TALLINNA TEHNIKAÜLIKOOL
TALLINN UNIVERSITY OF TECHNOLOGY

Department of Mechanical and Industrial Engineering

FACTORS FOR AUTOMATING ONLINE SALES FUNNEL BASED ON CASE OF LUPI – EDUCATION TECHNOLOGY COMPANY

ONLINE-MÜÜGIKANALITE AUTOMATISEERIMISE MÕJUFAKTORITE ANALÜÜS HARIDUSTEHNOLOOGIA ETTEVÕTTE - LUPI NÄITEL

MASTER THESIS

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AUTHOR'S DECLARATION

Hereby I declare, that I have written this thesis independently.

No academic degree has been applied for based on this material. All works, major viewpoints and data of the other authors used in this thesis have been referenced.

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    2. Analyzing factors and developing the online sales funnel

    3. Analyzing automation of the online sales funnel

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INTRODUCTION

The main goal of the current thesis is to study and develop online sales funnel for digital product – education technology product for Lupi. Special attention is paid to factors needed to take account for automating online sales funnel.

The sales funnels have been used for decades, since Lawes introduces AIDA models in 1925 and even before there might be people who were using the funnel concept even without knowing about it.

In academic writing the sales funnels are mentioned with different names and phrases or parts of them can vary as well. The reason is that the sales funnels are built for suit individual products.

Since the digital products are widely used by the customers, the online sales funnels became an important framework for understanding the sales process of the product and improving it. For the digital products all phases of the sales funnel became online and it became possible to track user's actions through their customer journey. This possibility made online sales funnels much more efficient, as there have been collected data which can be used for improving sales funnels and sales process in general.

In this thesis is studied how to build online sales funnel for digital product, what factors should be taken into consideration and how to improve already built sales funnels. Extra attention is paid to the process of automating of online sales funnels using Facebook. The possibilities, how the push notifications can be used for improving activation and engagement of the users of digital product are discussed.

1. SALES FUNNELS

The sales funnels are widely used and common part of sales process. Google search for term "sales funnel" gives 47 500 000 results in 0,48 seconds and there are 1 030 000 video results for the same term search (updated on 22 of May, 2019).

The sales funnel "is academically grounded in the marketing funnel [Howard and Sheth 1969, Meyerson and Scarborough 2007, Young, et al. 2006], AIDA model (Attention +Interest +Desire +Action model) [Lancaster and Withey 2006], and the hierarchy of effects model [Lavidge and Steiner 1961]" [1]. In general, "The sales funnel frames the customer buying process from the producer's point of view with the aim of funneling the potential customers to a successful transaction" [2].

In academic literature the sales funnels are mentioned and described with different names, such as "Buying funnel", "Buying cycle", [1] "Consumer decision-making process", [3] "Consumer decision journey", [4] "Consumer behavior", "Buying behavior", "Model of decision-making" [3] and it is not the complete list. This abundance of names and also differences between descriptions can be explained by nature of the concept: sales funnel is a general understanding of how potential customers are making buying decisions and therefore they are quite closely linked to each product or service (which is the objects of selling in that sales funnel case).

From many different explanations about sales funnels and what it is, it can be summarized that basic concepts are arguably the same for most of them; there are minimum 4 stages in sales funnels [1]:

- **Awareness Phase** – Phase when potential customers (so-called prospects) get an information about the solution offered by product (or service).
- **Interest Phase** – In this phase potential customers became interested in the product and conducting research about the solution.
- **Evaluation Phase** – During this phase the prospects are starting evaluation of the product in terms of comparison to competitive products and solutions, which means that they are leaning toward a decision.
- **Decision Phase** – In this phase the prospect already wants to buy the product and negotiations are undergoing [5].

To this 4 stages the 5th one can be added: **Purchase Phase** (Figure 1). It can be viewed as a result of the funnel or the last phase of the funnel.

Awareness Phase

Interest Phase

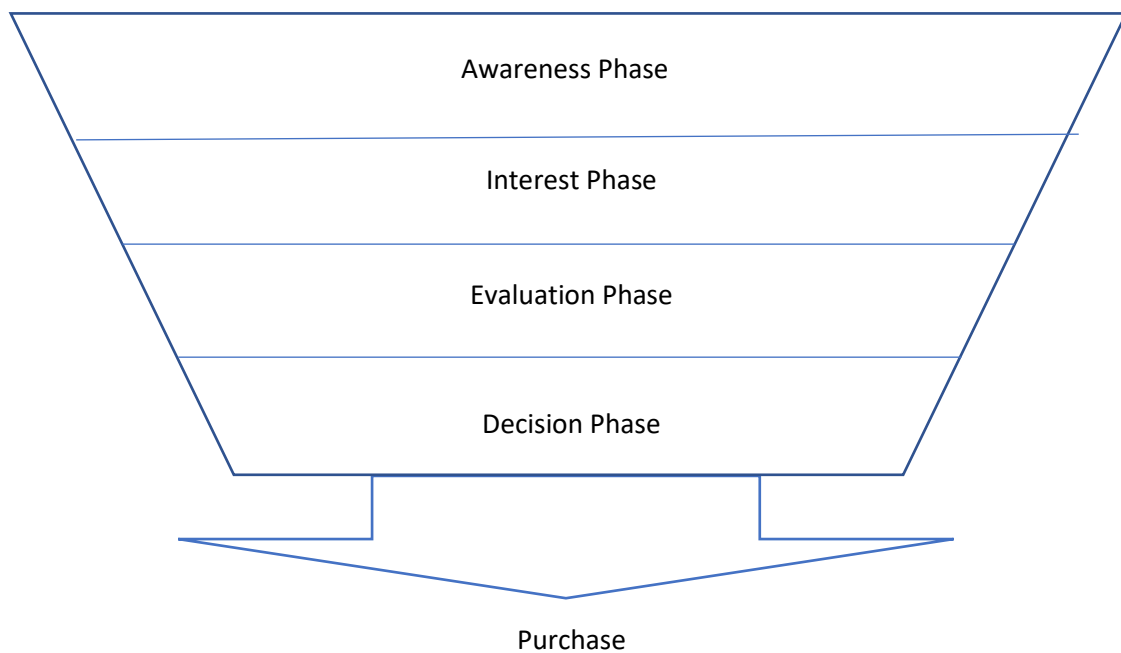Evaluation Phase

Decision Phase

Purchase

Figure 1: Concept of a sales funnel

For particular products the sales funnel can be different or containing more phases, all of this is case specific, but the general logic which underlines the concept is the same. For example, if first decision of buying the product is hard to make, but after that repurchases are very likely and frequent, the sales funnel can be modified by adding this phases for better adjusting it to the case:

- **Awareness Phase**
- **Interest Phase**
- **Evaluation Phase**
- **Decision Phase**
- **Purchase Phase**
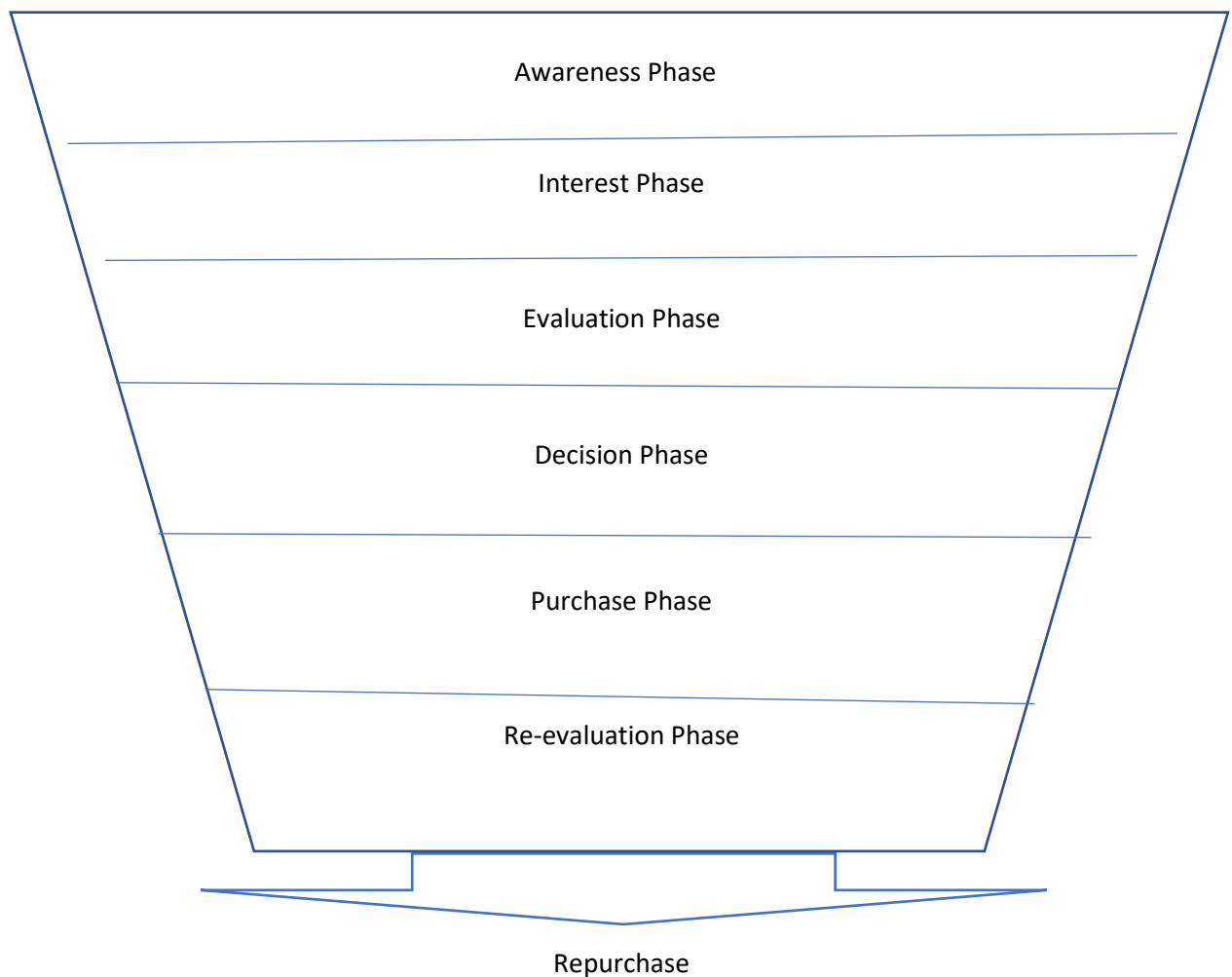- **Re-evaluation Phase**
- **Repurchase Phase**

Figure 2: Sales funnel for repurchasing goods (B2B)

This kind of sales funnel can be very common in B2B sales, where first purchase can be for the testing purpose of the product and repurchase of it can be the main goal (Figure 2).

Sales funnel concept in general makes sales process more efficient because marketer is targeting potential customer with right massage at the right time. For example, if prospect does not know about the product in general (not yet on awareness phase), there is no sense in offering dramatic discounts for making purchase. First goal of the sales person will be explanation of the product to potential buyer so that s/he can identify value of owning the product and can get closer to making the purchasing decision. To summarize, goal of making the sales funnel is to identify steps in potential customers decision-making process and then focus on getting her/him to the next phase

of the funnel rather than trying to sell the product to the person who is not aware of the product and has no interest in it.

1.1 Online sales funnels

After internet became available to public, marketers started using it for advertisement and sales purposes. At first, it was only used for the first phases of sales funnel and more often for lead collection through internet. With more digitalization of advertising and access to advanced analytical tools, online sales funnels are got more and more useful, effective and efficient, especially in case of digital products.

The digital products have an important difference with traditional products and services in terms of online funnels: in digital products all the steps of sales funnels can be tracked online. This difference can be used in many aspects of sales funnel; it makes identification of the prospect easier and because of online advertising and advanced tracking tools are available nowadays, marketers can target right people with right massage in right time. That's an important advantage for making sales funnel effective and efficient.

If sales funnel "frames the customer buying process from the producer's point of view with the aim of funneling the potential customers to a successful transaction" [2], online sales funnel for digital products tries to frame website visitors online behavior "with the aim of funneling the _visitors_ to a successful transaction".

Ability of tracking potential customers online enables monitoring of many data points of user journey through phases of sales funnel. There are hundreds of data points which can be monitored for digital products and many analytical tools make it even easier to get more numerical information from the product perspective. So, for digital products and their online sales funnels, challenge lies in understanding what metrics to track rather than how to track them.

Assuming all of the things mentioned above, for achieving effective and efficient results in converting website visitors to customers there are several goals to accomplish:

- Understanding potential customer decision-making process
- Choosing framework for building online sales funnel for specific product
- Building and testing phases of online sales funnel for that product

That is important to notice that the framework should not focus only on conversion rate of the online funnel – percentage of site visitors that will be converted into paying users (even through it is the main goal to optimize this rate), but it should identify and monitor micro-conversions – conversion rates from one phase of an online sales funnel to another. This metrics will be very helpful for optimizing the whole sales funnel, as they will be useful for identifying phases of an online sales funnel, where conversion rates will be weaker than in other parts of the funnel and, so marketers will know on which part of the funnel to work on to optimize specific micro-conversion rate, which in result will improve performance of the online sales funnel as a whole.

For example, let's take a simple online shop, where sales funnel consists of 4 steps:
1. Visiting the website
2. Registration on the website
3. Visiting item page
4. Purchasing the product

If 2% of website visitors are finishing the session with a transaction, it is hard to say, what should be done for improving this result.

Visiting the website	80% to the next phase
Registration on the website	10% to the next phase
Visiting item page	25% to the next phase
Purchasing the product	

Table 1: Micro-conversion rates of the online sales funnel

But if there is a monitoring of conversion rates of the phases of the online sale funnel (Table 1: Micro-conversion rates of the online sales funnel) and it is noticed that only 10% of registration page visitors are completing the registration (and industry benchmark is much higher), it might be assumed, that improving registration process can increase percentage of visitors of the registration page who will successfully finish registration process and that improvement will not only improve that micro-conversion rate of registration phase, but will dramatically impact the final conversion rate of the online sales funnel as well.

If registration phase conversion will increase from 10% to 20%, conversion rate of the sales funnel (80%*10%*25%=2%) will get to 4%, which is a 100% improvement.

2. BUILDING ONLINE SALES FUNNEL

The study is focused rather on building online sales funnel, than describing all available approaches and strategies for building online sales funnel for different kind of products. However, some knowledge on development process is necessary to aquire. The study of user behavior on website and try to find patterns of their interactions with particular products is considered as starting point. This patterns should correlate to the general model of sales funnels discussed in the chapter one of this thesis (on page 6).

- **Awareness Phase** – Phase when potential customers (so-called prospects) get an information about the solution offered by product (or service).
- **Interest Phase** – In this phase potential customers became interested in the product and conducting research about the solution.
- **Evaluation Phase** – During this phase the prospects are starting evaluation of the product in terms of comparison to competitive products and solutions, which means that they are leaning toward the decision
- **Decision Phase** – In this phase the prospect already wants to buy the product and negotiations are undergoing

Hence, there are Awareness Phase, Interest Phase, Evaluation Phase and Decision Phase in sales funnels. For the digital products in general all this phases (or most of them) happens online, during the interaction with the website. It is important to discuss what can be the actions on the website which can relate to the mentioned sales funnel phases .

Awareness phase is "when potential customers get an information about the solution offered by product". For the digital product is the first visits on the website, when user is getting general information about the product or service offered by the website. On this phase users are getting from different sources: SEO, SEM, Online Advertisement, referrals, etc. Hence, in normal case, users have limited information about the product and website (company which is offering the product or service through this website) tries to give the visitor all the necessary information to convince her/him to stay on the website and continue using it. Metrics which can be useful for this phase might be the number of site visitors, number of visitors who will make an action intended by the website, etc.

For the next phase, which is an interest phase, "potential customers became interested in the product and conducting research about the solution". In this phases goal of the website might be to collect information about the user, try to register him/her or convince to subscribe to newsletter or opt in to contact him/her in the future depending on case of the product or service Numbers which can be monitored for future use might be the conversion rate from visitor to opted in user, percentage of the visitors performing the desired action, etc.

During the evaluation phase "prospects are starting evaluation of the product in terms of comparison to competitive products and solutions, which means that they are leaning toward a decision". In digital product's case users are already aware of the characteristics of the product offered to them and they might be evaluating benefits and values of the product compared to the price to pay or other resources to spend on it. It will be common for digital products to give a sample, or offer a trial period or other options to user, so that s/he can experience it on herself/himself. Data can be collected about users who will visit specific pages giving them the information about the price of the product, or how to buy it. For online shopping websites it might be number of users adding products to cart, this number compared to the number of registered users who visited the website during specific range of time, etc.

For the decision phase for digital product users already wants to buy the product, but there might be objections which should be overcame. This objections might be very case sensitive for some products, and less for others, but in any case, goal is to systematize this data as well, so that online sales funnel will be built accordingly to deliver right massages to users for making them buy the product.

"It's about how to develop a model of customer behavior, and then use conversion metrics / web analytics to assist internet marketing & product management efforts." [6] For starting development of the model, first, let's discuss the product of EdTech company Lupi and how the model and metrics for this digital product might be built.

2.1 Description of the Lupi product

Lupi is personalized online educational application for schoolchildren. Company describes itself as the „Personalized Duolingo for school subjects". Company is based in Tbilisi, Georgia and product is running only in Georgia at a time of May, 2019.
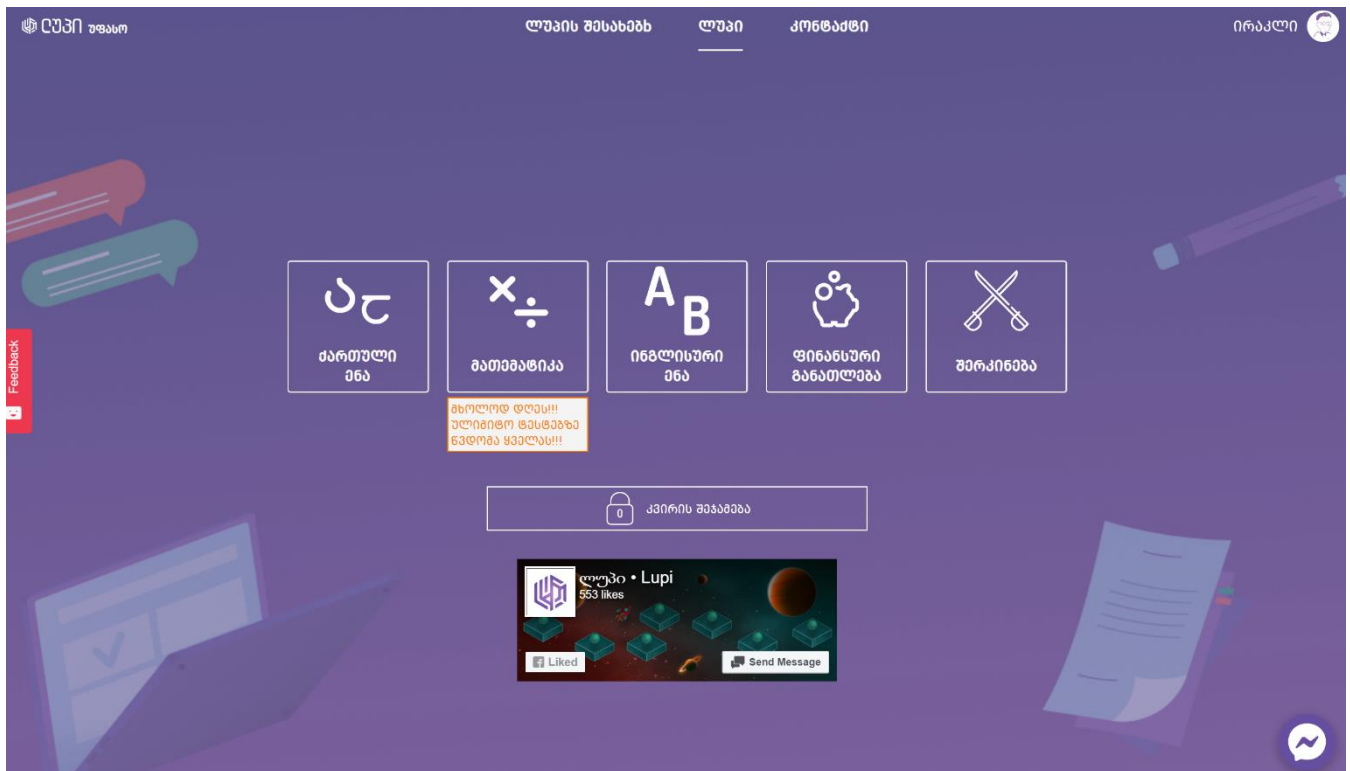

Figure 3: Look at "Choose Subject" page of Lupi

In the application students are doing tests, while all the questions have their answer explanations and in case of a mistake from the student s/he can learn what mistake has been made and what and why was the right solution (Figure 4). It is important to notice that every next question depends on the answer of the previous one and questions, where students made a mistake will be asked multiple times, while application will not „make sure", that student learnt from the mistake. That makes Lupi learning platform, not the testing one.

ლუპი უფასო   საშუაბათის მისია   1:28   თავიდან გამოსვლა

It was a snowy and cold month. One morning Haley fell ill. Her mom touched her forehead and it felt hot. Haley had a fever. Mom took Haley to a doctor. The doctor was kind and beautiful. She gave her a sticker.
She said: "No more ice-cream ,please! Just a lollipop". The doctor told Haley to drink a lot of water. After that, Haley was ok! She went to the market and bought some sweets. Haley did everything that the doctor said. Now Haley is healthy again.

what happened with Haley ?

○ She had a toothache.   ● She was not ill.

⊘ She had a temperature.   ○ She had an ear ache.

შემდეგი

Feedback

ახსნა-განმარტება

Haley had a fever(ჰელის ჰქონდა სიცხე).

Figure 4: Look at Lupi testing process

Important part of the product is a personal feedback, generated by the algorithm based on the data collected. This feedback includes not only statistical numbers about the performance of the student, buy also analysis of the strong and weak aspects of the knowledge and recommendations for the improvement of results.

Also, Lupi is gamified application with related design (Figure 5) and points, which can be earned during the process of working on tests. Hence, this motivates users to do more tests in the application.
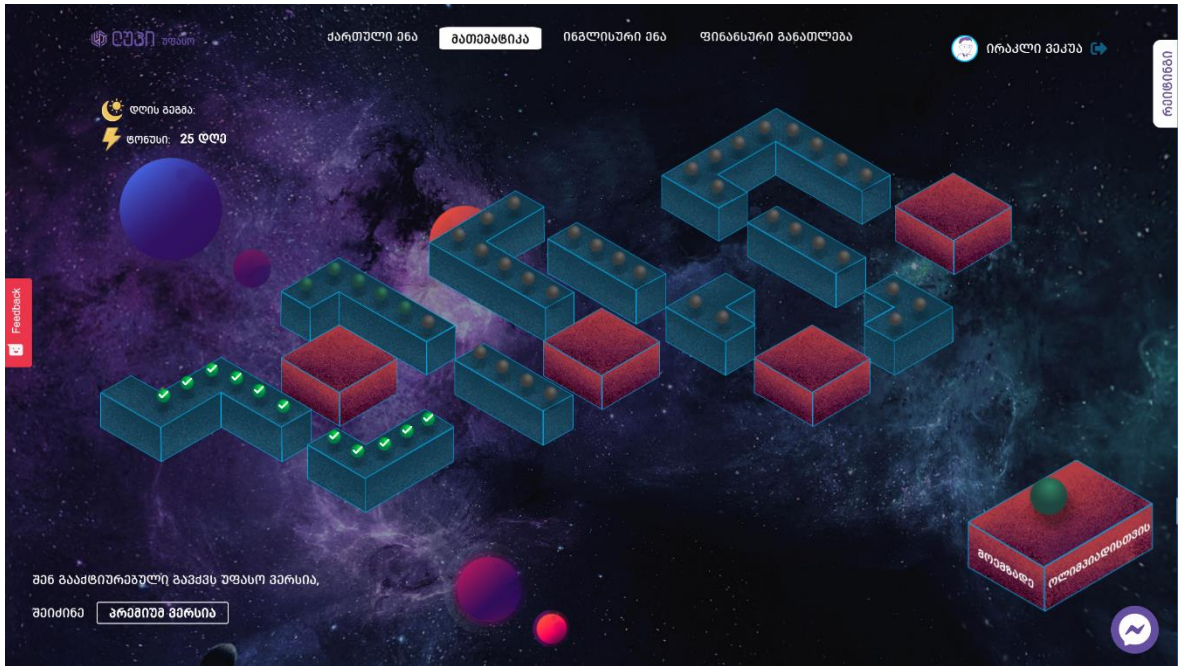
Figure 5: Look at Mathematics page of Lupi

On the back side, there is a B2B part of the product, which is used by teachers and schools. They have an access to data about each individual student to act accordingly and personalize their effort to help each student improve their weaknesses.

While B2B product sales are organized according to the sales funnel phases described in chapter 1 (SALES FUNNELS on page 6), there is a B2C product where online sales funnel can be built.

B2C product of Lupi is using freemium model. „Freemium is a business model which is coined as a combination of the words free and premium. This word describes "a business model in which you give a core product away for free to a large group of users and sell premium products to a smaller fraction of this user base." [7]

There are many examples of freemium model nowadays, for example Spotify (Figure 6), Mailchimp, Evernote, Skype, Buffer and many more.
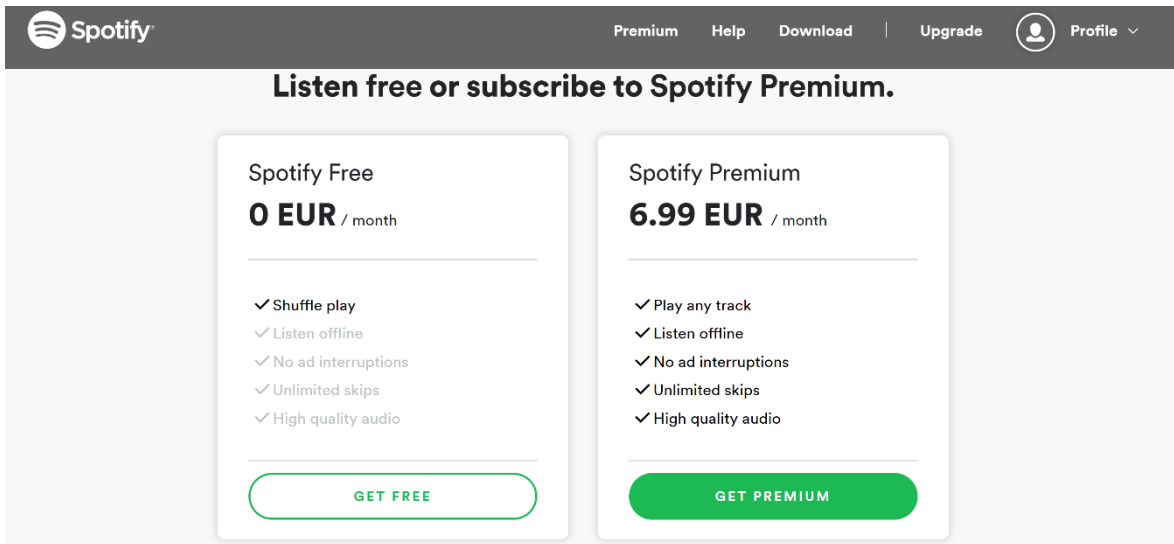
Figure 6: Look at Spotify's Freemium offer

In case of Lupi, free version of the product includes limited access to product functionality: users can finish 1 test per day/per subject, they are getting access to only 3 questions per test and doesn't have any additional features.

Premium version of Lupi includes unlimited access to tests and explanations of the questions, personalized feedback, weekly summery and personal recommendations (Figure 7).
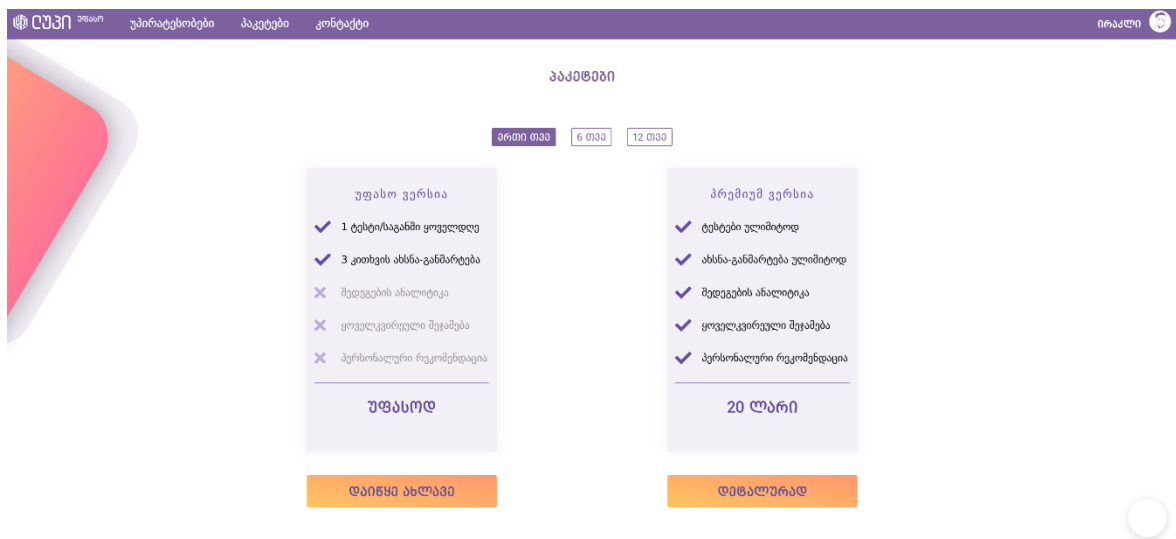
Figure 7: Look at Freemium model of Lupi

Lupi is gamified application and while users are doing tests in the process of using Lupi, they are also gathering some points and bonuses depending on their activities.

Therefore, even users of free version of Lupi can use it every day. This factor enables marketers and people working on customer acquisition and conversion, motivate users to use Lupi every day, and prospects who will do it and use Lupi frequently are the ones who are more likely to convert to being the paying users.

2.2 Lean startup and AARRR framework

Lupi is developing new products and services with Lean startup approach. It is a concept introduced by Steve Blank in his famous article in Harvard Business Review in 2013. [8] This approach is widely used now as an new product development methodology and it is especially suited for technology companies.

Basic idea behind the lean startup methodology is to minimize waste during the development on new product. Waste is the all the work done which will be useless at the end: features, designs, etc. It suggests to build minimum viable product (MVP) for testing the general hypothesis about the product and iterate and pivot (if necessary) based on feedback loop which is generating the data for making decisions based on it. This methodology makes the process of finding product/market fit efficient. [9]
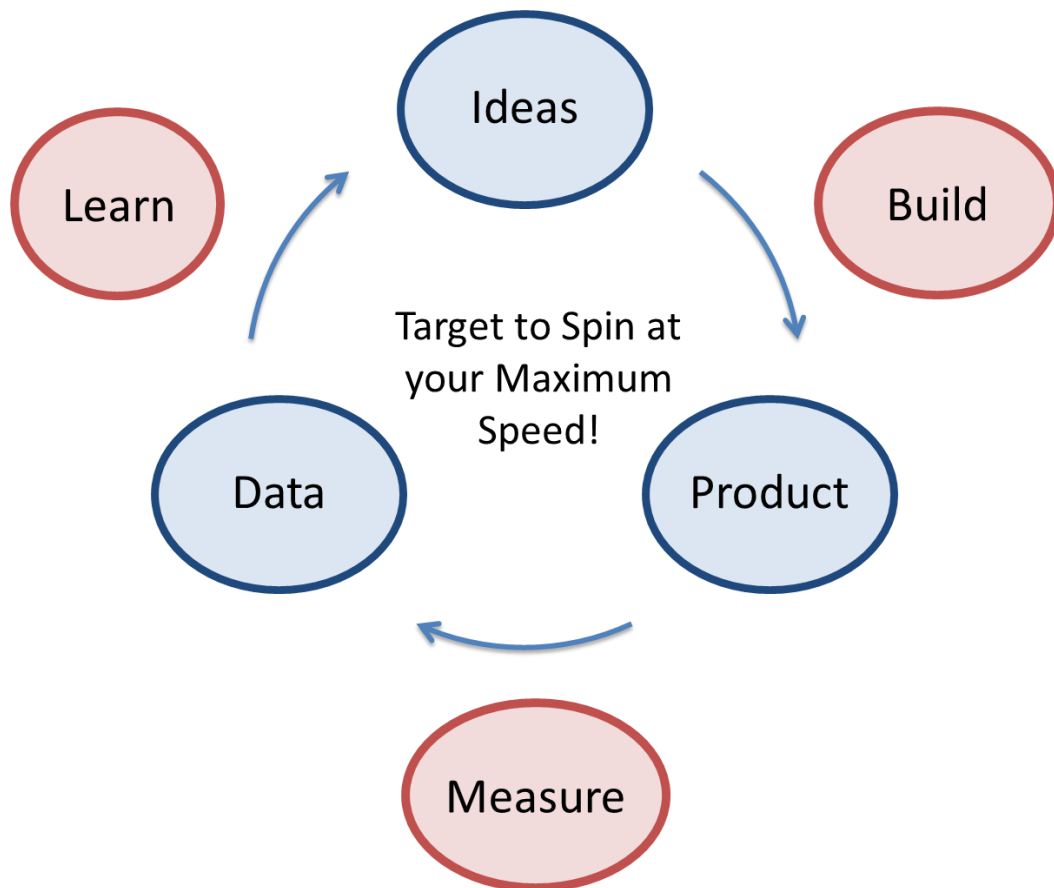
Figure 8: Lean startup framework (source: http://www.agileacademy.co)

Application of Lupi was developed using the Lean Startup methodology as well. It was used for testing not only the general hypotheses behind the Lupi, but also ideas about new features and other changes in the product.

As it is seen on the Figure (Figure 8), Lean startup methodology promotes fast execution of ideas, measurement of the results to generate data about success or failure of the idea and leaning based on this data to come up with the better ideas.

Hence, it is an intense focus on measurement of right metrics, so that data-based decision can be made. "In order to know what metrics to focus on, the company uses a concept known as Startup Metrics for Pirates. The five metrics of interest are: acquisition, activation, retention, referral and revenue, or AARRR! for short. These metrics must be dealt with in that order; the product is optimized for acquisition before moving on to activation, then retention and so on. This keeps the company focused on the most important metric." [10]

This framework (Figure 9) was introduced by Dave McClure, co-founder of 500 Startups (startup acceleration in USA) and is very common to be used by technology companies, especially if they are using lean startup methodology for the new product development too. That's because AARRR framework focuses on metrics that are not only useful for building first online sales funnel for products which are still developing but also makes it easier to come up with product changes or new features which will make product and/or online sales funnel better.

AARRR (also known as Pirates Metrics) framework looks at sales funnel as a user journey from first interaction to becoming customer as a step by step process:

- Acquisition
- Activation
- Retention
- Referral
- Revenue

Let's go through these 5 steps:

Acquisition represents users who found the website or product. In most cases with digital products this phase represents website visits. Acquisition of this people can been done by many different ways, starting from search engines and social networks, ending with advertisements and referrals. It is important to monitor all the sources which gets users to the website.

Activation is done if website can get an user to a so-called "aha-moment". That is when user experiences the essence of the product and understand it's benefits or advantages.

Retention means that users are getting back to the website. It means that they are liking the product and likelihood that they will buy the product increases.

Referral is the phases, when users are already talking and suggesting the product to others and getting new users to the website. Of course, it is the determinant that users really see the benefits of using the product or service.

Revenue is obviously phase, when users are already paying for the product and the goal here should be maximizing long-term profit from that users.
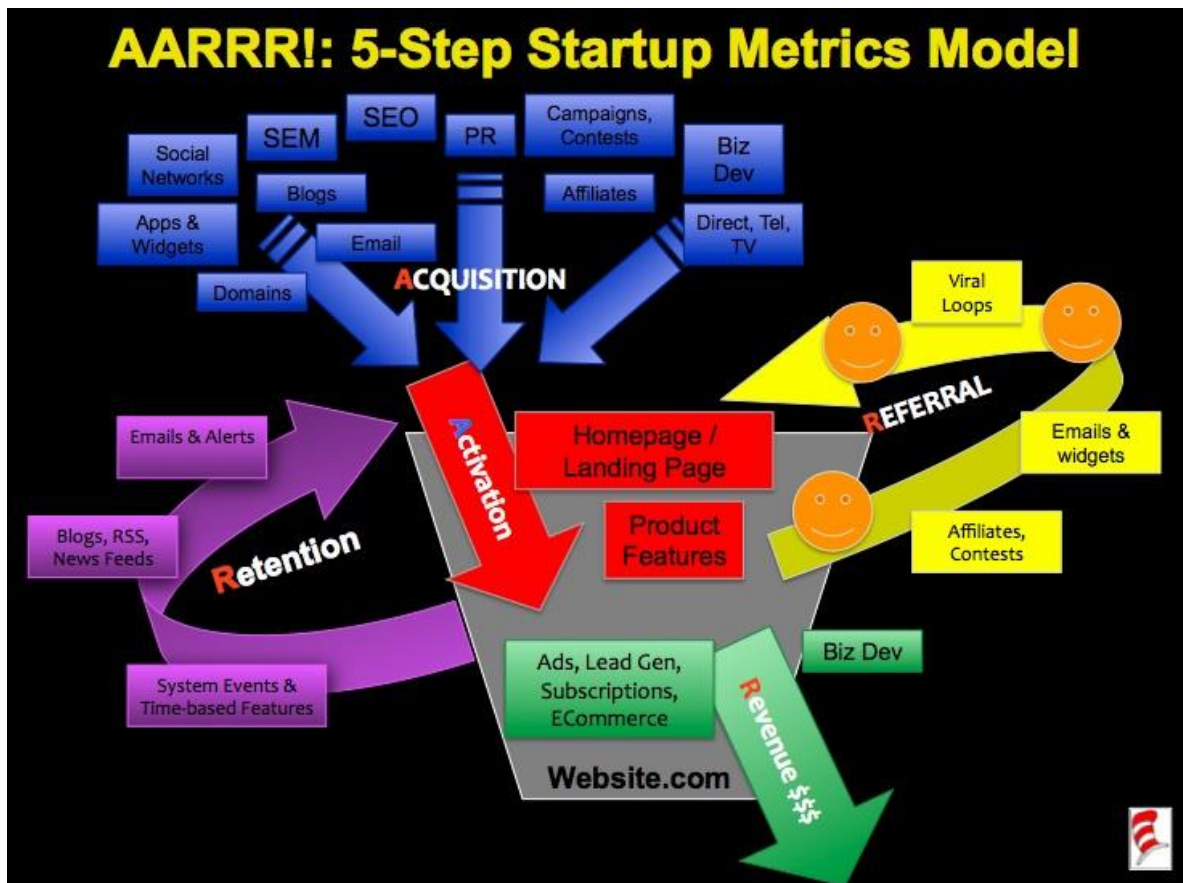
Figure 9: Graphical illustration of AARRR! framework from the presentation of Dave McClure

All this steps can be monitored automatically and it is important to look at metrics of micro-conversions from one phase to the next. Also, improving the funnel in general is the sum of improving each step of the funnel. Therefore, it is much efficient to focus on improvement of the one step at a time. There might be normal conversion rates from referral stage to revenue, for example and improving that even by small percentage might be quite hard, while there might be a big problem in retention phase and focusing on that can be much more productive in this kind of case.

2.3 Phases of the online sales funnel

For automating online sales funnel there are 3 steps to do:

1. Identifying parts (phases) of online sales funnel
2. Identifying ways (determinants) for putting potential customers in one of the parts (phases) of sales funnel at a time (each prospect should be in one of the parts of sales funnel at any moment)
3. Building tools which will make potential users getting from one sales funnel phase (step) to another automatically based on their behavior (trigger-based).

In case of Lupi AARRR framework was used for creating the first version of the sales funnel. That means, sales funnel was divided into following parts (Figure 10):

- Registration on the website (That was an acquisition part)
- Finishing 1 test (That was a part of activation)
- Finishing minimum 1 test for 3 days in a row (That too was a part of activation)
- Finishing minimum 1 test for 7 days in a row (That was a retention part)
- Sending invitations to friends for exchange of some benefits (That was Referral part)
- Purchasing some payed subscription (Revenue part – obviously)
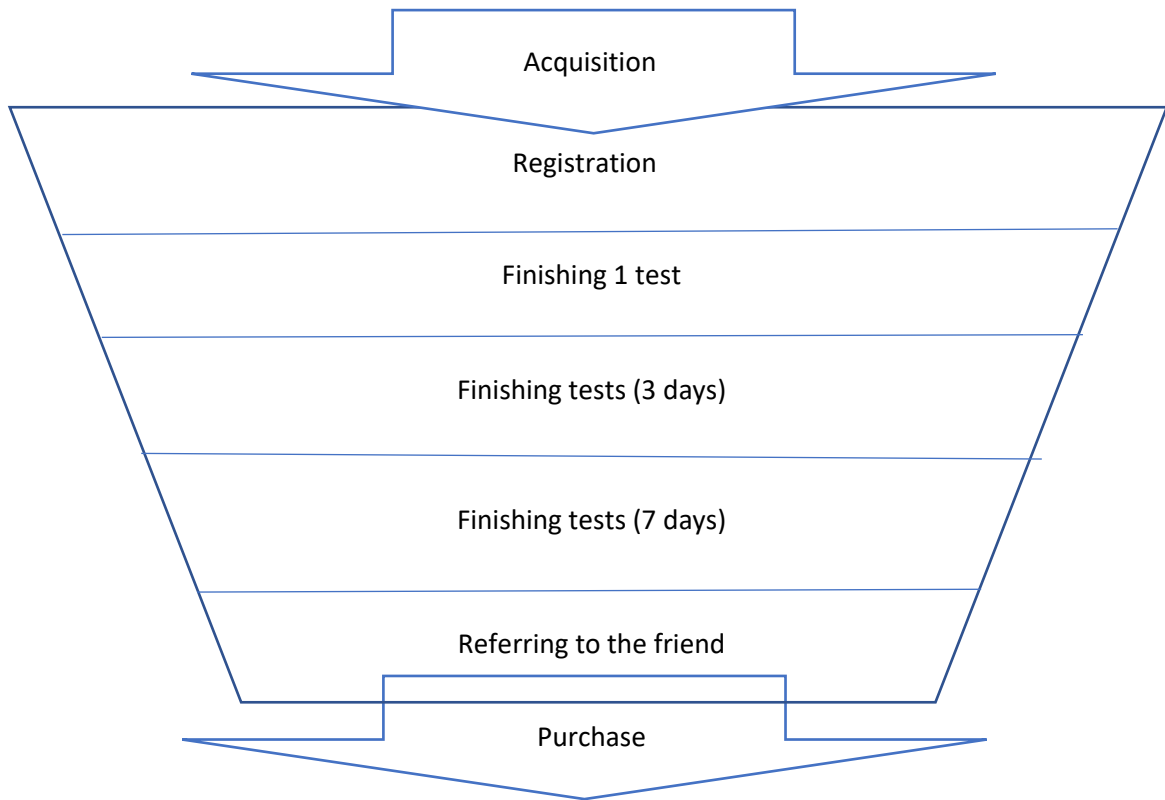
Figure 10: Online sales funnel v. 1

Of course, it was not clear at first if that was a right way for dividing the sales funnel and couple of iterations were done before final decision about sales funnel steps.

After deciding about sales funnel steps, it was necessary to understand if there were clear determinants in place for identifying each prospects place in sales funnel at any given moment.

Of course, it was quite intuitive that with more interaction with the product by the users, there was more likelihood that they were liking the product and were more willing to purchase the premium version in the future. But more interaction with the product can be identified (counted) differently:

- Time spent with the application
- Tests finished in the application
- Frequency of using the application
- Liking the application

While first two factors can be measured more easily, frequency of the usage of the application and liking it can be measured with many different approaches.

Goal was to try different approaches and identify the best possible way of measuring interaction which would correlate with likelihood of purchasing Lupi in the future.

Here there was an issue with referral part: prospects were willing to refer to their friends about Lupi not only after using Lupi for 7 days in a row, but earlier too. That made difficult to decide if the person with 1 or 2 days of experience of using Lupi were referring about the product to her/his friend, s/he was already near to purchasing the product or s/he was almost the same type of potential prospect as the one with same number of days in a row using Lupi but didn't referring yet to friend about the product.

Small A/B test regarding this question was conducted (it was tested on all users who were satisfying conditions of selection, but this number was not big enough to be representative for the 10X number of users, hence this test should be repeated in the future): random sample of users (who were using Lupi for same number of days in row) were taken and one group haven't yet referred Lupi to her/his friend while second group had already done it. Both of this groups were approached with exactly same marketing massages and other sales tactics and results of this two groups were compared. Results were not correlative, meaning that this factor (referring to friend) was not determining likelihood of making the purchase in the future, so it was decided to remove this part (step) from the sales funnel (Figure 11).

Hence, online sales funnel modified to this form:
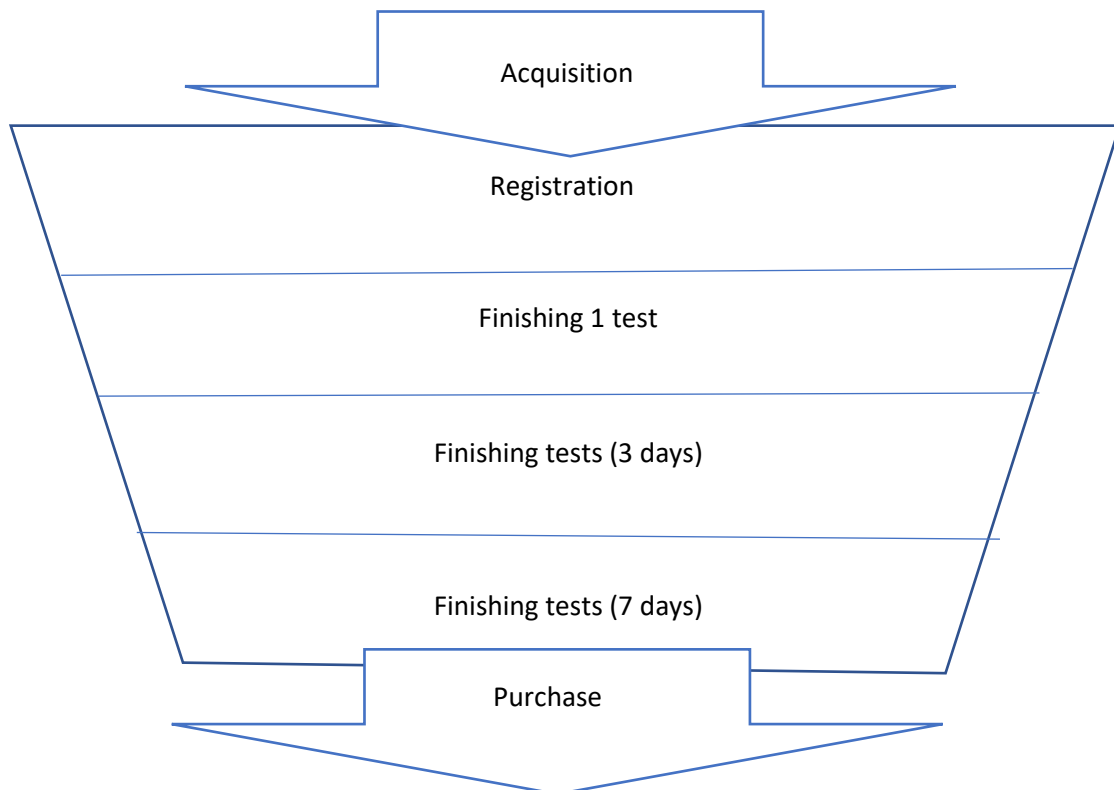
Figure 11: Online sales funnel v. 2

Also, referrals might be useful for attracting new users and they are bringing new people at the start of online sales funnel. Because of that, referral part was added to this framework outside of the main funnel and result was more precise look of how framework works in reality (Figure 12):
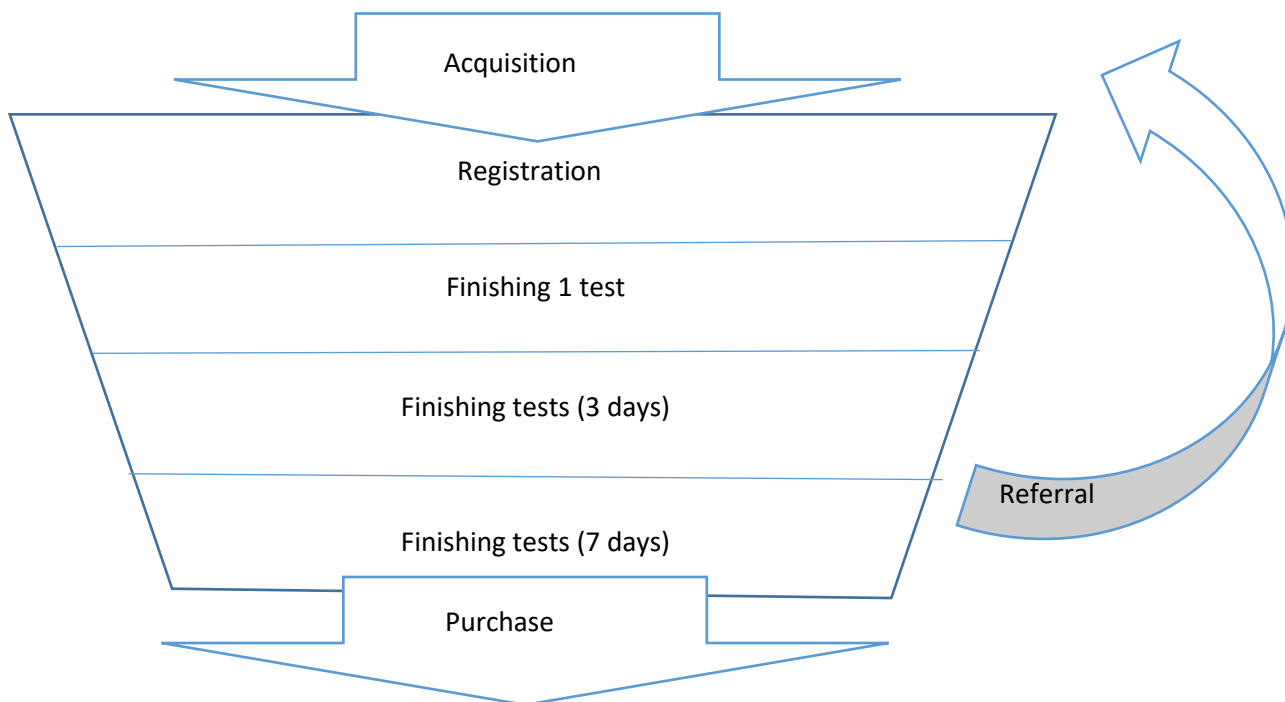
Figure 12: Online sales funnel v. 3

One more thing should be underlined: there will be prospects, who will be ready to buy the product before they will finish tests 7 days in a row. Additional determinants, which can help to understand who might be this type of prospect is a very useful for closing the sale sooner than expected. In case of Lupi, it can be "looking at pricing page" ("Packages page", see Figure 7), researching ways for paying for the product on the website, etc. Hence, after adding this part to the sales funnel, result was the following graphical illustration of the sales funnel (Figure 13):
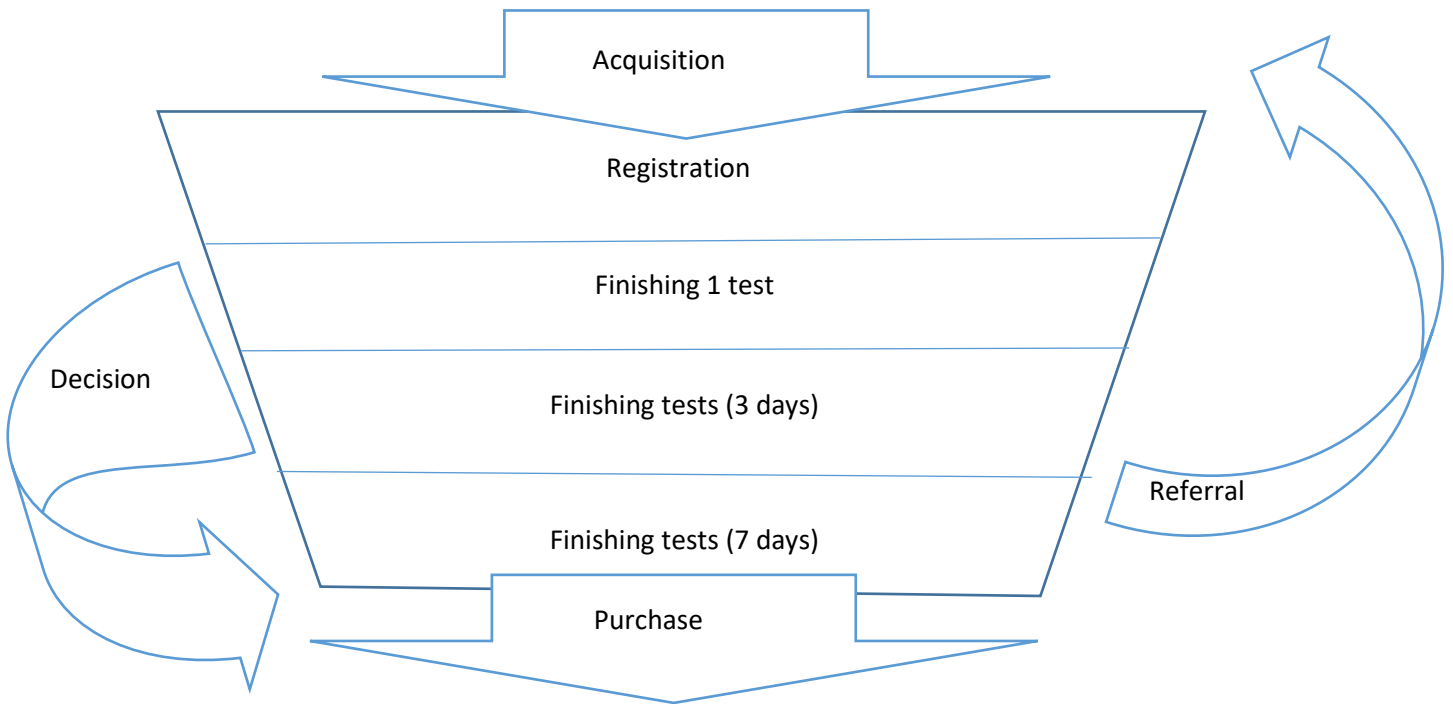
Figure 13: Online sales funnel v. 4

This representation of the online sales funnel takes into consideration all the important factors about user journey at present on website of Lupi, starting from the first visit ending with the purchase of the product.

After identifying and testing phases of the online sales funnel, it is important to distinguish for each prospect on which phase of the sales funnel is s/he at this moment.

In case of Lupi users were acquired from different sources and they were getting to the website. As the next step in the online sales funnel is Registration, it is easy to understand that all the registered users had been on this phase of the sales funnel during specific period of time. Also, prospects who got to the website, but didn't registered had dropped out from sales funnel (at that point). One more thing to underline is that if prospect haven't registered, then s/he can't get to the next phase of the funnel, which is finishing minimum of 1 test. Hence, if prospects who have been on the website but didn't registered, can be filtered, then this group of people can be characterized as a phase 1 (Acquisition phase) prospects.

Same logic follows for other phases as well. For phase 2 prospects, users who have already registered but didn't finished any test yet should be identified. Hence, if after filtering them from others, there will be a group of people who are on phase 2 (Registration phase) in the sales funnel.

3 AUTOMATION OF THE ONLINE SALES FUNNEL

The term "Marketing automation" was first introduced by John D.C. Little in his presentation at the 5th Invitational Choice Symposium UC Berkeley 2001 and refers to the automated marketing decision support on the Internet. [11]

Important advantage of online sales funnels can be their automation. It means, that if build properly, online sales funnels can function without further modifications for moderate or long period of time.

Online sales automation can be done by automating email campaigns for trigger-based segments (prospects in one of the online funnel phases). Prospects who will act with specific trigger are receiving email which tries to convert them into the next phase of sales funnel. If successful, then same logic applies for the next phase of the funnel and if not, there can be multiple additional emails with different content but the same goal of converting prospects to the next stage of the sales funnel.

In case of Lupi, users are representatives of generation Z [12]. In general, Generation Z includes those born beginning in 1995. Coincidentally, this date aligns with the approximate time when the World Wide Web became publicly available. [13] "They may never send an email: [that is "so yesterday"]. Why email when you can text, instant message, tweet or Facebook?" [14] Hence, using email marketing for converting them from one phase of online sales funnel to another is less effective than for older generations and using text or/and Facebook can be much more effective and efficient. Moreover, for registering on Lupi, user does not need an email, it is not the mandatory field in the product (to increase conversion rate of registration on the registration page) and less than 15% of users are indicating email addresses in their Lupi account.

Hence, the goal is to automate online sales funnel with the right and suitable tools for Lupi. Usability of text (SMS) and Facebook for this purposes will be discussed.

3.1 Automation of the online sales funnel using Facebook

The online sales funnel for Lupi has 6 phases:

1. Acquisition

2. Registration

3. Finishing test

4. Finishing 1 test (minimum) 3 days in a row

5. Finishing 1 test (minimum) 7 days in a row

6. Purchasing premium version

For automation of online sales funnel using Facebook, creation of Facebook ads (which will be specifically directed to the people who are on the concrete phase of the online sales funnel) will be needed and this ads will have Call to Actions (CTA) for converting this prospects to the next phase of the sales funnel.

For creating audience, business account of the Facebook should be used and under "Assets" column there is a tool called "Audiences", which makes it is possible to create audiences based on website traffic.

Hence, custom audiences feature on Facebook's ad platform was used. Custom audience feature enables marketers to create audiences using following data ():

- Website traffic

- Customer list

- App activity

- Offline activity
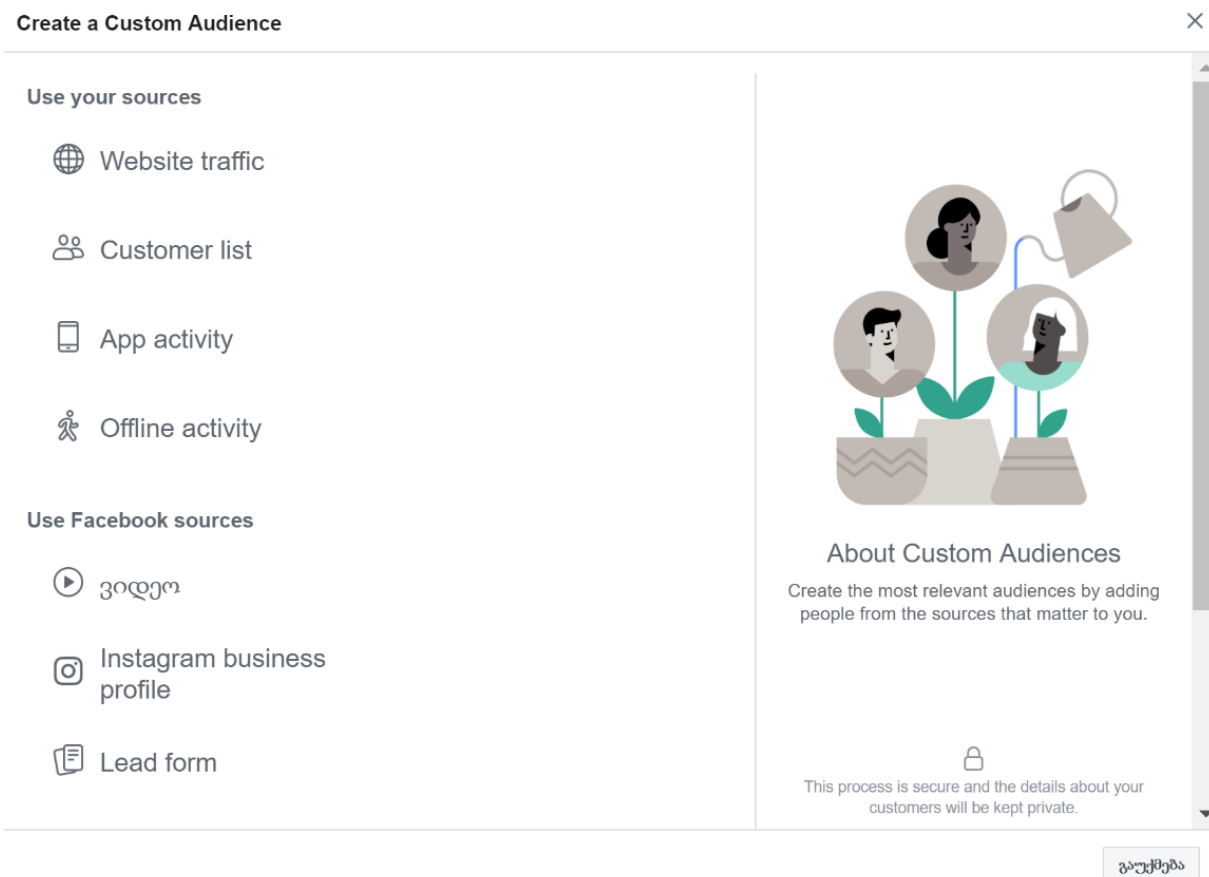
Figure 14: Creation of a Facebook custom audience

Also, there is a possibility to create custom audience using Facebook sources, meaning that it is possible to create audience based on user interactions on Facebook and other Facebook platforms. It is not discussed further here as in case of Lupi concentration is on custom audiences that are created using website sources.

For creating custom audience based on website traffic data Facebook Pixel should be implemented on the website. "The Facebook pixel is an analytics tool that allows measuring the effectiveness of advertising by understanding the actions people take on the website."[1]

Implementing Facebook Pixel into website enables Facebook to track users who are visiting it. Also, implementing more advance tracking features using Facebook Pixel are possible, for example tracking actions (button clicks, completing action, etc.) and other behaviors of the user on website.

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[1] https://www.facebook.com/business/help/742478679120153?locale=en_US

In case of Lupi Facebook Pixel was added to the website to build custom audiences based on specific page visits. For example, audience which was tracking all website visitors for last 30 days (Figure 15) and audience of users who have been on page – „Choose Subject" (link: https://lupi.ge/#/choosesubject) for last 30 days were created (Figure 16).

Figure 15: Audience of website visitors for last 30 days

This page ("Choose Subject"; Figure 3) is the first page user is visiting after successful registration or login. Hence, people who have been on this page are registered users.

Figure 16: Audience of "Choose subject" visitors for last 30 days

When creating Facebook ads, it is possible to subtract one audience from another. In case of Lupi, this enables to subtract registered users (people who have visited „Choose Subject" page) from all visitors (who visited Lupi in general) and get an audience, which consists only by users who have visited Lupi, but did not register (Figure 17); So, remarketing can be done (remarketing is showing ads to people who have already visited website previously) targeting them with Call to action (CTA) for registering on Lupi.

Figure 17: Creating audience by subtracting audiences

Here is the one more factor to consider: Marketing massages. When automating online sales funnels, there might be several phases of the funnel, which are different in terms of customers likelihood and readiness to purchase the product (that should be the reason, why they are not in the same phase of the funnel), but the marketing massage and CTA which should be sent to the prospects on this different phases might be the same. If that is the case, then there is no sense in terms of automation of the sales funnel to separate this several phases.

In case of Lupi, after prospect has already finished minimum of 1 test, that prospect is in phase 3 or higher (if prospect is finishing tests for several days in a row), but for purpose of Facebook ads it won't make sensible difference, if same massage will be delivered to all of the phase 3, 4 and 5 prospects and all of them will receive call to action (CTA) of "being active" and "work on tests".

Hence, "general" audience of users was created (analogically as for audiences of "website visitor for last 30 days" and "visitors of choose subject page"), who have finished minimum of 1 test for last 10 days and didn't purchased premium version of Lupi yet. This audience was targeted with call to action of "coming back to Lupi for working on tests".

Of course, situation is different in case of phase 6, where goal is to convert active user to a paying customer. In this case, communication is done by different massages which are related to closing the sale and it can be: highlighting advantages of using premium model, offering limited in time promotion, etc.

High correlation between users who were active on the application (number of "Tonus") and who have visited page of "packages" was noticed. Actually, higher the number of "Tonus", number of visits on page of "packages" was also higher. Because of this correlation, the custom audience for people who have visited this page was created (page of "packages": https://lupi.ge/#/paketebi) (Figure 18).
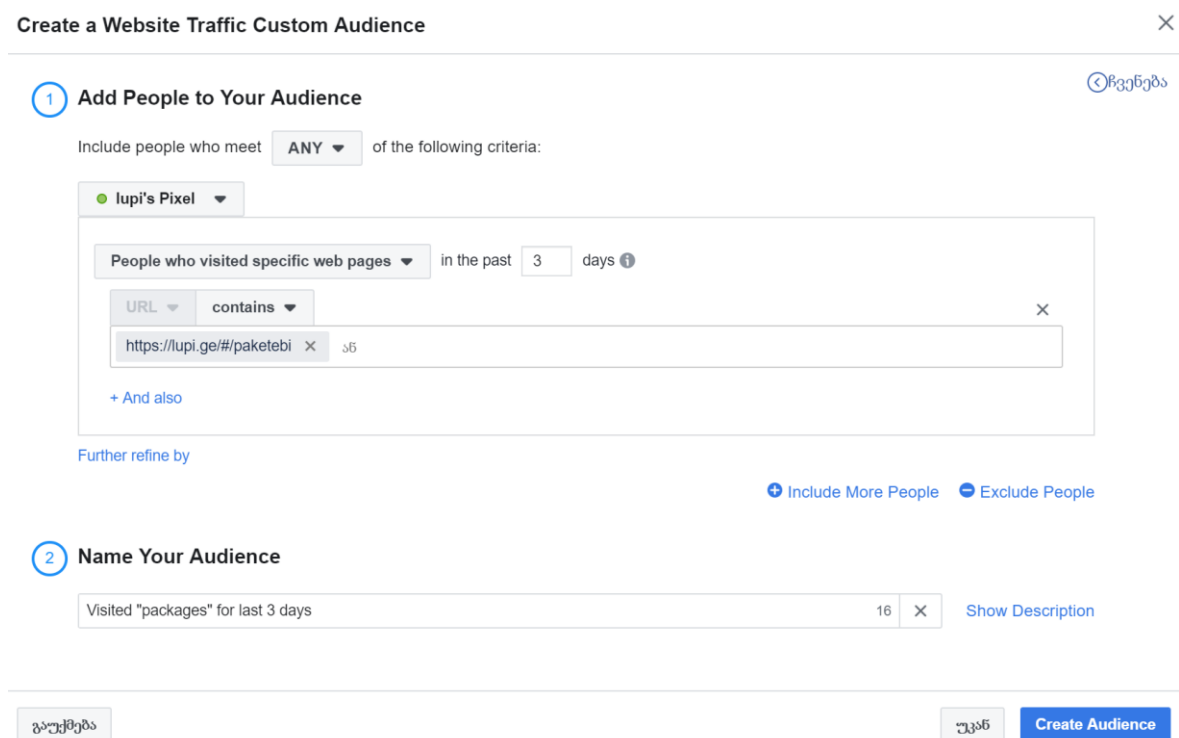

Figure 18: Creating custom audience for visitors of page "packages"

Same approach was used in case of audiences of website visitors and visitors of page "choose subject". It was decided to limit "days after visiting this page" with 3. Hence, advertisement to convince users to purchase the premium package was showed only for 3 days after they have visited

the "packages page". It is important to notice, that users who bought premium version after this advertisement were excluded by creating the audience who visited "successful payment" page on Lupi (Figure 19). So, if user would convert through this advertisement (or other way), s/he would have been on the "successful payment" page and by excluding this audience from the target audience of the Facebook advertisement targeting people who have already bought the premium version of the product was avoided.

Figure 19: Excluding paying users from the target audience

To summarize, creation of audiences based on website traffic is an effective way for online sales funnel automation. This audiences are changing automatically and if sales funnel advertisements are done properly (with advertisements and call to actions which are converting users to the next phases of the funnel), users will always get massages which are suited and targeted to them based on their current activities on the website.

Additional note: *As online sales funnel focuses on actions which should be fulfilled in short term (finishing the test same day or during next days), it is better to create audiences based on short term activities for this type of CTA Facebook ads. For example, if person didn't registered on Lupi when he first visited the website and after seeing the ad on Facebook for 3 days in a row, which calls for action of completing registration and prospect does not interact with the ad (does not visits*

website), it is better to stop advertising in front of him/her. Hence, it is more beneficial to have audience of the people who visited the website for last 3 days. For the second audience, as they are tracked by visiting specific page, the time cycle should be the longest possible, so that the most number of registered users will be included in this audience. Facebook pixel allowed creating audiences based on 180 days of website activities. But in case of Lupi, there is a plan to subtract this audience from the audience which only includes the people who have visited the website for last 3 days. So, that won't make a huge difference if audience of registered people will be created by 180 days activities or just activities from last 3 days, but there is a chance that some users who are already registered, visited Lupi for last 3 days, but does not logged in, which means that automated audience can't track him as a registered user. In this case, if there will be an audience of visitors based on last 3 days activities and audience of the registered users with the same timing cycle, after subtracting this two audiences, there will be left not only the people who visited the website but didn't registered, but also might be that there will be small number of people, who are already registered, visited the website during the last 3 days and didn't logged in. Hence, ad with CTA of registration will be shown to them, which will be a mistake.

3.2 Automating the sales funnel using SMS

Inside the online sales funnel, after user have already registered on the website and finished test main goal became engaging them even more. "Following Fogg's behavioral model [15] (Figure 20), prompts may provide the necessary trigger to engage with intervention content whereas theoretically informed prompt content may provide the necessary motivation to do so." [16]
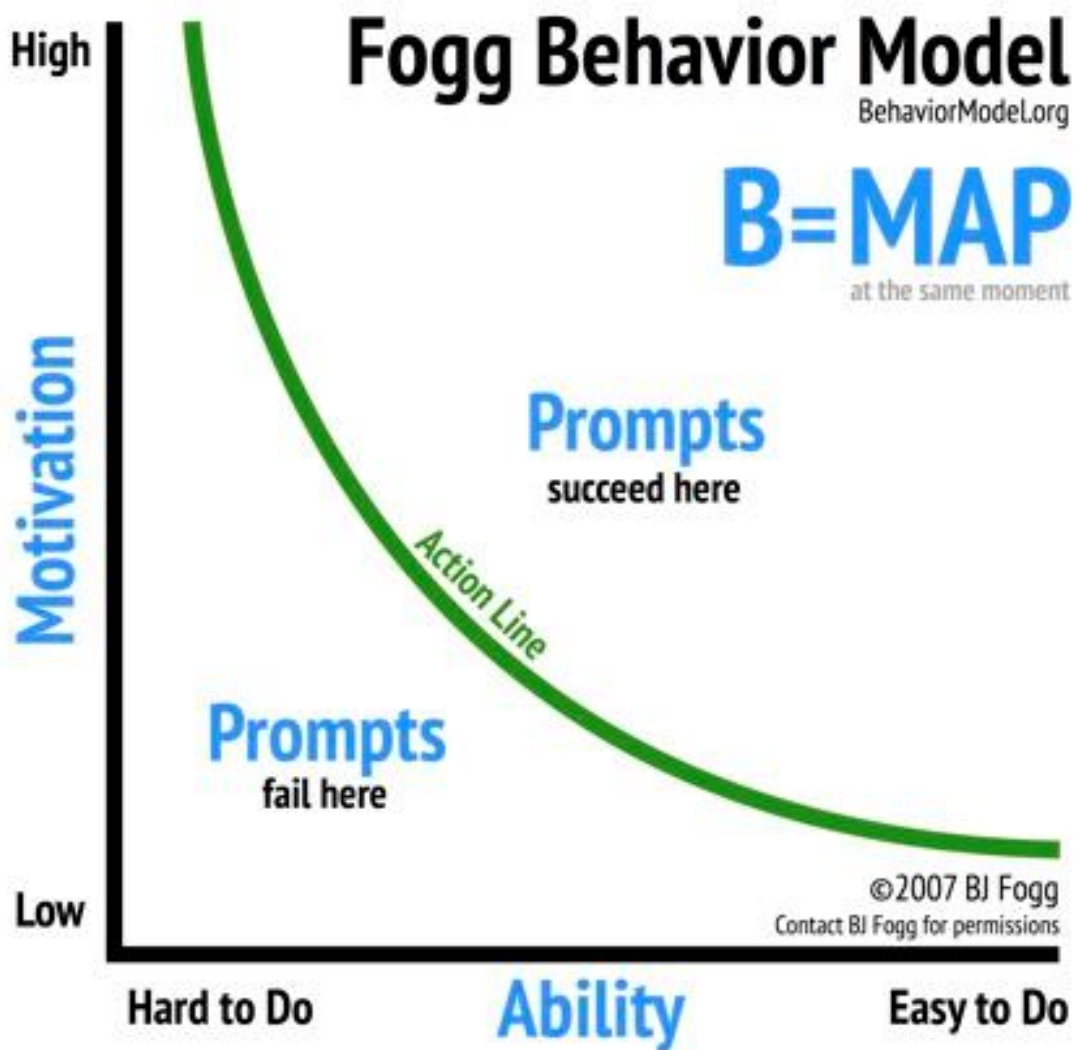
Figure 20: Fogg's Behavior Model (source: https://www.behaviormodel.org/)

SMS (Short Message Service) can work as a notification (communication) tool for product. Users will receive them as an push notifications. Push notification reminds user about specific action to do and works like stimulus and trigger for motivating taking desired action. It can be very useful and efficient for moving prospects to further phases inside the sales funnel.

"Research has also indicated that sending additional push messages in different formats (e.g. email and SMS) may have adverse effects on desired behavior compared to the use of just one message type." [16] [17]

As there was a general concept of sales funnel for Lupi already, small modifications for adjusting it specifically for SMS tool were done.

There was an idea about the gamification element which would motivate users to use Lupi every day and would make it easy to separate users with this determinant. Lupi introduced "Tonus" (so-called "Streak"-like feature), which is the number and represents days in a row when user was finishing minimum of 1 test per day. Hence, if someone has the "Tonus" of 3, it means that this user was finishing minimum of 1 test for last 3 days; If "Tonus" is 10, then user have had finished minimum of 1 test for last 10 days, etc. If user with miss the day without finishing the test, "Tonus" becomes 0 and user should start collecting "Tonus" from start.

It should be mentioned, that "Tonus" numbers were important factor for getting general points in Lupi which are determining users place on a leaderboard. Hence, there was a clear stimulus for earning maximum number of "Tonus" for users which cared and followed their places on the leaderboard.

So, "Tonus" was used for the following characteristics for SMS funnel:

a. Finished minimum of 1 test during last 10 days;

b. Has "Tonus" of at least 1;

c. Has "Tonus" of at least 3;

d. Has "Tonus" of at least 7.

Purchasing phase was not included into the funnel, because of assumption that purchasing decision would be made online anyway and SMS "notification like triggers" would not help much.

After using data for finding patterns regarding this factors it was seen that "Tonus" of 7 was a good determinant for engaged user: after achieving "Tonus" of 7, users were already self-motivated for continuing using Lupi and difference in likelihood of converting from free to Premium version was insignificant for users with "Tonus" of 7 and 20. Hence, as a last phase of the funnel (before "making purchase" phase) "Tonus" of 7 was taken as it was a good determinant for likelihood of purchasing the premium version and additionally, it was easy and clear to track.

After starting to work with this funnel, lack of data from 2nd to 3rd stages of the funnel and from 3rd to 4th stage were identified .

Hence, additional monitoring numbers were added to the funnel:

1. Minimum of "Tonus" of 1 for last 10 days

2. Minimum "Tonus" of 1 currently

3. Minimum "Tonus" of 2 currently

4. Minimum "Tonus" of 3 currently

5. Minimum "Tonus" of 4 currently

6. Minimum "Tonus" of 7 currently

For tracking this metrics and users with this "Tonus" numbers, dashboard was created, which showed all this information, including conversion rates from one phase to another (Figure 21).

Figure 21: Dashboard for monitoring the flow of users through funnel

This was the part of the analytical dashboard, which was tracking all the metrics identified as an important and (what is more valuable) actionable. Dashboard included "Tonus funnel" and graph of finished tests per day (Figure 22), graph for "registrations per day" and graph for "tests per subject per day" (Figure 23) and graphs for "referrals sent and activated" (Figure 24).

Figure 22: Look at dashboard of Lupi -Tonus funnel and graph of finished tests per day
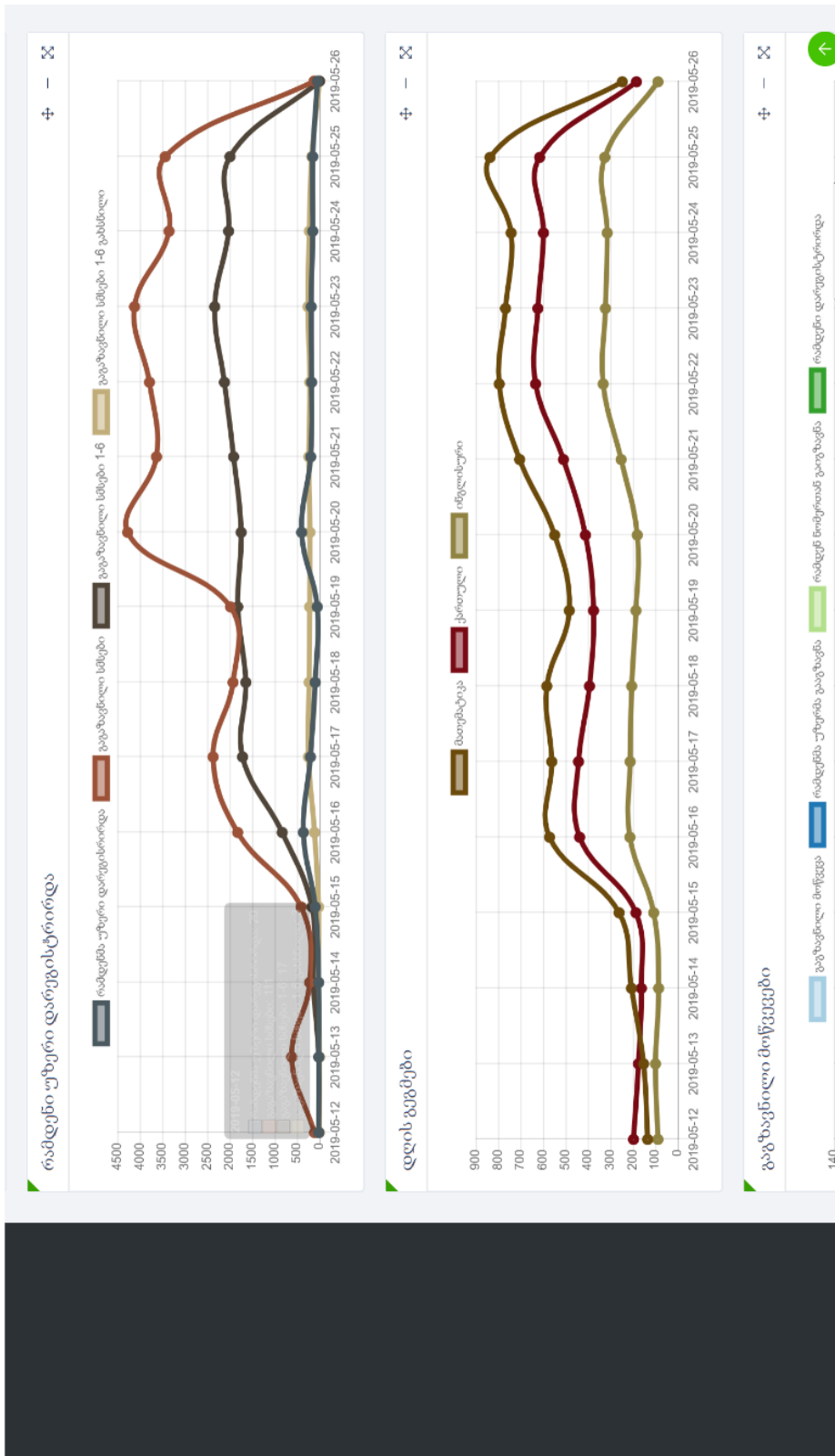
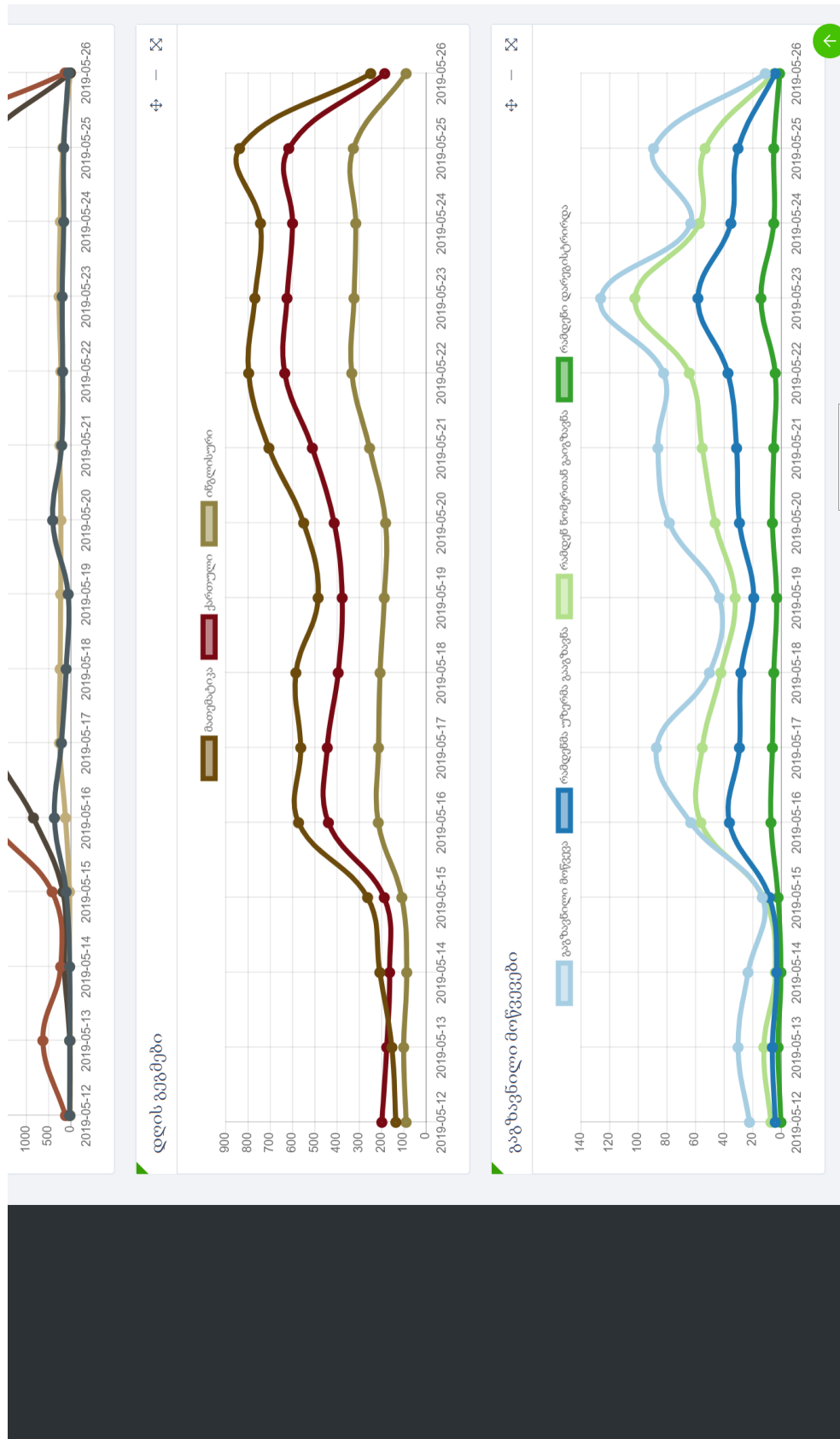Figure 23: : Look at dashboard of Lupi -Registration per day and tests per subject per day graphs

Figure 24: Look at dashboard of Lupi - Graphs of tests per subject per day and referrals sent/activated

For each phase of this funnel, SMS text was created, and they were individualized and tested by sending them to users on different times. After 2 weeks of iteration result was the model which is described below.

There was a software built (using SMS provider API), which sends individualized SMSs to users if they meet the criteria which was defined for this purpose.

Users were divided into 5 categories:

1. Users who have "Tonus" of 0 currently, but have finished the test during the last 10 days.

2. Users who have "Tonus" of 1 (exactly 1) and tell them that they have earned their first "Tonus" yesterday.

3. Users who have "Tonus" of 1 to 3 and didn't finished test that day before 9 PM (so they might lose their "Tonus").

4. Users who have "Tonus" of 4 to 7 and didn't finished test that day before 9 PM (so they might lose their "Tonus").

5. Users who have "Tonus" of more than 7 and didn't finished test that day before 11 PM (so they might lose their "Tonus").

On 6 PM system sends SMSs to users from the first two categories:

1. Users who have "Tonus" of 1 (exactly 1) and tell them that they have earned their first "Tonus" yesterday.

2. Users who have "Tonus" of 0 currently, but have finished the test during the last 10 days.

To users of the first category Lupi is telling that they should finish tests for today as well for continuing collecting the "Tonus".

To users of the second category Lupi is telling them to come back to Lupi for continuing learning and earning "Tonus".

On 9 PM system sends SMSs to users from categories 3 and 4:

3. Users who have "Tonus" of 1 to 3 and didn't finished test that day before 9 PM (so they might lose their "Tonus").

4. Users who have "Tonus" of 4 to 7 and didn't finished test that day before 9 PM (so they might lose their "Tonus").

Lupi tells users from 3rd category that they are just getting on the track and they have more 3 hours to finish the test, so they will not lose already earned "Tonus".

To users from 4th category Lupi is notifying that they have not finished test yet and it is strange for the user who is so active.

On 11 PM system sends SMSs to users of 5th category, who are users with "Tonus" of more than 7 and tells them not to forget finishing the test that day and they have only 1 hour for keeping their "Tonus".

These massages are individualized, and post-SMS behavior of users are tracked. If users are not reacting to massages for 3 days in a row, sending them SMSs are stopped.

Additionally, of course, users can stop receiving SMSs by indication about it on their profile on Lupi or using "NOSMS" feature from SMS provider.

3.3 Finalizing the sales funnel and future work

After testing sales funnel on real users, it can be divided into 3 parts based on goals each phase of sales funnel is accomplishing:

1. Acquisition

2. Activation

3. Close

These 3 parts are essential and, quite separated from each other: all three of them can work separately well or poorly, while it won't affect other parts much.

Goal of the acquisition phase of the funnel is to attract potential users to the website. It is done outside of the website (if referral part of the funnel is excluded) and there are many sources (places)

for doing it. This thesis was not focused on discussing how to do this part of the funnel and it can be the topic for future work and discussion.

Goal of the activation is to get users excited about the product and engage them, so they will be willing to purchase premium version of the product (or they will be monetized in other way). This part of the funnel was discussed in details based on case of Lupi and two automated sales funnels have been built (Facebook funnel and SMS funnel) which converted users from just visiting the website to activating them in a way, that they were using product every day for minimum of 7 days (in case of users who collected "Tonus" of 7).

Last part of the sales funnel is close. Users might be ready to buy the premium version of the product, but they have to overcome hesitation they might experiencing. For helping them in this, Lupi should target them with the right massage, which is not the same for different users. Performance of online sales funnels might be the least effective in this phase.

As the operational profit margin for digital product and also, (normally) customer lifetime value (CLV) are high, it might be worth to directly contact "hot" prospects and convert them to paying users with involvement of sales representative, who can personalize offers for 'every' user. Also, talking to users helps to improve massages for the online sales funnel as well.

Because this was the case for Lupi (high operational profit margin) this approach of direct calls to users was tested.

After testing all 6 groups ("Tonus Funnel" groups: 1. Minimum of "Tonus" of 1 for last 10 days; 2. Minimum "Tonus" of 1 currently; 3. Minimum "Tonus" of 2 currently; 4. Minimum "Tonus" of 3 currently; 5. Minimum "Tonus" of 4 currently; 6. Minimum "Tonus" of 7 currently) of users with sales representative calls, it was not surprising that number of Tonus was in a direct correlation with conversion rate of free user to paying one.

It was identified that even in case of "Tonus" of 3, involving sales representative was profitable even in one-month outlook, but profit margin was increasing 300%+ in case of "Tonus" of 7. Hence, online sales funnel works to get maximum number of users to "Tonus" of 7 and then (if user have not converted yet into premium version of Lupi) sales representative is contacting this group of users to help them overcome their hesitation and convert them into paying users.

As a conclusion, automation of the online sales funnel depends on following factors:

- Building the sales funnel with clarity of phases

- Identification of criteria for assigning each user to one of the phases of sales funnel

- Building the system which will monitor users online based on identified criteria

- Identification of the triggers which will transfer users from one phase to the next

- Automation of this trigger based system.

SUMMARY

Main goal of the thesis was to study and develop online sales funnel for digital product – education technology product for Lupi. It was important to discuss and identify factors for automating the online sales funnel.

This thesis includes introduction, three chapters, summary and appendixes. In first chapter description of sales funnels and importance of online sales funnels are covered. In second and third chapters the development of online sales funnel and their automation are discussed.

Online sales funnel was developed for the educational technology Lupi based on Lean startup methodology and main idea of this methodology it to minimize waste during the full process of development. The AARRR framework, based on the following five metrics: acquisition, activation, retention, referral and revenue, was employed.

The automation of online sales funnel is analysed and tested based on Facebook and SMS channels.

As the result of this thesis the factors that are influencing building of automated online sales funnels are identified based on real-life example.

KOKKUVÕTE

Antud magistritöö peamiseks eesmärgiks on online-müügikanalite automatiseerimise mõjufaktorite analüüs ning arendus konkreetse haridustehnoloogia ettevõtte LUPI näitel.

Töö koosneb sissejuhatusest, kolmest peatükist, kokkuvõttest ja lisadest. Esimeses peatükis on toodud müügikanalite kirjeldus. Teises peatükis on käsitletud müügikanalite ehitamist/arendamist ning kolmandas automatiseerimist.

Müügikanaleid on kasutatud aastakümneid alates 1925 aastast, kui Lawes võttis kasutusele AIDA mudelid. Kaudselt kasutati müügikanalite kontseptsiooni veelgi varem, tehes seda teadvustamata.

Teaduskirjanduses on müügikanalid kasutusel erinevate nimetuste ja fraaside kujul. Selle põhjuseks on müügikanalite kasutus väga erinevate toodete ja tootjate poolt.

Müügikanalite täiendamisel/arendamisel on müügiprotsessis oluline roll kuna sellest sõltub klientide rahulolu. Teisalt on digitaalsete toodete korral kõik müügikanali osad online, mis võimaldab kasutajate tegevuste jälgimist ja analüüsi. Kogutud andmete põhjal tehtud analüüs ja järeldused omakorda võimaldavad muuta müügikanaleid efektiivsemaks.

Online müügikanalite arendus on teostatud haridustehnoloogia ettevõtte LUPI jaoks lähtudes „lean startup" metodoloogiast, mille põhiideeks on saate minimeerimine toote arendusprotsessi jooksul. Kasutatud on AARRR raamistikku, mis põhineb järgmisel viiel meetrikal: leidmine (toote leidmine veebilehel), aktiveerimine (tootest arusaamine), naasmine toote juurde (korduvkasutus), toote soovitamine, kasum.

Töös on analüüsitud müügikanalite automatiseerimist facebook-i ja SMS baasil ning sellele järgnevat testimist.

Töö tulemusena on selgitatud välja olulisemad faktorid, mis mõjutavad digitaalsete toodete jaoks arendatud online müügikanaleid konkreetse rakenduse näitel (Lupi).

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APPENDICES

A1: Look at English Language page of Lupi
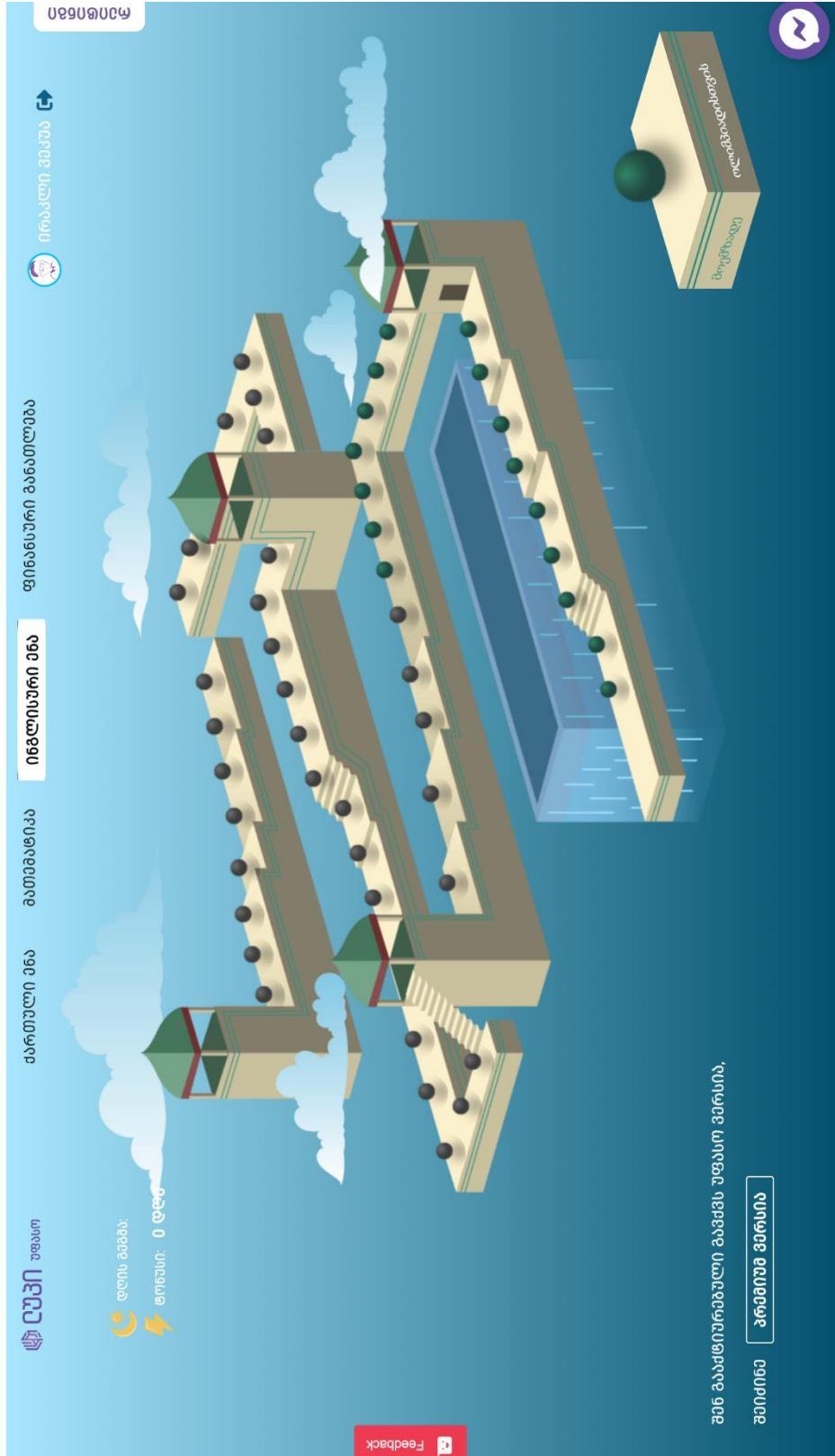
A2: Look at Georgian Language page of Lupi

GRAPHICAL MATERIAL