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на тему “ Створення інноваційного застосунку на ринку AR-технологій для розпізнавання складу косметики та харчових технологій - “ОКО БОГА”

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INTRODUCTION

“Make difficult things simple” - this is what stays behind the whole idea of the NoGrab App. But how do we get this, and why the humanity need it? First of all, living now faster than ever before, the volumes of information that people get day to day with social networks and social media can't be fully processed. But not only is this source overloaded with information. Day-to-day products have a lot of data that cannot always be clear and understandable. Our team in this step will focus on food and cosmetics paks. Help people to know more with less time spent. That's what we do.

PART 1. THE PROJECT

1.1 Project history

On 24 August 2019, after a few weeks of research for some products that can use functions such as google lens to recognize cosmetic ingredients from a camera live stream video, we found our product NoGrab App. At that time services which provide recognition on photos were too expansive to start work on video stream recognition, so we decided to start work with photo recognition. Relias of the first version was on 30 March 2020. After several failures with the app realize, was decide to change the strategy of product development with more deep learning of the market and customers. From the Autumn of 2021 till January 2022 was created a new strategy for developing the NoGrab app was. After the full-scale invasion product development was paused till October 2022. And now we are on the way to completing our “EYE of GOD” release.

1.2 Project goal

Using AR/MR technology implements a fast and clear way of recognizing ingredients and provides users with an answer to one simple question - “Is this product contains any restricted ingredient?”

1.3 The problem description and solving instrument

30000+ ingredients in CosIng database [1]. Thousands of ingredients can harm specific skin types or run allergy reactions and similar situations in the food market with allergen-contained products. Even religious or cultural restrictions include halal and kosher food, prohibitions on the consumption of certain foods or meats of certain animals, and gluten-free products e.t.c. This list of custom limitations is endless. And

new products developed by manufacturers and tried by customers every day. But let's live food for the expansion of our future market and focus on today.

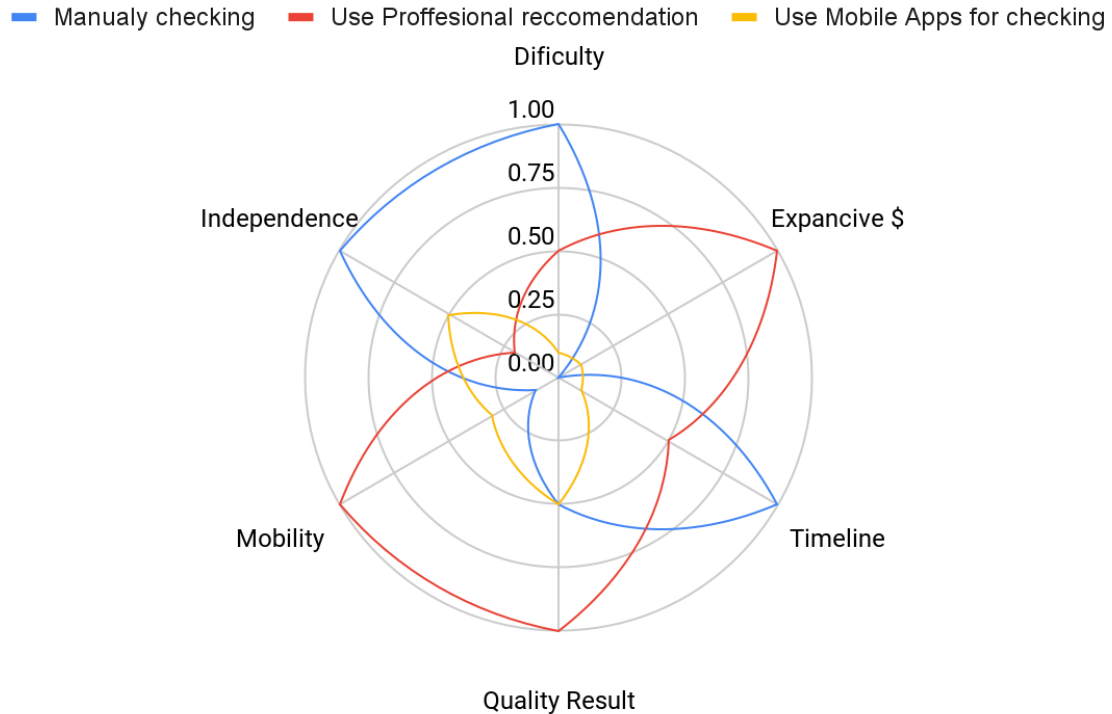
The cosmetics market has two primary ways to identify its ingredients are restricted. FDY(US-based), CosIng(EU-based), and other smaller country region organizations. And the process of approving products goes through a certificate of them as medical or cosmetic products and here we have the first big issue. In the US this is possible to deliver cosmetics products to market without the premarket FDA's approval [2] if they are not classified as drugs, and it's really easy to do, compared to the drugs go to market process. The next step is we go to the personal allergy and ingredients which can affect specific skin types. These two primary issues can be solved in the step of buying products.

Solving both of these problems is based on two important things. The first one is knowing more than 30000 ingredients(restricted or approved by CosIng) and the second one is knowing what is not good for the customer's skin.

3 primary ways to solve this problem: manually checking all of the products, getting professional recommendations about your skin type, and allowance products, use apps for product scanning.

Manually researching - is very hard and absolutely free (if skip counting investing time to research) end user will get the medium-quality result based on his knowledge.

Professional recommendation - Users can order professional screening and a set of recommendations for products and a list of restricted ingredients based on the skin analysis. This way is most right today, costs a lot and takes some time to make skin analysis and get a complete and precise list of suggested quality products. The bad news here is customers probably will be stuck to some partner's product of this consultant lab, and in case of age, season, or health changes customers need to go through the process again to get quality results.



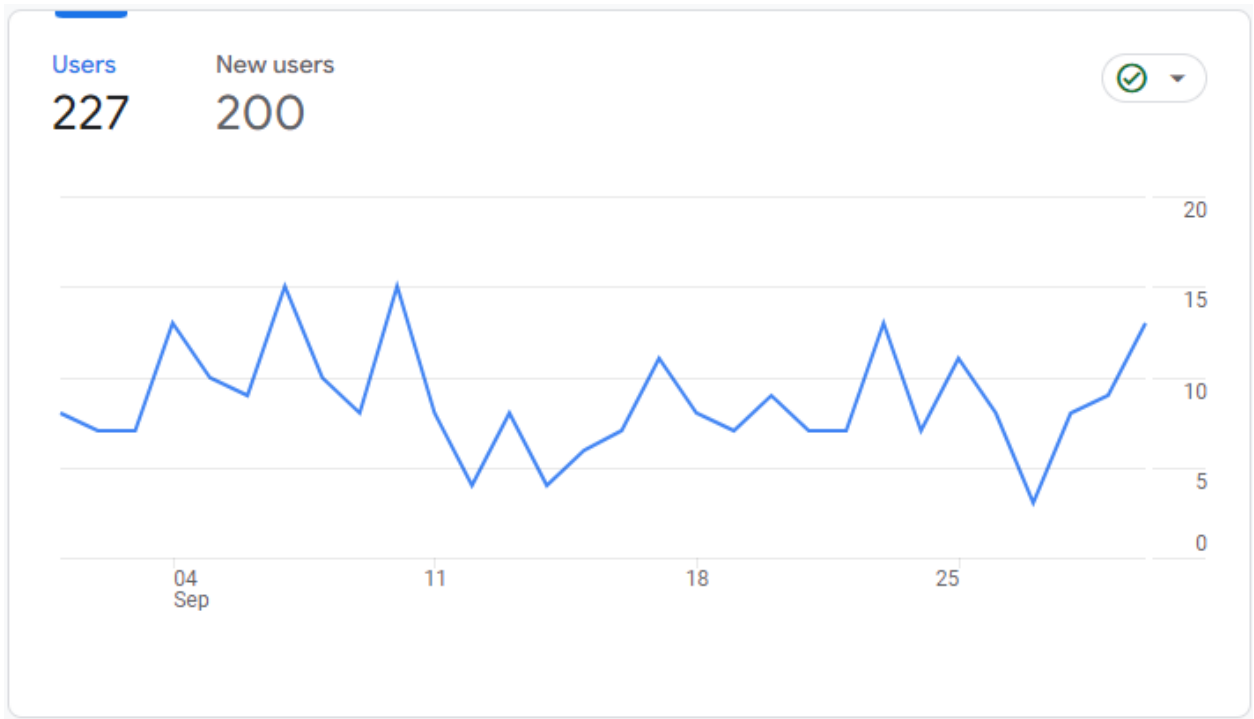
Apps for scanning products - this way is faster than the two before and less personalized. And basing on the app creator can be more independent with results and suggestions than professional recommendations in labs or cosmetology consultants.

The app - is our focus to simplify the process of decision-making by customers. Most of the apps on the market

1.4 From where we start with NoGrab

We will count the start date when the current team was seated up to 1 October 2022. From this day the NoGrab app was rebooted. Here are some numbers about project user activity. All information collected with Firebase and Google Analytics:

During September 2022 we have



Traffic sources:

New users by
First user default channel gro... ✓

FIRST USER DEFAULT CH...	NEW USERS
Organic Search	93
Direct	90
Referral	16
Organic Social	1

[View user acquisition](#) →

And one of the most important criteria is an event that describes the usage of the application

		5,603 100% of total
1	screen_view	2,220
2	user_engagement	1,471
3	Recognized_ing	359
4	session_start	296
5	app_open	293
6	START_SCAN	243
7	first_open	157
8	Scan_Result_NO_INGREDIENTS	144
9	app_remove	78
10	page_view	71
11	Scan_Result_SUCCESS	61
12	ad_impression	51
13	first_visit	43
14	Scan_Result_NO_TEXT	32
15	scroll	26
16	app_clear_data	20

Let us explain what you see in this table.

[Scan_Result_SUCCESS](#) - this is the event that happened when our algorithm correctly finds the start of ingredient sections in plain text.

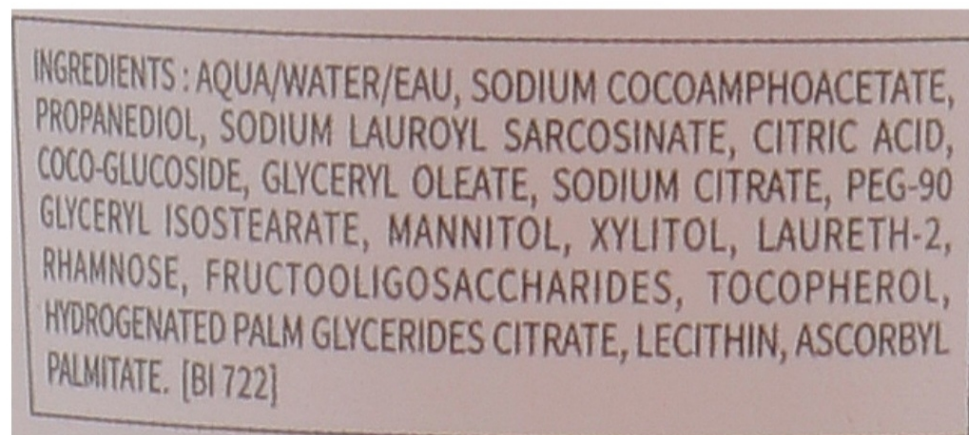
[Scun_result_NO_TEXT](#) - this happened when the user takes the wrong photo, for example, he just makes a random photo of the room or the photo of the product that was blurred because he try to take shot on a go.

[Scan_Result_NO_INGREDIENTS](#) - this is the result of our first biggest failed assumption. When we start to develop the product we have several top mobile devices for our tests. And as we know that all cosmetics products packs contain keywords

“Ingredients”, ”Склад” e.t.c we decide to make them as a trigger to identify the start of the ingredient section. This looks super simple and a little bit stupid, especially for those who already solve a such simple task. We make mistakes and this gives us an answer.

After combining and manually reviewing 500 failed scans, what do we know?

- 1) ML Kit returned results of text recognition of more quality for short words and very poor results for long words. For example in all Scan_Result_NO_INGREDIENTS reports where the ingredients



section was correctly placed on the photo like this:

Failed to recognize by only one reason, this is the long keyword. And plane text that we got from the ML Kit was this - ”NGREDIENTS : AQUA/WATER/EAU, SODIUM COCOAMPHOACETATE,PROPANEDIOL, SODIUM LAUROYL SARCOSINATE, CITRIC ACID,C0C0-GLUCOSIDE, GLYCERYL OLEATE, SODIUM CITRATE, PEG-90GYCERYL ISOSTEARATE, MANNITOL., XYLITOL, LAURETH-2,RHAMNOSE, FRUCTOOLIGOSACCHARIDES, TOCOPHEROL,HOROGENATED PALM GLYCERIDES CITRATE, LECITHIN, ASCORBYLPALMITATE. (BI722)”.

80% of all fails were because we get incorrect recognition of keywords for start ingredient sections, “gredients”, “Ckaan”, “Ckaaa” for today we collect about 80 variations of these fail recognitions. 400 of reviewed failed because we focused on too long keywords in this time frame.

- 2) In 352 of those 400, they contained the keywords “aqua”, and “water” in the ingredients list. Short, clear, and recognized correctly by the ML kit in almost all cases.
- 3) And the last 148 of 500 totally contain 3 primary reasons. The user takes a photo of the product barcode, not the ingredients section. The user takes a photo of the front of the perhaps expecting us to recognize objects. The user takes the wrong photo or photo orientation.

And what we plan to do with all this knowledge. First of all, we will add checking by “aqua”, and “water” keywords to improve the quality of recognition. The second one is finding more short keywords with a high rate of recognition and using them as anchors to identify the ingredients section bloc on the photo. The next step of reusing this knowledge is creating patterns of short keywords

1.5 Project “Eye of Good”.



Start Date: 01/10/2022

End Date: 30/04/2023

The essence of the project:

With “Eye of God” we get the user experience of recognizing cosmetic product packs to an absolutely new level. The foundation of the whole idea is ”Make difficult things simple”. NoGrab App - is a mobile app that focuses on making the user experience understand what is inside the cosmetics. The product is released and has about 200 users per month, Project “Eye of God” is a set of complex improvements for the application change of user experience and product visibility to achieve 5000 active users per month and a lot more...

General requirements:

Improvements in UX in the NoGrab app must affect the % of successful scans and the quality of provided results to users. The referral system must create an organic way to increase active users in the app and link-building (off-site SEO) process. Video Stream recognition of products must improve user experience with recognition of pack information, as a side effect it will be good to have “WOW” when the user sees how it works. Getting a third-party source of product information by barcode helps us provide more clean info to our users. Finally polishing user interaction flow and improving the key metrics will open an easy way to go on the food recognition market.

General assumptions:

1. Video Steam product recognition will be more useful than taking photos for users
2. The referral motivation system will be demanded by users
3. SEO and content plan allow rich traffic goals
4. Fail scan reporting system helps to improve the quality of recognition
5. All this helps us get angel investment for scaling product

General risks:

1. The referral system will be useless
2. Video stream recognition flow will be useless
3. The difficulty of tasks is underestimated for two developers
4. Developers will be overloaded on the main job(they want to eat and drink)

Budget:

2400\$, sweat, tears, and blood

1.6 Goals and KPI

Goals:

1. Increase the count of monthly active users in the application(current: daily average is 10 users, monthly average 300))
 - **Minimum acceptable result:** daily average is 30 users, monthly average 900
 - **Medium acceptable result:** daily average is 60 users, monthly average 1800
 - **Absolutely successful result:** daily average is 166 users, monthly average 5000
2. Increase % of second-day users retention(current value 4.1%)
 - **Minimum acceptable result:** second-day users retention value 10%
 - **Medium acceptable result:** second-day users retention value 20%
 - **Absolutely successful result:** second-day users retention value 35%
3. Increase Average engagement time per session (current value 1 m 41 s)
 - **Minimum acceptable result:** Average engagement time per session 2 m 30 s
 - **Medium acceptable result:** Average engagement time per session 3 m 30 s
 - **Absolutely successful result:** Average engagement time per session 5 m 00 s
4. Increase in-app subscriptions (current: 1 subscription)
 - **Minimum acceptable result:** 10 subscriptions
 - **Medium acceptable result:** 100 subscriptions
 - **Absolutely successful result:** 500 subscriptions
5. Increase search traffic to the site(current: 66 visitors per month)
 - **Minimum acceptable result:** 250 visitors per month
 - **Medium acceptable result:** 1000 visitors per month
 - **Absolutely successful result:** 5000 visitors per month

6. “START_SCAN” event per user(current: 3,88 event count per user)
 - **Minimum acceptable result:** 5 event counts per user
 - **Medium acceptable result:** 7 event counts per user
 - **Absolutely successful result:** 10 event counts per user

7. “SUCESS_SCAN”/“START_SCAN” (current: 141/411“SUCESS_SCAN”/“START_SCAN” = Success scan rate: 28%)
 - **Minimum acceptable result:** Success scan rate: 50%
 - **Medium acceptable result:** Success scan rate: 70%
 - **Absolutely successful result:** Success scan rate: 85%

8. Prepare a project to participate in the www.angelone.fund contest
 - Prepare Pitch Deck/Presentation
 - Prepare Pitch
 - Prepare an elevator pitch

Key points:

1. Complete “Fail reporting system“ - include: getting the report, admin panel to review the report, notify users about review results with push notification and email.
2. Getting extra product information by barcode at less from one source
3. Referral reward system- with direct referral links, links to products with referral codes, and other share links with user referral codes
4. Offline mode for app
5. Video stream recognition

Several variants of criteria for the project is Success:

- 1) All goals 1-7 achieved Minimum acceptable results, **and** goal 8 complete
- 2) 4 of goals 1-7 achieved Medium acceptable results, **and** goal 8 complete

3) 3 of goals 1-7 achieved Absolutely successful results, **and** goal 8 complete

1.7 Milestones

I. 15/12/2022 - Initiated

Epic- dev - NG-171 Recognize copied and pasted text of Ingredients(**Done**)

Epic- dev - NG-181 UI design Improvements/Refactoring

Epic - dev- NG-167 Personal Alert List

Epic - dev- NG-170 Create Fail Scan reporting flow (**In Progress**)

Prepare clear descriptions of how NG-171, NG-181, NG-167, NG-170 must be developed

Order 80 backlinks from the service

Create 10 two languages (en, ua) articles for blog (**In Progress**)

Create two languages (en, ua) FAQ Sections on the site (**In Progress**)

Create two languages (en, ua) How it works Section on site (**In Progress**)

II. 23/02/2023 - Halfway

Epic- dev - NG-168 Getting Extra Information about Product from third party source of data

Epic- dev - NG-172 Add Restrictions Advanced Information

Epic- dev - NG-173 Request user Rate App

Epic- dev - NG-165 Referral Links

Epic- dev - NG-185 Intro tooltips for explaining app functionality

Prepare clear descriptions of how NG-168, NG-172, NG-173, NG-165, NG-185 must be developed

Create 10 two languages (en, ua) articles for blog

Get an SEO review of the site

Get SEO Improvements on the site

Get 50 more backlinks

III. 30/04/2023 - The Eye is open

Epic- dev - NG-187 Offline mode

Epic- dev - NG-166 Recognition Video Stream

Prepare clear descriptions of how NG-187, NG-166 must be developed

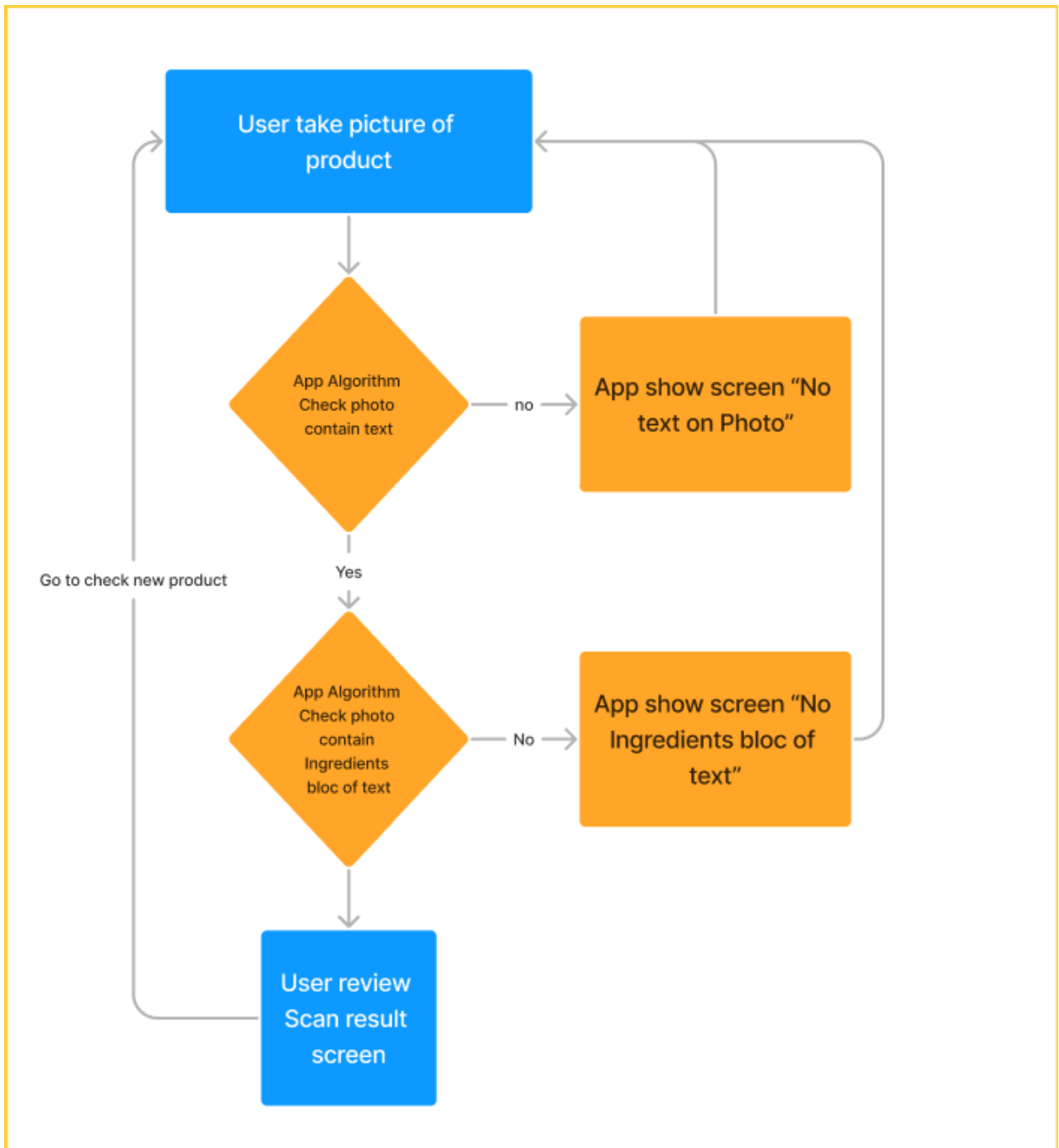
Prepare Pitch Deck/Presentation

Prepare Pitch

Prepare elevator pitch

1.7 Reasons and Implementation

If we talk about the reason to implement the “EYE OF GOD” first of all need to pay attention to our primary product value proposition. This is to provide fast and clear information about the products containing restricted ingredients. With the current flow of user interaction with NoGrab.



With the current realization, users need to wait till know if the product contained any restricted ingredients and need to wait at least 5-10 seconds in case the photo was taken correctly and contained an ingredients bloc text section.

With “EYE OF GOD” all this will happen in real-time with AR/MR overlay. This will allow users to stay in focus on scanning product flow. And in case of users want to view extra information they will go to the details screen.



Now let's focus on the benefits of this functionality realization.

- 1) Set the data to Analyzy. In case we use real-time video stream recognition we will get not one photo as we do now we can check hundreds and maybe thousands of photos for one product. This will allow us to improve the quality of the provided result.

- 2) Time for getting the first information of recognized ingredients will be less, as we will show each newly found ingredient when it will be recognized. In old realization, we show the whole result at one time.
- 3) All interaction with the App and product will be on one screen. So time while recognition is ongoing users will interact with the app.
- 4) Highlighting ingredients with overlay will provide more fast and clear information about ingredients

Some issues that we already know and are not sure how to fix for now

- 1) Analytics - we need to develop the right conception of getting data about user interaction with products as recording video, for example, is expensive and illegal
- 2) Accurate handling product scan session - need to handle when user change products what he scans, for now, we will ask user do this manually
- 3) Phone overheating with run camera view

This is the way what we decide to improve user experience in this market.

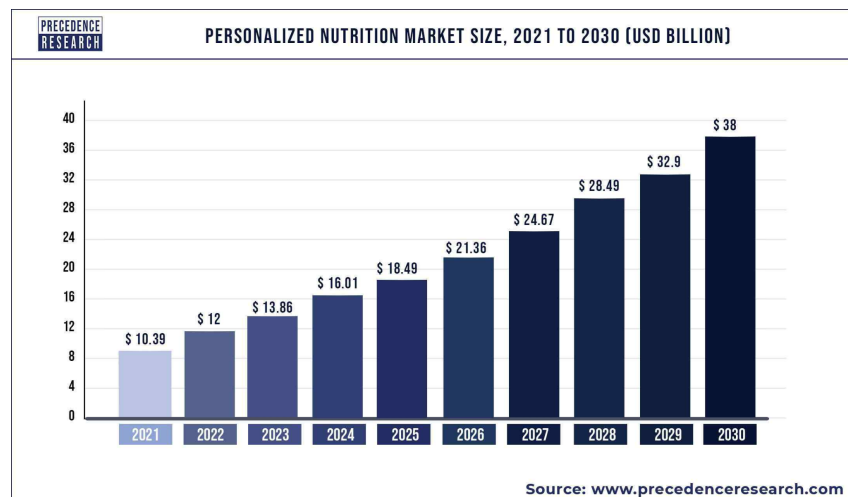
PART 2. THE MARKET

2.1 Market Size

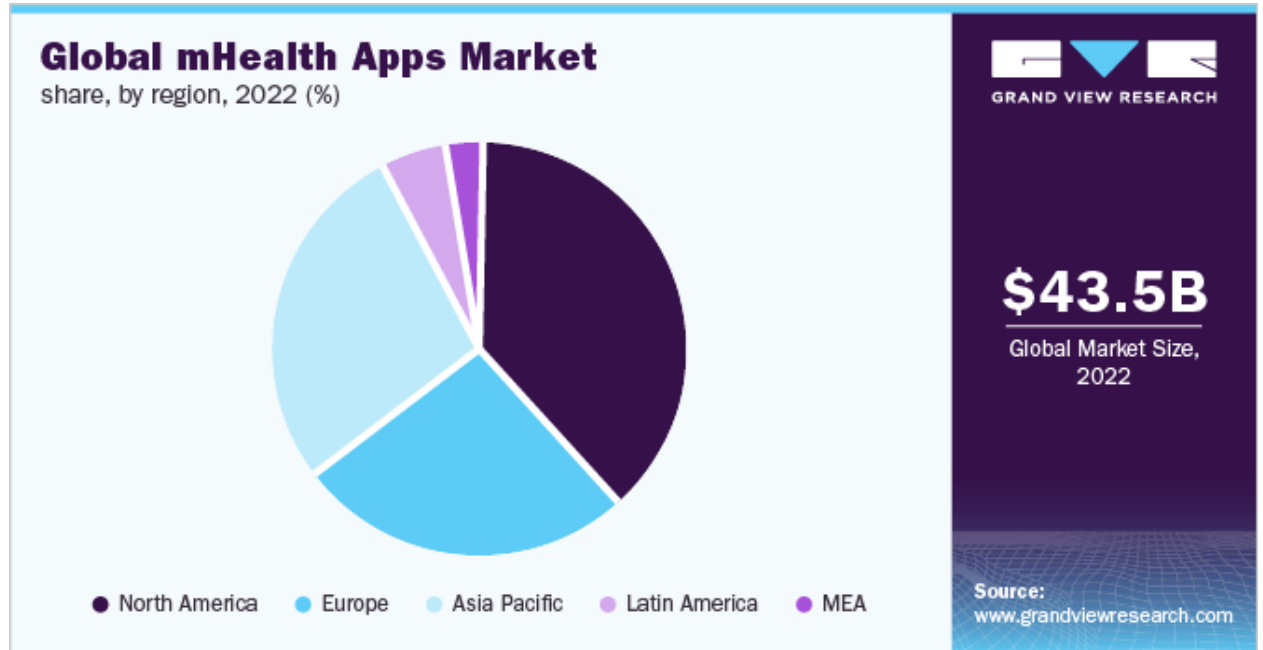
The market size for apps related to food ingredient recognition, cosmetics and personal care products recognition is difficult to estimate precisely, as it can include a wide range of apps with different functionalities and target markets. However, the global market for food ingredient recognition which includes many apps related to food ingredient recognition, personal care and cosmetics, is expected to continue growing in the coming years.

We can focus on value for this to great markets, “food and nutrition apps” and “mHealth apps” as the context of our development plan contain particularly cover both of them.

So according to a report by Research and Markets, the global market for “food and nutrition apps” was valued 12 billion in 2022 and it is projected to be worth around USD 38 billion by 2030, registering at a compound annual growth rate (CAGR) of 15.49% during the forecast period 2022 to 2030. And “health and wellness apps” [3].

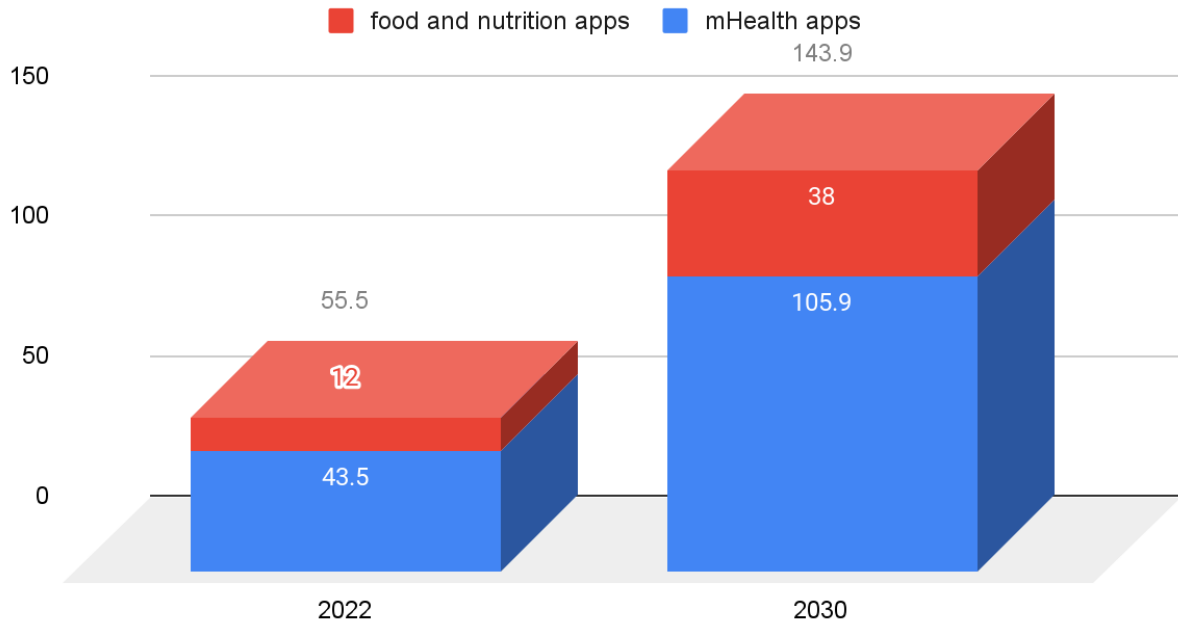


And according to a report by Research and Markets, the global market for “mHealth apps” was valued 12 billion in 2022 and it is projected to be worth around USD 38 billion by 2030, registering at a compound annual growth rate (CAGR) of 15.49% during the forecast period 2022 to 2030. And “health and wellness apps” [4].



Our assumption about the total market value for 2022 and prediction to 2030 of our target markets looks like this:

Total markets Size in billions dollars



55.5 billion dollars for today and 143.9 for 2030 very interest values, unfortunately not all of this money is related to our app theme. Let's try to make some assumptions based on open data of traffic and revenue of our top competitors.

2.2 Competitors

The market of apps for recognizing ingredients is not new. We have a lot of competitors. And they have various types of business models to generate revenue. We analyze 8 of our competitors to generate some assumptions about the total target market size. Here is a list of themes: ThinkDirty, EWG Healthy Living, CosmEthics, SkinSAFE, INCI Beauty, Yuka, Ingred, and Ingredio.

Think Dirty is a mobile app that helps users to make informed decisions about the personal care and household products they use. The app was developed in Canada and is available in several countries, including the United States, Canada, and the United Kingdom.

Think Dirty uses a simple color-coded system to rate products based on their ingredient quality. Green means a product is good, yellow means it's average, and red means it's not so good. The app evaluates the safety and quality of the ingredients used in a product based on several factors, including their potential health risks and environmental impact.

In addition to providing ratings, Think Dirty also provides detailed information about the ingredients used in products and offers alternative product suggestions that are healthier or more environmentally friendly. Users can scan the barcodes of products or search for them manually in the app to get information and ratings.

Think Dirty has gained popularity due to its user-friendly interface and helpful information on products. However, it's important to note that the ratings provided by Think Dirty are based on the app's own evaluation criteria, which may differ from other sources. [5]

EWG Healthy Living is a mobile app developed by the Environmental Working Group (EWG), a non-profit organization that advocates for healthier and more sustainable lifestyles. The app provides ratings and information about personal care, household, and food products based on their ingredients and potential health risks.

EWG Healthy Living uses a simple rating system from 1 to 10, with 1 being the best (i.e., lowest potential health risk) and 10 being the worst (i.e., highest potential health risk). The app evaluates the safety and quality of the ingredients used in products based on several factors, including their potential to cause cancer, developmental and reproductive toxicity, and other health hazards.

In addition to providing ratings, EWG Healthy Living also provides detailed information about the ingredients used in products and offers alternative product suggestions that are healthier or more environmentally friendly. Users can search for products manually in the app or scan the barcodes of products to get information and ratings.

EWG Healthy Living has gained popularity due to its comprehensive database of products and its mission to educate consumers about the potential health risks associated with certain ingredients. However, it's important to note that the ratings provided by EWG Healthy Living are based on the app's own evaluation criteria, which may differ from other sources. [6]

CosmEthics is a mobile app that allows users to scan the barcodes of personal care and cosmetic products and receive information about the ingredients and potential health risks associated with those products. The app was developed by a Finnish company called Sustainalytics.

CosmEthics uses a simple rating system from 0 to 10, with 0 being the best (i.e., lowest potential health risk) and 10 being the worst (i.e., highest potential health risk). The app evaluates the safety and quality of the ingredients used in products based on several factors, including their potential to cause cancer, reproductive toxicity, and skin irritation.

In addition to providing ratings, CosmEthics also includes detailed information about the ingredients used in products and offers alternative product suggestions that are healthier or more environmentally friendly. Users can scan the barcodes of products or search for them manually in the app to get information and ratings.

CosmEthics has gained popularity due to its user-friendly interface and comprehensive database of products. However, it's important to note that the ratings provided by CosmEthics are based on the app's own evaluation criteria, which may differ from other sources. [7]

SkinSAFE is a mobile app and online platform that helps users to find personal care and cosmetic products that are safe for their skin. The app was developed by the Mayo Clinic and is powered by a database of over 8,000 products that have been evaluated and certified as safe for people with sensitive skin.

SkinSAFE allows users to search for products by brand or category and provides ratings for each product based on their compatibility with sensitive skin. The app

evaluates the safety of ingredients used in products based on their potential to cause skin allergies or irritations.

In addition to providing ratings, SkinSAFE also provides detailed information about the ingredients used in products and offers alternative product suggestions that are free from common allergens or irritants. Users can search for products manually in the app or scan the barcodes of products to get information and ratings.

SkinSAFE has gained popularity due to its focus on helping people with sensitive skin find safe products and its partnership with the Mayo Clinic. However, it's important to note that the ratings provided by SkinSAFE are based on the app's own evaluation criteria, which may differ from other sources.[8]

INCI Beauty is a mobile app and online platform that helps users to understand the ingredients in their personal care and cosmetic products. The app was developed in France and is now available in several countries.

INCI Beauty allows users to scan the barcodes of products or search for them manually in the app and provides ratings for each product based on the safety of their ingredients. The app evaluates the safety of ingredients used in products based on several factors, including their potential to cause skin irritation, allergies, and environmental harm.

In addition to providing ratings, INCI Beauty also includes detailed information about the ingredients used in products and offers alternative product suggestions that are healthier or more environmentally friendly. Users can search for products by category or brand and filter their search results based on their personal preferences.

INCI Beauty has gained popularity due to its user-friendly interface, comprehensive database of products, and its mission to educate consumers about the potential health risks associated with certain ingredients. However, it's important to note that the ratings provided by INCI Beauty are based on the app's own evaluation criteria, which may differ from other sources. [9]

Yuka is a mobile app that helps users to make informed decisions about the food they eat and the personal care products they use. Uses a simple color-coded system to rate products based on their nutritional value or ingredient quality. Green means a product is good, yellow means it's average, and red means it's not so good. For food products, the app evaluates the nutritional value of the product based on the amount of sugar, salt, saturated fats, and additives present. Personal care products, it evaluates the safety and quality of the ingredients used.

In addition to providing ratings, Yuka also provides detailed information about the ingredients used in products and offers alternative product suggestions that are healthier or more environmentally friendly. Users can scan the barcodes of products or search for them manually in the app to get information and ratings.[\[10\]](#)

Ingred is a mobile app that allows users to scan the barcodes of food products and receive information about the ingredients and nutritional value of the product. The app was developed by a startup company based in France. They use machine learning and artificial intelligence algorithms to analyze the ingredients in a product and provide a detailed breakdown of their nutritional value and potential health risks. The app also provides personalized recommendations for healthier food choices based on the user's dietary preferences and goals.

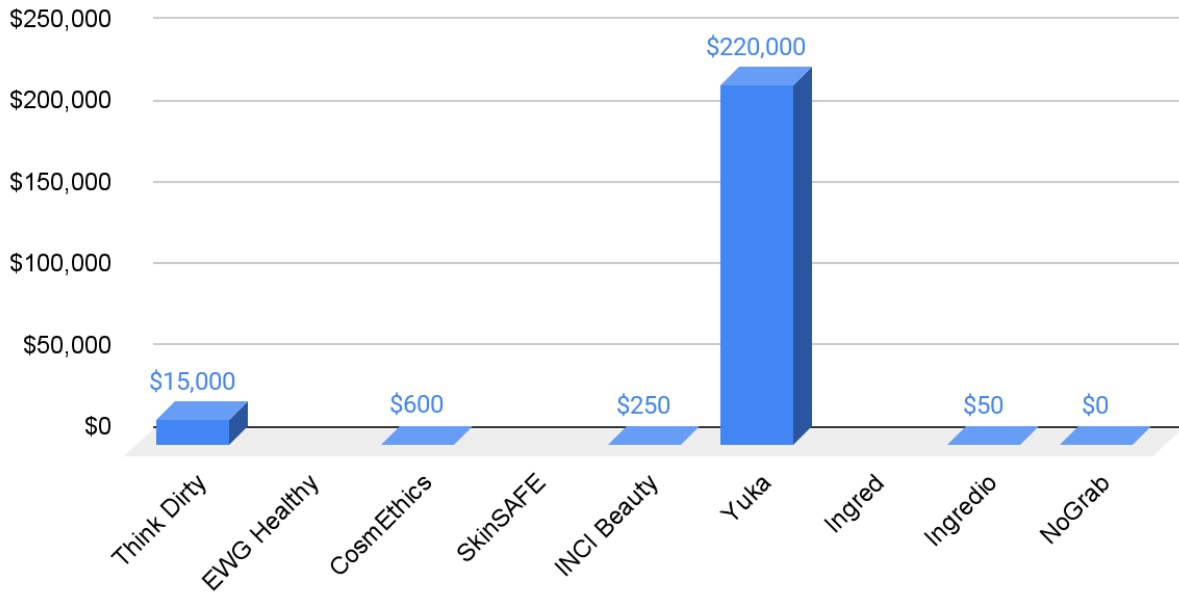
In addition to providing nutritional information, Ingred also offers a social feature that allows users to connect with others and share their food experiences. Users can create profiles, follow others, and share their favorite products and recipes.

Ingred has gained popularity due to its user-friendly interface and its ability to provide personalized nutritional recommendations. However, it's important to note that the nutritional information provided by Ingred is based on the app's own evaluation criteria, which may differ from other sources.[\[11\]](#)

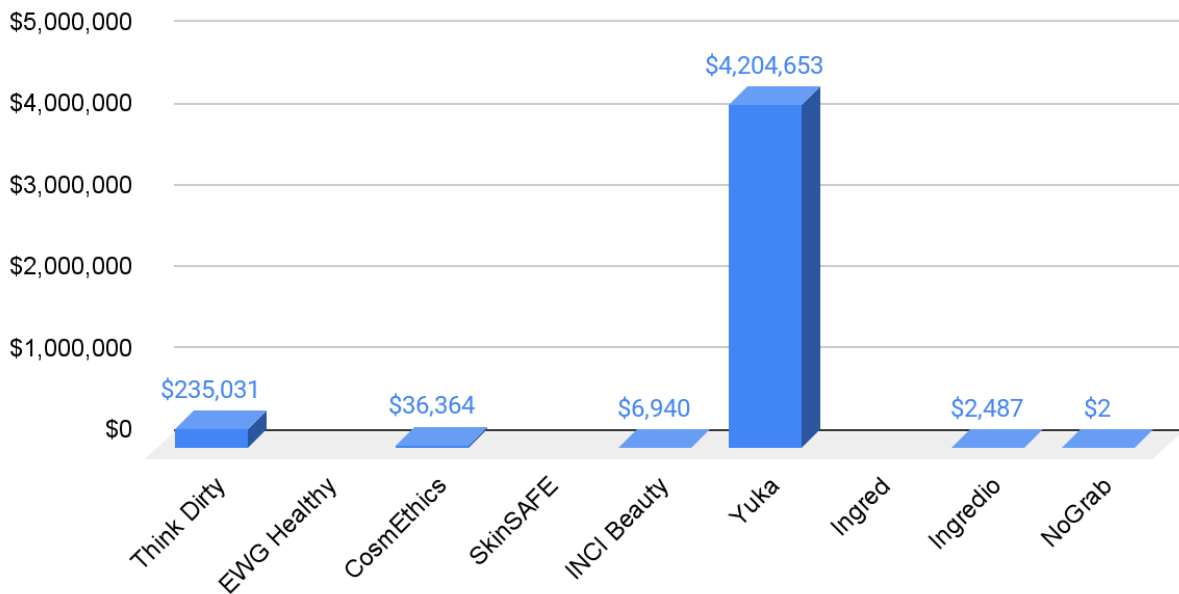
Now let's view some numbers and comparisons for our competitors and try to make assumptions about our target market size for 2022. First of all, need to pay attention to various different types of monetization and the business models of our

competitors. So let's start with the most accurate value. Revenue, disclaimer: it's very important that this value get from online service named "App Magic"[\[12\]](#) they provide information about products based on the data related to the subscriptions model and in-app purchases in the app. And we have these two important data set, the average revenue for the last 6 months and the total known revenue for each product based on subscriptions and in-app purchases.

Monthly avg(last 6)



Total Revenue



Now we can start to make our first assumption about the possible revenue. But before let's take a closer look at all these competitors and figure out why the revenue is so different.

As we mentioned before this data is based on in-app purchases and subscriptions built into the application. Our next table describes the market coverage of our competitors and software type variation with primary functionality.

	Food	Cosmetic	ScanText	ScanBarcode	Mobile Apps	Web App
Think Dirty	No	Yes	No	Yes	Yes	No
EWG Healthy Living	Yes	Yes	No	Yes	Yes	Yes
CosmEthics	No	Yes	No	Yes	Yes	No
SkinSAFE	No	Yes	No	Yes	Yes	Yes
INCI Beauty	No	Yes	No	Yes	Yes	Yes
Yuka	Yes	Yes	No	Yes	Yes	No
Ingred	Yes	Yes	Yes	Yes	Yes	No
Ingredio	Yes	Yes	Yes	Yes	Yes	No
NoGrab	No	Yes	Yes	No	Yes	No

And here we have monetization types table of our competitors:

	Contain Ads	InApp/Subscriptions	physical goods	Donation	Other
Think Dirty	Yes	Yes	Yes	No	No
EWG Healthy Living	No	No	No	Yes	No
CosmEthics	No	Yes	No	No	Yes
SkinSAFE	No	No	Yes	No	No
INCI Beauty	Yes	Yes	No	No	No
Yuka	No	Yes	No	No	No
Ingred	Yes	No	No	No	No
Ingredio	Yes	Yes	No	No	No
NoGrab	Yes	Yes	No	No	No

Now we can make several assumptions about how our competitors make money. Let's skip volunteering project EWG as it's not relenting for as from a monetization perspective. The other two types of monetization are in-app purchases and e-commerce. Two of our top competitors ThinkDirty and Yuka make 15000\$ and 220000\$ in revenue

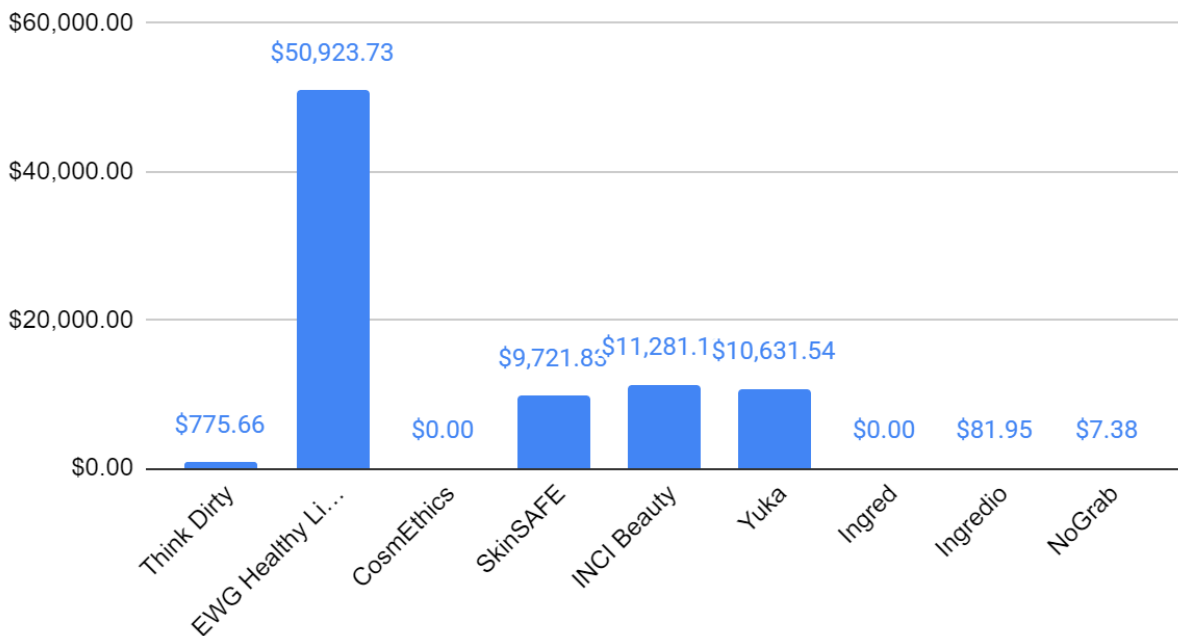
per month. But this is based on in-app purchase estimation. For example, ThinkDirty uses a mixed monetization model they have 3 of 5 types of money income: Ads, in-app purchases, and e-commerce for beauty products. It's not easy to calculate the value from e-commerce, but we can make assumptions about ads monetization for web traffic and it will give an as the more big picture of the possible value that can be a generator in this markets.

Based on the AdSense revenue calculator [13]:

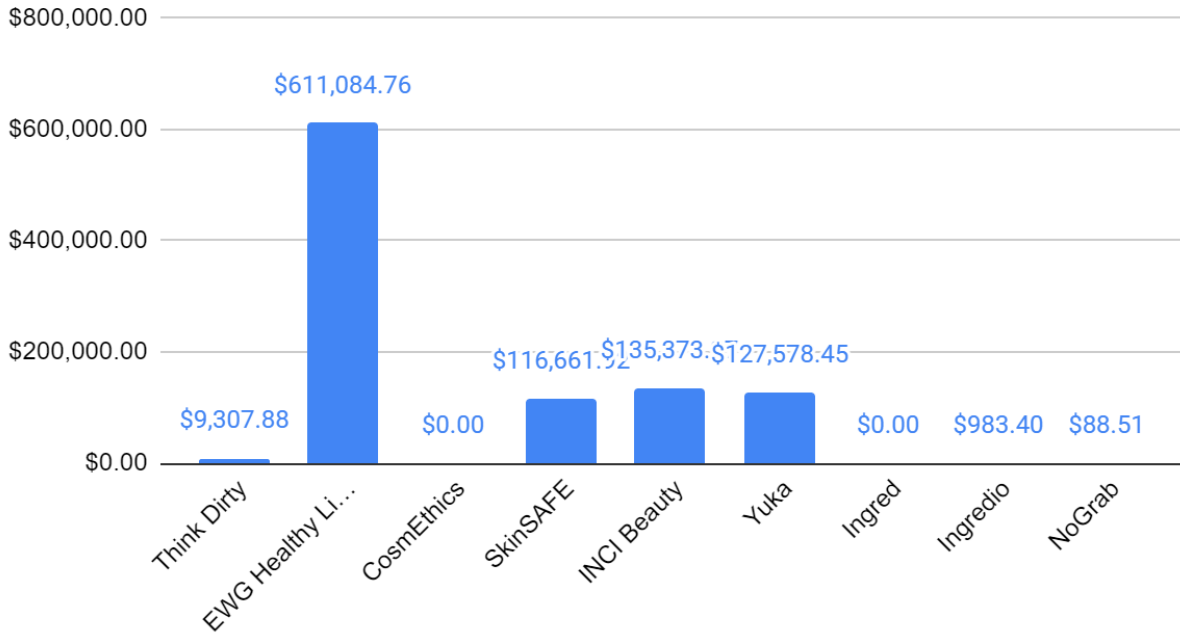
	Monthly Page View	Monthly Revenue
Food & Drinks	50000	\$859.00
Beauty	50000	\$780.00

Let's calculate the possible ad value for our competitors. Information about traffic we take from service name SimialrWeb [14]

Monthly Ads revenue



Monthly Ads revenue



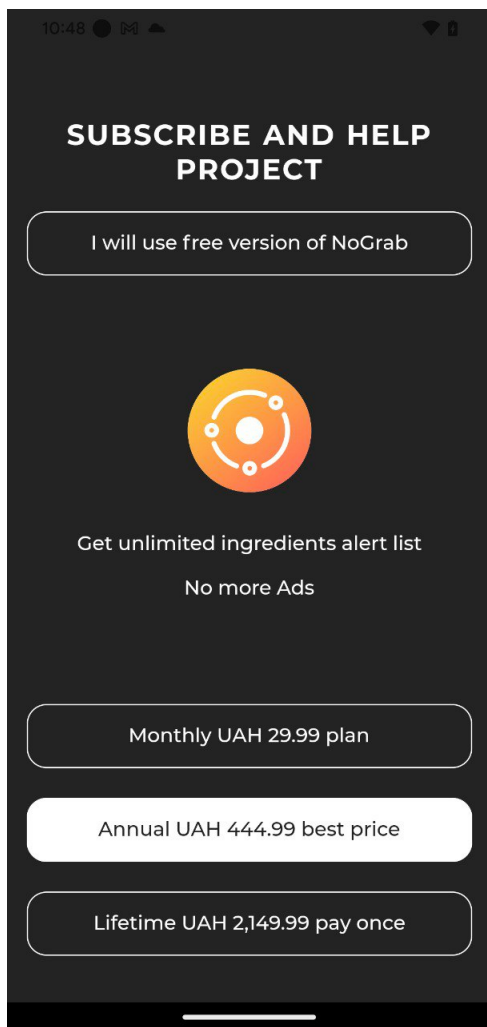
So with every 100k monthly visitors, we can add ~20k \$ for estimated annual revenue from ads source.

PART 3. BUSINESS MODEL

3.1 Primary business model - In-App Purchases

Our primary business model revolves around generating revenue through in-app purchases, which will allow users to access the premium features of our app. This approach helps us monetize the app while still providing a free, basic version that appeals to a wide range of users.

Subscription-based access to premium features:



By offering a subscription-based model, we can provide users with an enhanced experience that includes exclusive tools, content, and functionalities[15]. Now we give users two things in the premium account:

- 1) Unlimited ingredients in the personal alert list
- 2) No more Ads in the app

The subscription model has several advantages for both the users and our business. For users, it allows them to access all premium features with a single monthly or annual payment, making it a more cost-effective option for those who use the app regularly. Additionally, this model ensures that users always have access to the latest features and updates, as well as any new premium content we release.

From the business perspective, subscription-based revenue provides a more stable and predictable income stream, enabling us to make better decisions about investing in product development and marketing. This model also encourages user loyalty, as customers who subscribe are more likely to continue using the app over a longer period.

To make our subscription offering even more appealing, we can consider offering a free trial period, which allows potential subscribers to test the premium features before committing to a paid plan. We can also offer tiered pricing plans to cater to different user needs and budgets, ensuring that our app remains accessible to a diverse audience while still generating revenue.

By implementing a subscription-based model for in-app purchases, we can build a sustainable and scalable business while providing users with a valuable experience.

3.2 Secondary business model - Ads (Interstitial)

In addition to our primary business model of in-app purchases, our secondary business model involves generating revenue through the display of international advertisements within the app. By partnering with global advertisers, we can monetize the app's user base and provide a diversified income stream for our business.^[15]

Incorporating ads within the app allows us to maintain a free version of the app, which can help attract a larger user base and increase our brand exposure. Furthermore, it enables us to target specific segments of our audience with relevant and engaging advertisements, enhancing the user experience while generating ad revenue.

At the current stage, we show only one Interstitial Ad after each successful scan result.

Furthermore, we can leverage user data to target ads more effectively and personalize the ad experience for our users. By understanding user preferences, demographics, and in-app behavior, we can serve ads that are more likely to resonate with our users, leading to higher engagement and conversion rates.

In summary, incorporating international advertisements as a secondary business model allows us to generate additional revenue, maintain a free version of the app, and potentially enhance the overall user experience. This approach can also help establish a diversified and sustainable income stream for our business while fostering strong partnerships with global advertisers.

*Notes: After review of our work rechecking our missions and goal and validating of the product value proposition we decide to remove the advertisement monetization model for our product using third-party advertisement networks to show ads for users after successful scans. As this is not matching our mission and values of the team. So starting from May 2 20223 the app NoGrab no more contains any ads in it.

3.3 Both active monetization expectation revenue

We make some calculations based on public data from the internet and our expected conversion rate in the app. There is two simple linear predictions based on a monthly subscription with 1\$ and 5\$ coast and average ads revenue iOS 5,27\$ per 1000 view and Android 6,52\$ per 1000 view.

Ads revenue historical and public data

per	1K View	10	100	1000	10000
		10K	100K	1M	10M
Historical data					
Android	\$1.27	\$12.70	\$127.00	\$1,270.00	\$12,700.00
iOS	\$6.47	\$64.70	\$647.00	\$6,470.00	\$64,700.00
AVERAGE	\$3.87	\$38.70	\$387.00	\$3,870.00	\$38,700.00
Subscriptions	1\$				
Online Source Data					
Android	\$6.52	\$65.20	\$652.00	\$6,520.00	\$65,200.00
iOS	\$5.27	\$52.70	\$527.00	\$5,270.00	\$52,700.00
AVERAGE	\$5.90	\$58.95	\$589.50	\$5,895.00	\$58,950.00

User success scan rate old 34,87%

	Event Count	Users	Event Count per user	To Total user
Start_scan	261	79	3.3	30.50%
Scan_Result_SUCCESS	91	49	1.9	18.92%
	34.87%	62.03%		

User success scan rate expected optimized 66,67%

	Event Count	Users	Event Count per user	To Total user
Start_scan	600	60	10.0	60.00%
Scan_Result_SUCCESS	400	50	8.0	50.00%
	66.67%	83.33%		

Monthly subscription with 1\$

Mobile User/month		1,000	5,000	10,000	25,000	50,000	100,000
Ads revenue History		\$15	\$77	\$155	\$387	\$774	\$1,548
Ads Revenue Global Data		\$24	\$118	\$236	\$590	\$1,179	\$2,358
Subscriptions Pesimistic	1%	\$9	\$43	\$85	\$213	\$425	\$850

Subscriptions Realistic	5%	\$43	\$213	\$425	\$1,063	\$2,125	\$4,250
Subscriptions Optimistic	10%	\$85	\$425	\$850	\$2,125	\$4,250	\$8,500
Yearly Revenue with Historical							
Subscriptions Pesimistic	1%	\$288	\$1,439	\$2,878	\$7,194	\$14,388	\$28,776
Subscriptions Realistic	5%	\$696	\$3,479	\$6,958	\$17,394	\$34,788	\$69,576
Subscriptions Optimistic	10%	\$1,206	\$6,029	\$12,058	\$30,144	\$60,288	\$120,576
Yearly Revenue with Global Data							
Subscriptions Pesimistic	1%	\$385	\$1,925	\$3,850	\$9,624	\$19,248	\$38,496
Subscriptions Realistic	5%	\$793	\$3,965	\$7,930	\$19,824	\$39,648	\$79,296
Subscriptions Optimistic	10%	\$1,303	\$6,515	\$13,030	\$32,574	\$65,148	\$130,296

Monthly subscription with 5\$

<i>Mobile User/month</i>		<i>1,000</i>	<i>5,000</i>	<i>10,000</i>	<i>25,000</i>	<i>50,000</i>	<i>100,000</i>
Ads revenue History		\$15	\$77	\$155	\$387	\$774	\$1,548
Ads Revenue Global Data		\$24	\$118	\$236	\$590	\$1,179	\$2,358
Subscriptions Pesimistic	1%	\$43	\$213	\$425	\$1,063	\$2,125	\$4,250
Subscriptions Realistic	5%	\$213	\$1,063	\$2,125	\$5,313	\$10,625	\$21,250
Subscriptions Optimistic	10%	\$425	\$2,125	\$4,250	\$10,625	\$21,250	\$42,500
Yearly Revenue with Historical							
Subscriptions Pesimistic	1%	\$696	\$3,479	\$6,958	\$17,394	\$34,788	\$69,576

Subscriptions Realistic	5%	\$2,736	\$13,679	\$27,358	\$68,394	\$136,788	\$273,576
Subscriptions Optimistic	10%	\$5,286	\$26,429	\$52,858	\$132,144	\$264,288	\$528,576
Yearly Revenue with Global Data							
Subscriptions Pesimistic	1%	\$793	\$3,965	\$7,930	\$19,824	\$39,648	\$79,296
Subscriptions Realistic	5%	\$2,833	\$14,165	\$28,330	\$70,824	\$141,648	\$283,296
Subscriptions Optimistic	10%	\$5,383	\$26,915	\$53,830	\$134,574	\$269,148	\$538,296

3.3 Alternatives for pivot

In the dynamic world of business, it is essential to have alternative strategies in place to pivot and adapt to changing market conditions or user preferences. The following are some potential alternatives for pivoting our business model:

1. E-commerce integration: In this alternative, we can integrate an e-commerce platform into the app, allowing users to directly purchase skincare products and accessories. By partnering with skincare and cosmetics brands or retailers, we can offer a curated selection of products tailored to users' needs, enhancing the overall user experience and generating additional revenue through sales commissions.
2. REST API with products database: Another possible pivot involves developing a REST API that provides access to our comprehensive skincare products database. This API can be offered to other businesses, such as e-commerce websites, mobile apps, or skincare brands, enabling them to utilize our data for their own applications. We can generate revenue by offering various pricing plans, including a pay-per-use model or a monthly subscription.
3. Local skincare laboratory advertisements: To capitalize on local markets, we can collaborate with skincare laboratories or clinics, promoting their services within

the app. This can be achieved through sponsored listings, location-based promotions, or in-app content, such as articles or testimonials. By targeting users based on their location and skincare needs, we can help local businesses connect with potential customers and generate revenue through advertising fees.

4. Incentivizing return users to cosmetics products: Another potential pivot is to create a loyalty or rewards program that incentivizes users to return and purchase cosmetics products within the app. Users can earn points, discounts, or exclusive offers for their purchases or other in-app activities, encouraging repeat business and fostering brand loyalty. This can lead to increased sales and revenue, as well as valuable customer insights.

In conclusion, having a range of alternatives for pivoting our business model ensures that we can remain agile and responsive to changing market conditions or user preferences. Each of these potential pivots offers unique opportunities for growth and revenue generation, allowing us to adapt and thrive in a competitive market.

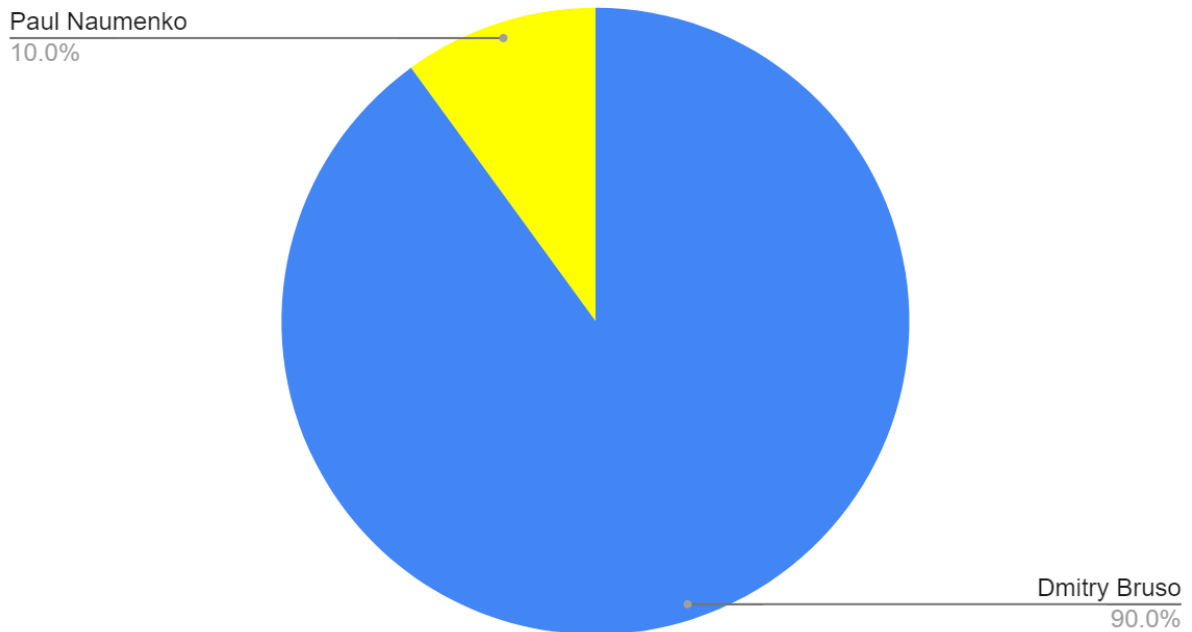
3.4 Business organization steps

For now the organization is easy as possible. All accounts for publishing the app, storing the code, and analytics are registered to Dmytro Brusov the founder of the project. Till we achieve our first revenue goal 3001\$ per monthly revenue on average for the 6 months, we will use the private entrepreneur accounts for cashout revenue from stores and reinvest them to grow the project. In this scenario, we will pay a 15% App Store/Google Play fee for an in-app subscription and pay a 5% tax in Ukraine.

After achieving 3001\$ monthly revenue, we will reorganize our business organization model. We will register LTD, for now, we are not to decide the jurisdiction for it, we will decide to betwene Ukraine, Litva, and maybe a few others, in any case, we will buy a professional consultation about it.

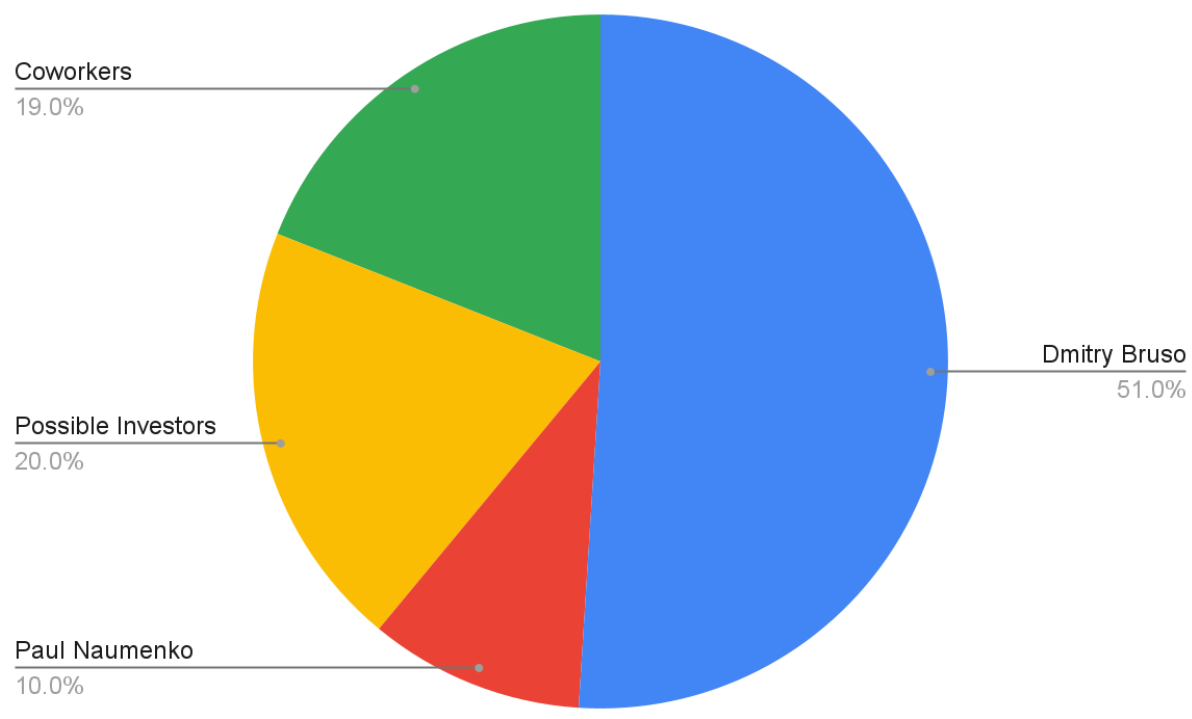
3.5 Business owners and shares

Current product shares owners



The only two people who own the project NoGrab: Dmytro Brusov CEO/co-founder - own 90% of the project. Paul Naumenko CTO/co-founder - owns 10% of the project

At the moment, we are planning to distribute another 39% of the ownership of the project to new potential partners and possible investors in the project. After that, the project ownership structure will look as follows



3.6 Balance Sheet

This is the full report of our spending, for now, to build the project. The most expensive part as you can see is marketing cost experiments. Doring the next two months we plan to invest 3000\$ in personal money to generate from 5000 to 10000 new users and validate our implementation of “EYE OF GOD”.

One of the primary goals for this extra investment is to have a clearer picture of the price of getting a new “free user” and the cost of getting a “paid user”. Under “free user”- we mean the user who uses the free version of the app.

The second one is to validate the most relevant chip channel to generate new users.

Total Investment for previuse period	-\$4,569.00	01/2023	02/2023	03/2023	04/2023	05/2023
Total for 2023	-\$5,489.00					
Dmitry investment	-\$920.00	\$35.00	\$425.00	\$35.00	\$185.00	\$240.00
Net profit	-\$920.00	-\$35.00	-\$425.00	-\$35.00	-\$185.00	-\$240.00
Revenue	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COGS	-\$579.00	-\$35.00	-\$134.00	-\$35.00	-\$185.00	-\$190.00
Marketing	-\$341.00	\$0.00	-\$291.00	\$0.00	\$0.00	-\$50.00
Taxes	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Revenue	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Android in App	\$0.00 -	-	-			
iOS inApp	\$0.00 -	-	-			
Ads revenu	\$0.00 -	-	-			
Operational coast	-\$99.00	\$0.00	-\$99.00	\$0.00	\$0.00	\$0.00
FireBase	\$0.00 -					
	\$0.00 -					
	\$0.00					
	\$0.00					
	\$0.00					
App Store Yerly Subscription	-\$99.00 -		-\$99.00 -			
Non Operational coast	-\$180.00	-\$35.00	-\$35.00	-\$35.00	-\$35.00	-\$40.00
G-Suite	-\$105.00	-\$20.00	-\$20.00	-\$20.00	-\$20.00	-\$25.00
Domain	\$0.00					
WP Hosting	-\$75.00	-\$15.00	-\$15.00	-\$15.00	-\$15.00	-\$15.00
	\$0.00					
	\$0.00					
Marketing and SEO	-\$341.00	\$0.00	-\$291.00	\$0.00	\$0.00	-\$50.00
Contect writing	-\$31.00		-\$31.00			
Link building	-\$260.00		-\$260.00			
Mail Marketing	\$0.00					
App review	-\$50.00					-\$50.00
	\$0.00					

	\$0.00					
Salary	-\$300.00	\$0.00	\$0.00	\$0.00	-\$150.00	-\$150.00
SMM	-\$300.00				-\$150.00	-\$150.00

PART 4. MARKETING STRATEGY

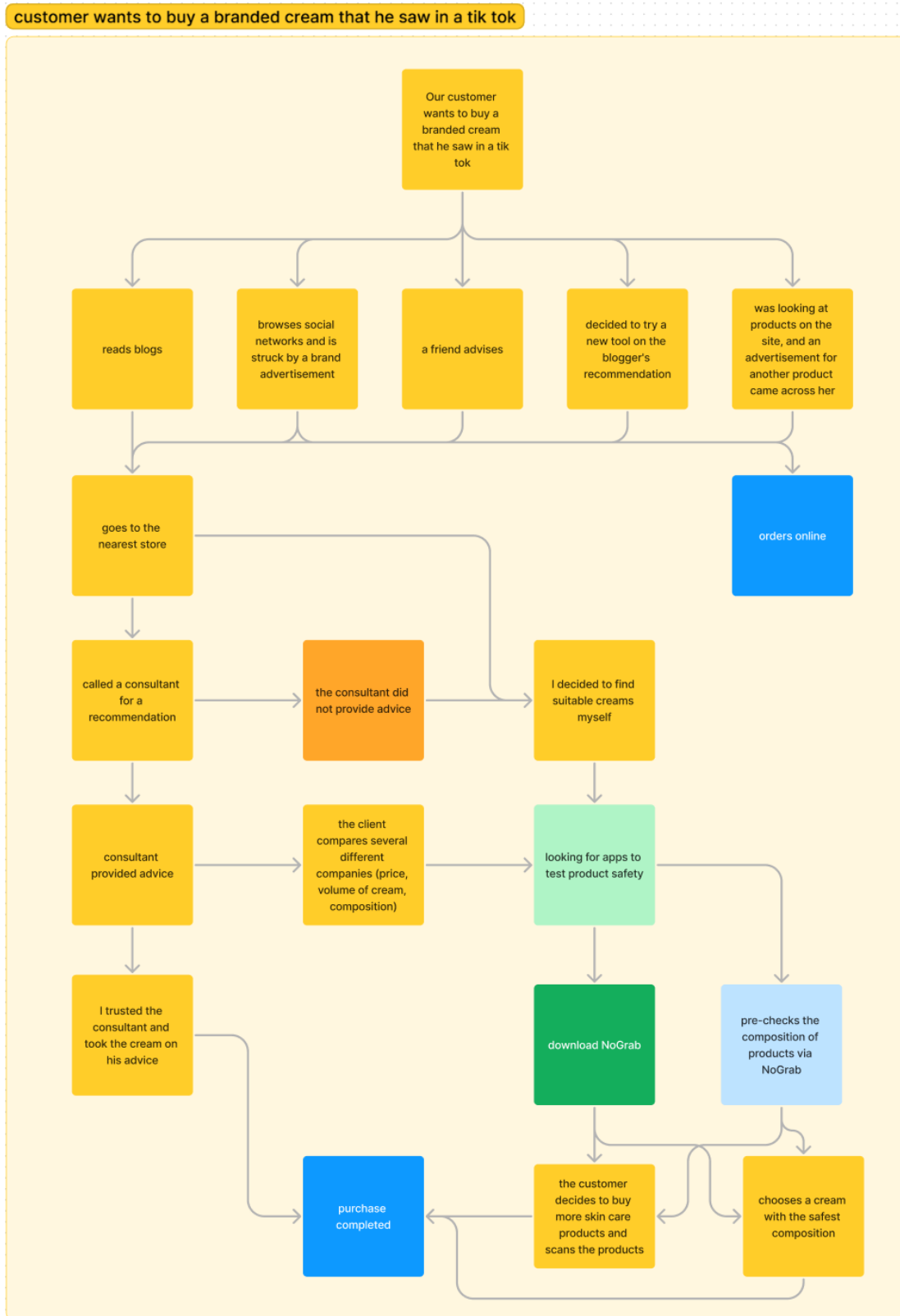
4.1 Intro

Based on analyzing traffic source data of our competitors, they don't use any social media as a valuable source of users, 3 primary sources for most competitors are a search engine, direct traffic, and mail marketing. We will focus on this channel secondary as for now we have a small user database of only ~3000 users email and the competition for organic requests in this segment is still quite expensive for us.

4.2 Our new customer profiles

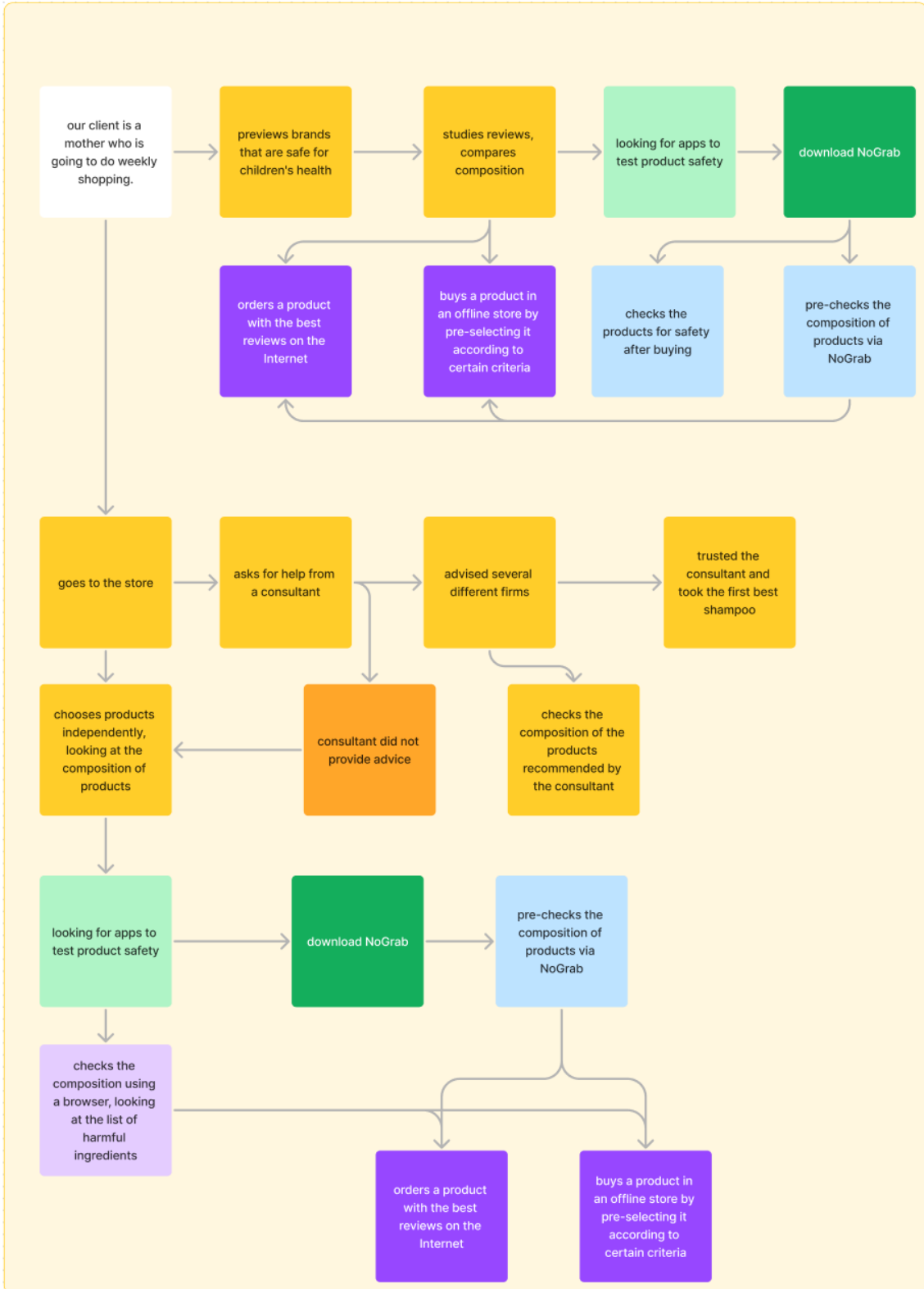
After re-build our customer's primary starting point for profiles we can focus on these 4 categories of users and their journey maps to decide the right time and place to get in there hands.[\[16\]](#)

1) Our customer wants to buy a branded cream that he saw in a tik tok

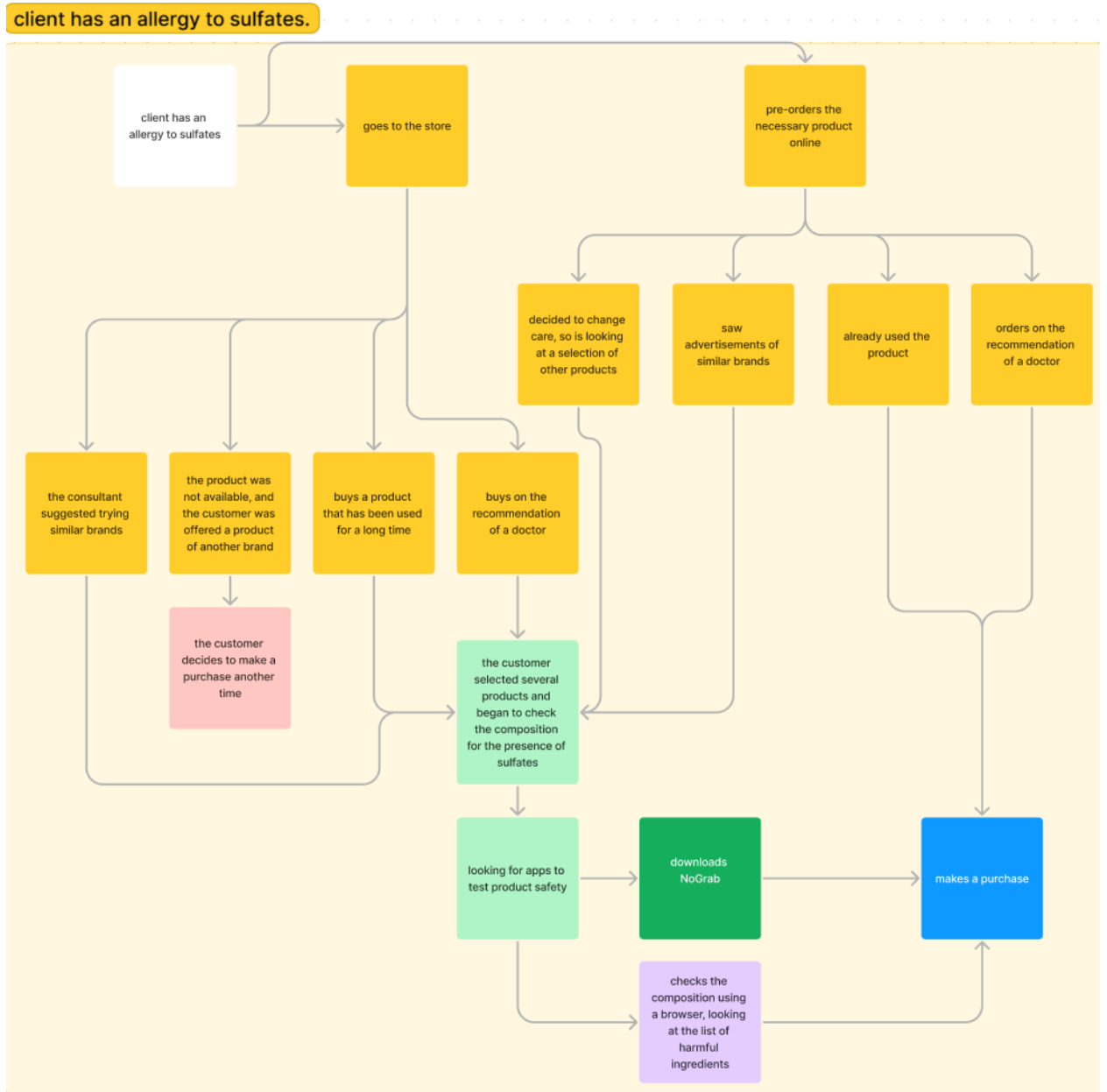


2) Our customer is a mother

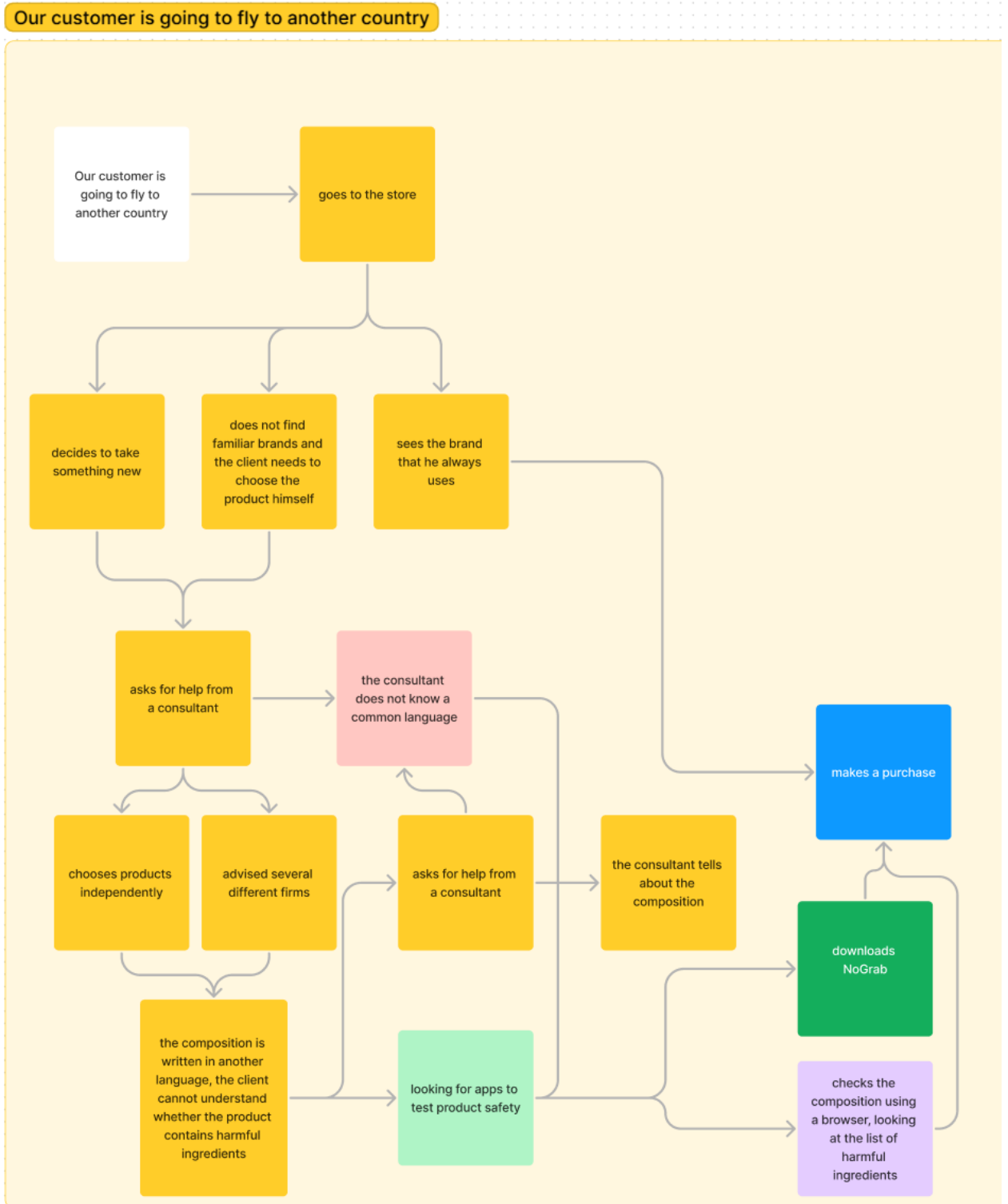
our client is a mother who is going to do weekly shopping.



3) Our customer has allergies.



4) Our customer is going to fly to another country



4.2 Instrument what we will validate

Probably the most important thing will not be which channels of communication with customers we should validate, but which tools and metrics to evaluate.

Firestore Analytics (wrapper of Google Analytics) - this tool will help to identify user behavior in the application and sources of new users, also this tool provides the ability to segment users according to various characteristics, we will use this to divide users by channels and identify which of the users are more involved in using the application in order to refute or confirm hypotheses about the sources.[\[17\]](#)

Firestore Short URL - this allows separating not only the traffic sources themselves but also separately checking the effectiveness of various posts, advertising collaborations or individual advertising messages.

KPI for validation results - for now, the primary KPI for evaluating the quality of sources is 1) value off uninstall the app 2) the value of returner users to the app the second time 3) the value of the scan. For this iteration, we didn't prioritize the paid users but it will be a good trigger to understand the paid customer's source too.

4.3 Channels for validation

Facebook - build community and run an advertisement for target audience

TikTok - build channel, run an advertisement, run collaboration with influencer

Instagram - build channel, run an advertisement, run collaboration with influencer

Youtube - run an advertisement, run collaboration with influencer

Paid and free articles - create content, buy content.

Startapp repository - producthunt and other platform

Search Ads - we will run advertisements for primary keywords

Contextual Ads - run advertisements on the thematical site for our customer's profile

PART 5. ENVAERMENT

5.1 Stakeholders

- **Team** - one of three primary stakeholders. Our main interest is to create a successful and profitable product. To be independent of third-party money sources.
- **Customers** - get clear and fast results of the status of ingredients on the products
- **Content Creators** - the possible way to improve the count of active users is to create instruments for content creators in the cosmetics and food industry. This is one more way to grow our product value proposition
- **Influencers** - in the food and cosmetics industry can use our product for independent product analysis
- **Investors** - this can be a possible opportunity to faster scale and promotion for our product and get some profits for our investors

5.2 Team

- **Dmytro Brusov - Co-founder / CEO**

- Providing the strategy of the project, preparing everything about the description of how it must work writing detailed and clean epics and tasks for the dev team, content making SEO, and other sides of project visibility and traffic generating.
- Prepare reports for Co-founders and present them after each milestone. Improve the current business model

- **Paul Naumenko - Co-founder / Flutter Developer/ CTO**

- Provide development for the project. Create new functionality for the application. -
Provide advanced feedback about task descriptions.

- **Solomija Bodnar Marketing Specialist** - Position closed with third-party service for two months as a trial period(1/05/2023 - 1/07/2023).

Responsible for:

- Re-creating user portraits based on changing the primary priority of project functionality
- Basing on the analysis deciding the channels for bringing new users
- Test several advertisement channels for promoting application
- **Second Flutter Developer** - position open
- **Email Marketing Specialist** - position will be covered with hiring specialist/outsourced
- **Designer(App/Web/Social media content)** - position will be covered with hiring specialist/outsourced
- **SMM** - position will be covered with hiring specialist/outsourced
- **SEO** - position will be covered with hiring specialist/outsourced
- **Content Writing** - position will be covered with hiring specialist/outsourced

PART 6. RISK MANAGEMENT

6.1 Why can we make mistakes?

For today we are a small team of 2 people who didn't take any penni from outside. The good news, is we do not spend much money today, it's about 5000\$ for personal investment at all for the last 3 years for validation products and ideas. And everyone who works on the project today is working for the personal future with grate perspective product. We believe in our goal and mission, so any breakdown in the market or with a product would not kill us mentally. It will be unpleasant, we will grieve a little, gather our strength and continue working. We are small as a team as a product today, so all our mistakes are cheap.

6.2 What can be painful for our project?

As we small project and a small team, it will be hard to fight with top projects on the market for now. Our unique proposition can be implemented by competitors as they have more resources to develop and promote the product.

- Implementing AR/MR layer for marking ingredients by our competitors as primary functionality for the apps. To deal with this we need to make our unique product value unreproducible with just development work. To do this we plan to implement the ML part of suggesting assistance and recognizing products by the pack in the next 12 months
- Improving government regulation with restricted products which include any restricted ingredients. This means no more products with restricted ingredients in the store. In this case, we need to focus on people who have personal allergies as not all allergens have restrictions

- Unstable working of team members - health, overloaded with the primary job, out of motivation.
- Unusable user experience implemented with “EYE OF GOD” - we plan to make the user experience of interaction between user \Leftrightarrow app \Leftrightarrow products more natural by adding AR ingredients marking layer. But what if this will be unusable in and. This is more like a challenge, not a risk, and can be solved with iterative improvements of user experience
- Project maintenance will cost more than the profit of the project - now we store a lot of the images and product data in Firebase service this service coast money so in case we will have a lot of active user without a correct way of monetization it will be financial painful for as. In this case, we need to research other ways of monetization.

PART 7. SCALING STRATEGY



7.1 Food

Based On our short terms plan we will include recognition of food products by just extending our ingredients database with food ingredients. As the cycle of buying food products is much short than cosmetics products we must improve our user retention value from 4.3% to at least 10%.

7.2 Drugs

Recognizing drugs and providing information about not recommended driving after them, or incompatible drugs, contraindications for use, and possible side effects. All this information can be easily and fast represented to users.

7.3 Chrome extension

We see an opportunity to combine fast and clear data sets about products if we will provide this instrument to our users. It will help collect quality photos, clear

descriptions, and ingredient sets for all products that the user will check from the browser.

7.4 Smart Glass

Our team strongly believes that using smart glass will be a more natural technology and user experience for solving such AR/MR problems as we do with our app. So combining our experience, product database, and ML models for recognition products we can create an awesome smart glass app.

7.5 Cosmetics/Food product sets

One more possible way to scale our product by providing additional value to our users is to create product sets with our restriction analysis and allow users to share/sell these sets to other users. This is a just hypothesis that didn't check for now as we focus on other aspects of our product. It can be useful for content creators in the food and cosmetic industry.

CONCLUSION

Vision. When the training was just beginning, the picture of the product that we were then developing in our heads looked completely different, although here it would be more correct to say not different, but are not complete. A bunch of tools that I got turned out to be quite successfully applied to complement the value vision of the product. Also, the awareness and documentation of the development strategy helped me to more clearly understand the achievement of the idea in time and the necessary resources for its implementation.

Strategy planning implementation of our product was the first step of a new clear vision about how long our road is. On the other hand using tools such as user journey map, product value proposition, marketing strategy, PR strategy, and customer interview help to highlight the most important part of the product that needs to our customers.

Collaboration. When it comes to estimating time and resources for implementation it became obvious that it is impossible to do it alone, so I will start looking for partners and outsourcing non-critical tasks. This freed up quite a lot of time and energy and most importantly gave inspiration and breathed a second life into the product. Today we have 3 people in the team and this is not finished with onboarding new members.

Analysis. Recurring checking competitors, re-check traffic channels of them, review updates of the apps open new ways of product vision.

We know our product is weak today in comparison with other apps, but we are sure we know how to get them to the level of market standard during the next 6-9 months. And what's more important is we know about only one possible constant value with entrepreneurship - this is constant changes!

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