the society of musical enthusiasts.

### 4.3. Three usage scenarios

In his book, Shaping Web Usability, Albert Badre says:

“An “enjoyable experience” depends on a large extent on the context and the purpose of the visit.” [4].
In order to investigate different purposes of visit, I have drawn three different scenarios about using the web site by three different target groups. They all consist of three pages and they are used based on the business model.

The first scenario is about the DJ’s and VJ’s (Figure 2.6) – the professional users. I believe that after they have visited the home page they would be most interested in the content of the View page. There they can see what their colleagues have done, they can get motivation how they can contribute to this idea or they can just see the latest tendencies in the industry. The next page, that they would be more interested in, is the How to page. There the experienced visitors can find advanced usage videos as well as some useful tips.

The second scenario is about the ordinary user (Figure 2.6). I suggest that the first page that would gather his attention is the Creativity page. There the user can find more information about events and challenges. He can share his ideas and he can get inspiration what he would like to create. He can discuss and follow other active discussions. The third page that he would be interested in is the How to page, where he can find video lessons about the application and the way that it can be used in a way that is adding value for the visitor.
The third scenario is about the view that the business would be most interested in (Figure 2.7). The business would look at the Rate page. There they can find what the positive features of the application are and what the negative ones are. They can estimate if this application can contribute for improving their business and popularity. They can understand what the audience is looking for and what it is expecting. The business would be interested in the Creativity page as there they can find new talents or they can promote their help in developing creative skills. They can follow the discussion and understand the desires of the new generation of users. The business would be interested in the View page as well. There they can understand how the C3LOOPS application is used. This will show them why the audience like the music created with this multimedia instrument.

Figure 2.7: The scenario of business users

These scenarios describe three different uses of this web place. As the target group of our C3LOOPS web site is everyone who is interested in creative and innovative solutions in the musical area, these scenarios explain three different uses that are adding value to the interested subject. I will select one of this scenarios and I will implement a simple prototype that shows the functionality and the appearance of the main menu.

4.4. Design results

When I was ready with the sketches, I started designing the menu buttons and the menu itself. I have tried different appearance of the menu buttons. I made the menu buttons green with white text inside. When the buttons are hovered or clicked the text is surrounded by a lighter orange color. This leaves the feeling that the button is lightened. My first idea was to
lighten them with yellow color, but finally I concluded that the orange color is more impressive. The buttons symbolize the different parts of a loop.

When I was designing the Home button, I decided to make its size double the size of the other buttons. It is the main entry point of the web page and it is not a part of the content, it is the summary of the content. It provides an overview of what is the functionality of the menu and what is going to be “played”. I chose the orange color to express the main impression that the web site leaves. It is that the doors to the creativity are opened. The design of the buttons that I liked the most is shown on Figure 2.8.

![Figure 2.8: The design of the menu buttons.](image)

For the Home page I needed to choose between light green and orange color. The green is the color of C3LOOPS, but when I compared the two possible appearances I selected the orange color.

On the following figure (Figure 2.9) you can see how the menu looks like in the different steps of its design.

![Figure 2.9: Different appearance of the entire menu during the design process.](image)
I selected the menu on the third position to be used for the implementation of the proposed design. It looks good, symmetric and easy to navigate.

5. Prototype

In order to validate the business model, I will implement a prototype that shows how the menu is working. The appearance of the menu is the last one that I selected in the design process. I will start the process of implementation with an analysis on what technology to be used. For the creating of the menu there are three alternatives:

- Adobe Flash
- Microsoft Silverlight
- Html (especially v.4 or v.5)/ JavaScript

I am going to provide a little analysis on which one of these technologies is the most beneficial for our purposes.

5.1. Technology analysis and suggestions

When selecting the technology for the implementation of the main navigation menu we should be careful regarding some java or flash components. Some users could not see these components. This is why I suggest minimizing their usage on the home page.

I am going to start with a definition of each of this technology from Wikipedia:

- Adobe Flash (formerly Macromedia Flash) is a multimedia platform used to add animation, video, and interactivity to web pages. [82].

- Microsoft Silverlight is an application framework for writing and running rich Internet applications with emphasis on multimedia, animations, and graphics, with features and purposes similar to those of Adobe Flash. [83].

- HTML5 is the next major revision of the HTML standard, currently under development. Like its immediate predecessors, HTML 4.01 and XHTML 1.1, HTML5 is a standard for structuring and presenting content on the World Wide Web. [84].
In Table 2.2 I have described what the positive and the negative features of the three different technologies are. I am comparing them in order to find which one is the best one for the menu that I have designed.

The menu is easy to be implemented using Adobe Flash. The users accept it very well and it has proven its consistency. The Flash is a propriety technology, with good documentation. The same applies to Microsoft Silverlight. Silverlight can offer richer programming model, out-of-browser capabilities and it is scalable.

Along with the positive features they both bring one very strong negative quality, especially when it comes to navigation menus. They are both very difficult to be indexed and therefore it is difficult the content that they show to be found by the search engines. More than this, they are both closed-technology and they are single-vendor solutions. The Flash is usually blocked in the web browsers and this is not acceptable to happen at the main page of the web site. Silverlight has problems when it is running under Linux.

The HTML v.5 is an upgrade to the web presentation specification. It seems that it is going to fill the gap that is still not owned by Flash and Silverlight. Ben Galbraith, co-founder of the Ajaxian Web says "HTML5 features like Canvas, local storage, and Web Workers let us do more in the browser than ever before". HTML 5 is based on an industry standard, while Adobe Flash and Microsoft Silverlight use their own technologies. On the other hand it is still a standard in progress and there are incompatibilities between the browsers. [75].

<table>
<thead>
<tr>
<th>Technology</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Flash</td>
<td>proprietary technology</td>
<td>Single-vendor solution</td>
</tr>
<tr>
<td></td>
<td>good documentation</td>
<td>Blocking in web browsers</td>
</tr>
<tr>
<td></td>
<td>rich user experience</td>
<td>Very difficult for indexing</td>
</tr>
<tr>
<td></td>
<td>consistent platform</td>
<td></td>
</tr>
<tr>
<td>Microsoft Silverlight</td>
<td>proprietary technology</td>
<td>Closed technology</td>
</tr>
<tr>
<td></td>
<td>development support</td>
<td>Problems under Linux</td>
</tr>
<tr>
<td></td>
<td>richer programming model</td>
<td>Not found by search engines</td>
</tr>
<tr>
<td></td>
<td>out-of-browser capabilities</td>
<td>It required additional software</td>
</tr>
</tbody>
</table>
Part II. Design of web site based on the developed business model

5. Prototype

<table>
<thead>
<tr>
<th>scalable</th>
<th>easy to deploy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HTML(v.4 v.5)/JavaScript</strong></td>
<td>Do more in browsers</td>
</tr>
<tr>
<td></td>
<td>Faster</td>
</tr>
<tr>
<td></td>
<td>Local storage (like desktop)</td>
</tr>
<tr>
<td></td>
<td>Based on an industry standard</td>
</tr>
<tr>
<td></td>
<td>Lack of support</td>
</tr>
<tr>
<td></td>
<td>Incompatibilities between browsers</td>
</tr>
<tr>
<td></td>
<td>Still in development</td>
</tr>
</tbody>
</table>

Table 2.2 Overview of different technologies for the implementation

Based on the information that I summarized in Table 2.2 I consider that it is most practical to use HTML 5 in the development. HTML 5 will be improving the coming years, and the browsers will start to support it. For the purposes of the prototype I am going to use HTML and CSS.

5.2. Implementation

In order to validate my proposition, I am going to demonstrate validity. The definition that Krippendorff gave regarding validation [15] is:

“To demonstrate is to show something with the intent to proof its value or workings, for example, what an artifact would do and how.”

Previously I described three scenarios, based on the business model idea. I will use the second scenario – the general user use – to implement a prototype of the main navigation menu. I have chosen to implement a light demo, showing how the special C3LOOPS menu will look by using HTML and CSS.

The purpose of my demonstration is to show how the menu should look like and how it will be used. I will show its basic functionality. Any non-functional requirements will be skipped in my implementation. My implementation consists of seven web pages. Every one of them has the same navigation menu, in order to keep the consistency of the web site. The pages are index.html, creativity.html, expert.html view.html, howto.html, rate.html and shop.html. I created pictures for the menu buttons. I used Photoshop for designing the buttons.
There is a part of the html code from the home page following (Figure 2.10, Figure 2.11). I will add the source code of the creativity.html, view.html and howto.html, as well as the full source code of index.html, in Appendix A.

```html
<table>
<tr>
<td style="margin-left:50px">
   <a href="creativity.htm" title="Challenge yourself">Challenge yourself</a>
</td>
<td style="margin-left:50px">
   <a href="view.htm" title="View">View examples</a>
</td>
</tr>
<tr>
<td style="margin-left:10px">
   <a href="expert.htm" title="Ask the experts">Ask the experts</a>
</td>
<td style="margin-left:10px">
   <a href="howto.htm" title="How to">Know how</a>
</td>
</tr>
</table>

Figure 2.10: Source code of the content of the index page

<!-- page menu -->

<ul id="menu">
  <li id="home"><a href="index.htm" title="Home" id="homepos" class="menactive">Home</a></li>
  <li class="other"><a href="creativity.htm" title="I am creative" id="creativitypos" class="menitem">I am creative</a></li>
  <li class="other"><a href="expert.htm" title="See the expert" id="expertpos" class="menitem">See the expert</a></li>
  <li class="other"><a href="view.htm" title="View what is available" id="viewpos" class="menitem">View what is available</a></li>
  <li class="other"><a href="howto.htm" title="How to" id="howtopos" class="menitem">How to</a></li>
  <li class="other"><a href="rate.htm" title="Rate" id="ratepos" class="menitem">Rate</a></li>
  <li class="other"><a href="shop.htm" title="Shop" id="shoppos" class="menitem">Shop</a></li>
</ul>

Figure 2.11: Source code of the menu of the index page

The source code for the other six pages of the web site follows the same structure. In this way it remains consistent.
I use one .css file for all the html pages. I have placed a sample of the code of the menu.css in Figure 2.12. The full menu.css can be viewed in Appendix A.

```css
.menu.css
.body {
  background-color: #000;
}
/* wrap */
div#menwrap {
  width: 700px;
  height: 700px;
  margin: 50px auto;
  padding: 0;
}
div#contentwrap h1{
  text-align: center;
  color:#C60 ;
}
div#content{
  color: #585858;
  color::#FFF;
  font:Arial, Helvetica, sans-serif;
  size: 14;
}
/* list style */
ul#menu {
  margin: 50px auto;
  height: 700px;
  padding: 0;
  width: 700px;
  list-style: none;
  list-style-type: none;
  position: relative;
}
```

*Figure 2.12: A sample code from menu.css*

The usage of this menu.css file saves many repeating code that should be placed in the html page. This way the code is readable and the appropriate style is added when it is needed.
The styles are very easy for maintaining as the changes needs to be done only on one place – in the menu.css code.

In Figure 2.13 you can see the appearance of the menu as it is implemented.

In my implementation I show only the functionality of the menu, because I consider it to be the key factor in the proposed design. I tested my implementation using Google Chrome 8.0.552.224 browser. I implemented only the functional requirements of the menu.
6. Conclusion

In this part I suggested a proposition for a design that is based on the customer-oriented business model that I specifically developed for C3LOOPS in the first part of my thesis. I defined requirements for the web design that are based on good practices in the modern software engineering. I have drawn and explained three different user scenarios using the business model idea as a background. For one of these scenarios I built a prototype and this way I validated the suggested proposition. The prototype is an implementation of an interactive menu that is designed especially for the purposes of the web site. This validation could be used for a proof of usability of the business model.
III. Conclusion

1. Future development

I have implemented a prototype that shows the basic functionality of the main C3LOOPS menu. For the future development the requirements should be fulfilled.

For future development there should be implemented the completed menu and should be done the testing of the usability. The traditional methods for doing this include expert reviews, user testing, lab tests, experiments related to human factors and testing of prototype. [4]

For the web it is very important to guarantee a good user experience. [4] For evaluating the good use experience the following issues should be considered:

- Does the home page of the Web site act as a gateway?
- Do the users understand the purpose of the Web site?
- Is the overall user experience pleasant and intuitive for the user?
- Is all major functionality visible above the line of scroll on each page?
- Is content intuitively organized?
- In terms of personalization, is it clear why we require information for their profile?
- Is the used terminology consistent across the Web site?
- Do the users know where they are in the site?
- Are the error messages understandable by the user? [4]

Based on these questions I suggest improving the design and completing the implementation. Along with this a quality testing of the outcome should be done. I suggest that the development process is continued as described in the RUP(Rational Unified Process) definitions.
2. Conclusion

I started my master paper with a research on the business modeling. The purpose of this research was to give me more deep knowledge about the purpose and the value of the business modeling and its importance for the interaction designers. I have started with the theoretical background on business models in order to introduce the reader to the current situation and to help him understand the problem better. I have applied some information about the business model innovation and how it is about creating value, for companies, for clients and for society. I have discussed how the emerging innovative business models develop the creativity in the society.

I made a research on both business models background and the consumer behavior, including the applied psychology theory. After that I build customer-orientated strategies, based on the new psychology studies of neuro-linguistic programming.

I have achieved my purpose to suggest a simple, and at the same time interesting, original and practical web design for the web site of the interactive, multimedia instrument C3LOOPS. I proofed the design that I suggested by implementing a prototype and this way I have validated the functionality of the suggested interactive design.

With the implementation of the interactive web navigation menu I have proofed that the business model idea can be successfully applied as a starting point of an interaction design process. The interaction design could be very powerful contribution to the business in order to help it increase its revenues. For doing so it should be applied to a well-defined business strategy. The interaction design can create a great experience, and it is very important that the designer can show the value of the expensive investment in interaction research and development.

With my work I have proved a novelty in the interaction design practice. Usually the interaction design starts with an idea of a new interaction principal or technique. I have proofed that the starting point of the design can be a business model instead.


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84
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Appendix A

Figure A1: Home page source code .................................................................................................................. 87
Figure A2: Creativity page source code ............................................................................................................. 88
Figure A3: View page source code ................................................................................................................... 89
Figure A4: How to page source code .................................................................................................................. 90
Figure A5: Source code of menu.css ................................................................................................................ 93
Appendix A

<html>
<head>
  <title>Home page</title>
  <meta http-equiv="content-type" content="text/html; charset=utf-8" />
  <link rel="stylesheet" href="menu.css" type="text/css" />
</head>
<body class="body">
  <div id="menwrap">
    <div>
      <!-- page content -->
      <div id="contentwrap">
        <h1>Home</h1>
        <table>
          <tr>
            <td style="margin-left:50px">
              <a href="creativity.htm" title="Challenge yourself">Challenge yourself</a>
            </td>
            <td style="margin-left:50px">
              <a href="view.htm" title="View examples">View examples</a>
            </td>
            <td style="margin-left:10px">
              <a href="expert.htm" title="Ask the experts">Ask the experts</a>
            </td>
            <td>
              <a href="howto.htm" title="How to">Know how</a>
            </td>
          </tr>
        </table>
        <h3>Latest news</h3>
        <div id="content">
          This week there is a special event...
        </div>
      </div>
    </div>
  </div>
</body>
</html>

Figure A1: Home page source code
<html>
<head>
  <title>Home page - Creativity</title>
  <meta http-equiv="content-Type" content="text/html; charset=utf-8" />
  <link rel="stylesheet" href="menu.css" type="text/css" />
</head>
<body class="body">
  <div id="menwrap">
    <div id="ie_height_fix">
      <!-- page content -->
      <div id="contentwrap">
        <h1>Creativity</h1>
        <div id="content">
          <p>This is the creativity page. Here you can show us that you are an artist!</p>
          <p>You are welcome to share with us your interesting ideas.</p>
          <p></p>
          <p>
        </div>
      </div>
    </div>
  </div>
  <!-- page menu -->
  <ul id="menu">
    <li id="home"><a href="index.htm" id="homepos" class="menitem"></a></li>
    <li id="creativitypos" class="menactive"><a href="creativity.htm" id="other"></a></li>
    <li id="expertpos" class="menitem"><a href="expert.htm" id="expertpos" class="menitem"></a></li>
    <li id="viewpos" class="menitem"><a href="view.htm" id="viewpos" class="menitem"></a></li>
    <li id="howtopos" class="menitem"><a href="howto.htm" id="howtopos" class="menitem"></a></li>
    <li id="ratepos" class="menitem"><a href="rate.htm" id="ratepos" class="menitem"></a></li>
    <li id="shoppos" class="menitem"><a href="shop.htm" id="shoppos" class="menitem"></a></li>
  </ul>
</body>
</html>

Figure A2: Creativity page source code
Appendix A

<html>
  <head>
    <title>Home page | View</title>
  </head>
  <body class="body">
    <div id="menwrap">
      <div id="ie_height_fix">
        <!-- page content -->
        <div id="contentwrap">
          <h1>View</h1>
          <div id="content">
            This is the View page.
          </div>
        </div>
      </div>
    </div>
    <div>
      <a href="creativity.htm" title="Challenge yourself">Challenge yourself</a>
      <a href="howto.htm" title="How to">Know how</a>
      <a href="rate.htm" title="Rate">Rate</a>
    </div>
  </div>
</html>

Figure A3: View page source code
Figure A4: How to page source code
Appendix A

```css
menu.css

/* body */
.body {
    background-color: #000;
}

/* wrap */
div#menwrap {
    width: 700px;
    height: 700px;
    margin: 50px auto;
    padding: 0;
}
div#contentwrap {
    position: absolute;
    left: 573px;
    top: 296px;
    height: 420px;
    width: 440px;
    overflow: auto;
    z-index: 2;
}
div#contentwrap h1{
    text-align: center;
    color:#C60 ;
}
div#content{
    color: #585858;
    color::-#FFF;
    font:Arial, Helvetica, sans-serif;
    size: 14;
}

/* list style */
ul#menu {
    margin: 50px auto;
    height: 700px;
    padding: 0;
    width: 700px;
    list-style: none;
    list-style-type: none;
    position: relative;
}
li#home {
    width: 245px;
    height: 491px;
    margin: 0;
    padding: 0;
    display: block;
    list-style: none;
}
Appendix A

```html
list-style-type: none;
position: absolute;
z-index: 1;
font-size: 8pt;
font-family: verdana, arial, tahoma, serif;
}

li#home a {
    border: 0;
    position: absolute;
    width: 245px;
    height: 491px;
}

a:link
{
    font:Arial, Helvetica, sans-serif;
    font-size: 24px;
    color: #fff;
    margin-left:10px;
}

li.other {
    width: 245px;
    height: 245px;
    margin: 0;
    padding: 0;
    display: block;
    list-style: none;
    list-style-type: none;
    position: absolute;
    z-index: 0;
    font-size: 8pt;
    font-family: verdana, arial, tahoma, serif;
}

li.other a {
    border: 0;
    position: absolute;
    width: 245px;
    height: 245px;
}

a.menactive, a.menactive:hover, a.menitem:hover {
    background-position: left top;
}

a.menitem {
    background-position: left bottom;
}

#homepos {
    top: -15px;
    left: -15px;
    background-image: url('images/home.png');

```
Appendix A

Figure A5: Source code of menu.css

```css
} 
#creativitypos { 
    top: -15px;
    left: 230px;
    background-image: url('images/creativity.png');
}
#expertpos { 
    top: -13px;
    left: 475px;
    background-image: url('images/expert.png');
}
#viewpos { 
    top: 232px;
    left: 475px;
    background-image: url('images/view.png');
}
#howtopos { 
    top: 477px;
    left: 475px;
    background-image: url('images/howto.png');
}
#ratepos { 
    top: 473px;
    left: 230px;
    background-image: url('images/rate.png');
}
#shoppos { 
    top: 474px;
    left: -15px;
    background-image: url('images/shop.png');
}
```