GoStudent

Gonzalo Hernández' GoStudent case study

Task 1

1. Give an overview of entire market's performance development and development of performance for different marketing sources. Please prepare 3-5 charts and summarize the most important findings:

A. Which KPIs would you choose to measure performance and why?

B. How profitable is this investment overall? Which marketing source is the most profitable?

C. How would you assess the development of the quality of leads in terms of likelihood of becoming a customer?

D. Marketing stakeholders have an opportunity to increase investment for the upcoming months. What is your advice in which channel to invest and why?

Analysis

Key Assumptions to be consider

- Analyzing the data, we found no Leads registered for December 2022. So we will assume that there is a delay in the mkt effects of approximately one month. While this is not linear and there are many influencing factors (such as seasonality, cumulative efforts, saturation, etc) we will allocate the mkt spend to the next month's Leads and leave out the last month's mkt spend (March 2023) as there is no Leads data in March.
- All monetary values are expressed in euros.

A . Which KPIs would you choose to measure performance and why?

As this case requires understanding deeply different Marketing channels' behavior, will be key to comprehend the End-to-End consumer funnel and its profitability.

The KPIs that will allow us to do so will be Conversion Rate and Return of Investment (both advertisement (ROAS) and E2E (ROI)). Revenue estimation using CLTV and Behavior of costs throughout time (Monthly Costs per phase a.k.a. CAC and LAC) will be auxiliary KPIs to build solid advice to Marketing and Commercial areas.

Performance/Efficiency of Sales teams in Step 3, affecting CR% and ROI, could be further analyzed with the Uncalled Customers, Avg Call Attempts and Call Duration.

KPIs and aggregations to be calculated

The first thing to do is assemble the KPIs needed for the subsequent analysis.

We will do a general analysis to see the overview of the data and then move on to a channel-by-channel analysis.

We will focus the analysis on taking into account the temporal character of the case study.

- **Number of Leads generated:** per month and per channel.
- **Number of FreeTrials agreed upon** per month and channel.
- **Percentage of Free Trials obtained over total Leads (CR_leads)**: this will provide a guideline on the treatment, care of the Leads, and effectiveness of the campaign.
- **Number of contracts** for each sales channel: i.e. new customers obtained.
- **Total Expected Revenue** per channel: we will calculate the number of contracts of each type, and multiply it by the corresponding CLTV. This will homogenize the cash contribution of each channel.
- **Conversion Rate FreeTrial (CR_FT)**: Percentage of new contracts over total Free Trial. This will inform about the effectiveness of the FreeTrial and the characteristics of the Leads.

- **Number of Leads that have not been called even once**: to see if there is an opportunity for improvement.
- **Lead Acquisition Cost (LAC)**: the cost of acquiring a new lead. We calculate it as the total marketing cost divided by the total number of leads, per month and channel.
- **Customer Acquisition Cost (CAC)**: we are going to attribute the customer to the channel that brought him/her in on the date he/she entered as a Lead. Calculation is done by dividing the sum of marketing, sales, and FreeTrial expenses by the total number of new contracts, per month and per channel.
- **Lead to Customer Cost (LCC)**: is the cost associated with converting a Lead into a contract. In other words, it is calculated as the sum of sales and FreeTrial costs divided by the total number of new contracts[1]. We will use it to evaluate what to do with uncontacted Leads.
- **Total Adjusted Duration**: the sum of call minutes plus the 10 seconds allocated to unanswered calls.
- **Avg Call Attempts**: average number of call attempts. It will help us understand the characteristics of Leads and sales efforts.
- **Avg Total Call Duration**: average duration of each call. Same as above.
- **Avg Calls 30**: the average number of calls longer than 30 seconds. Same as above.
- **Return On Ad Spend (ROAS)**: Expected Revenue divided by marketing spend.
- **Return of Investments (ROI)**: the ratio between net income (over a period) and investment. In this case, it will be calculated as (Expected Revenue - Total Costs)/Total Costs. Where Total Costs includes Marketing, Sales and FreeTrial costs.

[1] ***Proration of sales expenses and FreeTrial.***
In the case of **sales expenses**, it was assumed that they are all expenses associated with calls to Leads, in order to arrange a FreeTrial. Therefore, the cost of sales was prorated by the number of minutes associated with each of the channels. Special consideration was taken to allocate 10 seconds per call attempt in those cases where the Lead could not be reached even once.
In the case of the **FreeTrial expenses**, this expense was allocated only to those Leads who actually took the class. So the total cost was divided by the number of FreeTrials per month and channel.

B and C. How profitable is this investment overall? Which marketing source is the most profitable? How would you assess the development of the quality of leads in terms of likelihood of becoming a customer?

Since both questions are connected, I will address them together in the detailed analysis below.

Overall Analysis

We can see at first glance that in the 4 months analyzed, the **campaign** had initially very good reception with high Conversion Rates, and then moved into more moderate values - this a trend that can be observed throughout all the indicators.

On the **Sales** side, Expected Revenue for each month shows a decrease after February.

On the **Costs** side, costs have been increasing. Is key to note that In the first two months, sales costs exceeded mkt costs. This may be due to the sales team ramping up and at the same time, as investment in Reach (marketing) grows, we also saturate our target audiences, and greater efforts/costs will be required on the mkt side.

To better understand cost evolution in relation to conversion and cost per contract, expect a more detailed analysis below.

As a result of **Sales** and **Costs** trends, from January onwards ROI and ROAS decreased. Key Questions to answer will be: Did the number of new contracts decrease? Did costs increase?

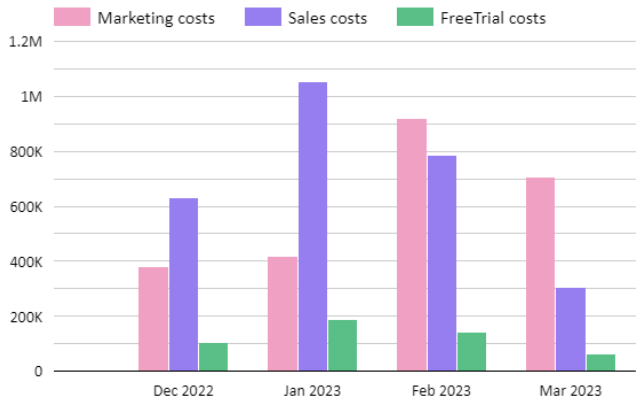


Chart #1: Cost Evolution through time

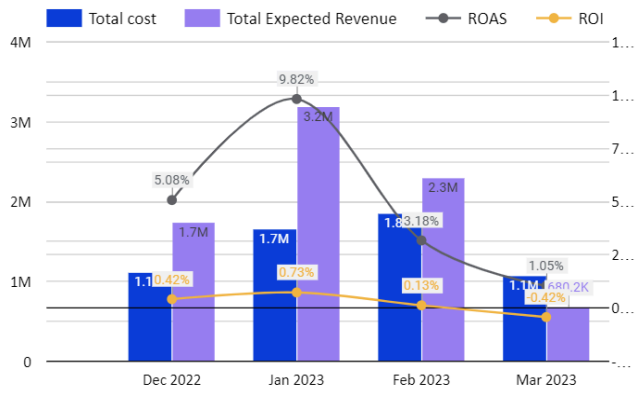


Chart #2: Evolution of Revenue vs Costs

Let's start to deep dive on the sales side and see what happened to Leads, Contracts, and Conversion Rates:

The cross-channel funnel allows us to see in a nutshell, that **4%** of each lead ends up with a Contract, this means, contributing to our Company revenue.

However, this average shows that both the Leads and the **CR%** are experiencing a downturn, the least, **dropping from 5,1% to only 2.5%**.

This is undoubtedly concerning for the business as not only has GoStudent less new potential students each month, but also, the potential of ending up being students after leaving contact details decreases.

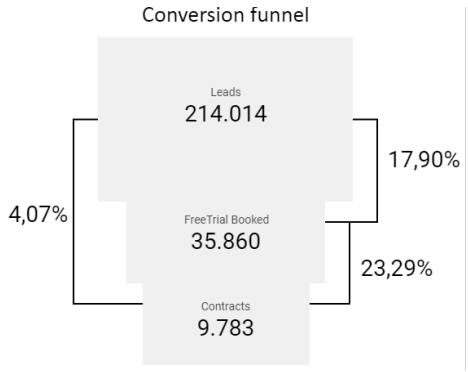


Chart #3: Go-Student Consumer Funnel

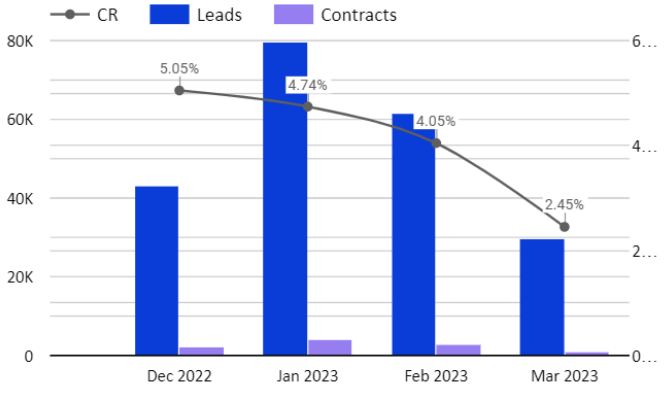


Chart #4: Conversion Evolution Dec-Mar

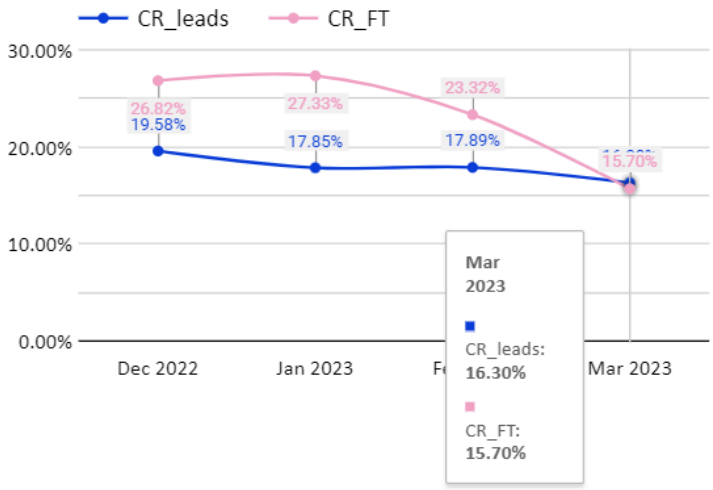


Chart #5: Lead to FreeTrial CR (CR_leads) and FreeTrial to Consumer CR(CR_FT) evolution

Here we can see that the **% of Leads who take the FreeTrial** falls from **3,3%** vs **11,1%** from people who become a customer after taking the class, meaning that sales efforts are persistent in general (we are going to analyze it further below), but we are failing in retaining people who take the

free class. We need to assess if there is no sufficient upselling from the tutors, if the plans are not tempting, etc.

To complement the picture of **sales team efficiency**, during the months, the average amount of call attempts goes down a bit as well as the average total call duration. This means that over the month sales teams have learned and improved the way they communicate the message.

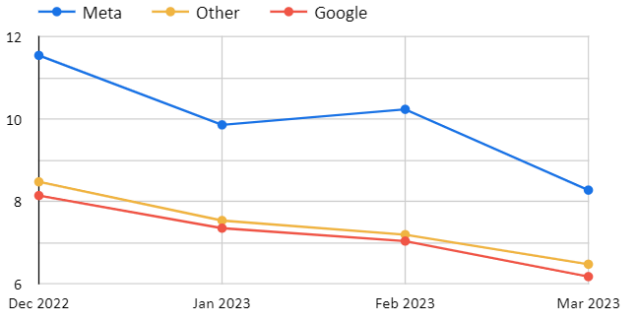


Chart #6: Average total call duration in minutes

On the costs side, from December to March the Customer Acquisition Cost skyrockets (it is almost 3 times higher).

Would be key to understand whether on the marketing side, this is derived from a seasonal behavior of education industry dynamics (e.g. exam preparation period starts in Europe), Investment Mix, Marketing Campaign Performance or Sales Performance.

Chart #7: Customer Acquisition Cost

As each channel has naturally different dynamics, let's now move on to analyze the different channels in order to understand this behavior.

Google leads the overall contribution in terms of volume of leads and contracts. It is followed by Other and Meta last.

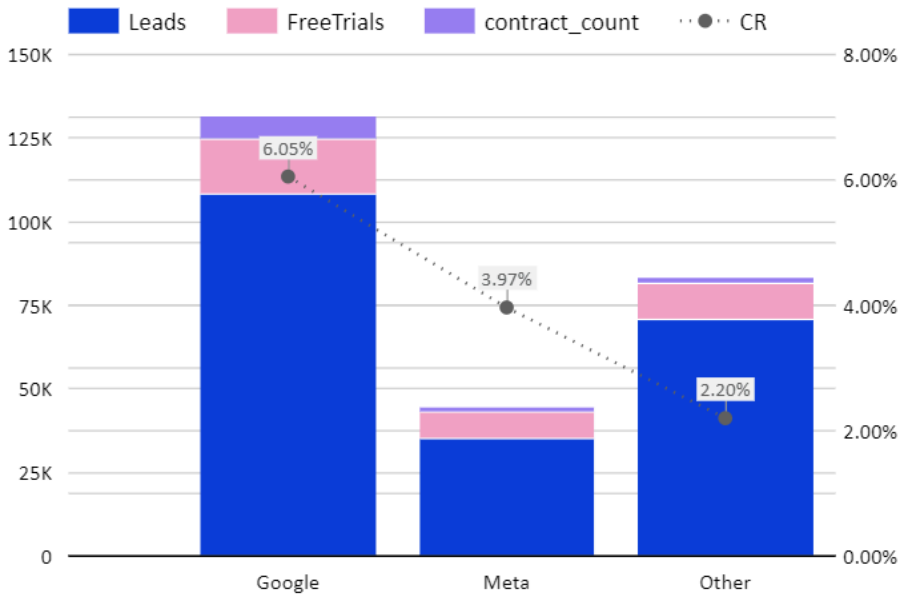


Chart #8: Channel volume contribution

An important point that places Google as the main candidate to guide marketing efforts is the values of the different Conversion Rates. While it is true that Meta is superior in the **CR_leads** - remember that this is the % of Leads that take the FreeTrial - in the most critical part (**CR_FT**, i.e. the % of users that contract the service once they have taken the class), Google is far superior.

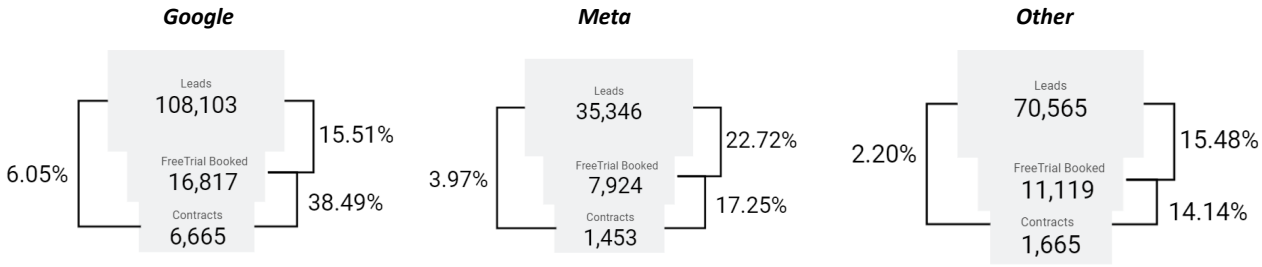


Chart #9: Conversion funnel by channel

And something quite interesting is that contrary to what usually happens **Google's CR_FT over duplicates from CR_leads (15,51% to 38,49%)**. This a very unusual behavior in general, and would be smart to use this, prioritizing pitches and calls to Google's Leads.

In other words, Meta is a great channel for penetration, this means, getting volume from users who are willing to accept the free class, but then do not convert - or at least with the current process.

A suggestion could be to **deep-dive into this type of student and understand its expectations through a Survey or Focus Group. (Price or Duration might not be convenient, e.g. Students from Social might be looking for a 1-month subscription only instead of 6/12/24 months)**.

When we analyze the mix of mkt investment over the months, we see that it remained more or less constant at around 70% for Google, **but that it was decided to increase Share of investment in Meta**. **However, contrary to this increase, the channel with the lowest cost of acquisition (CAC) was Google.**

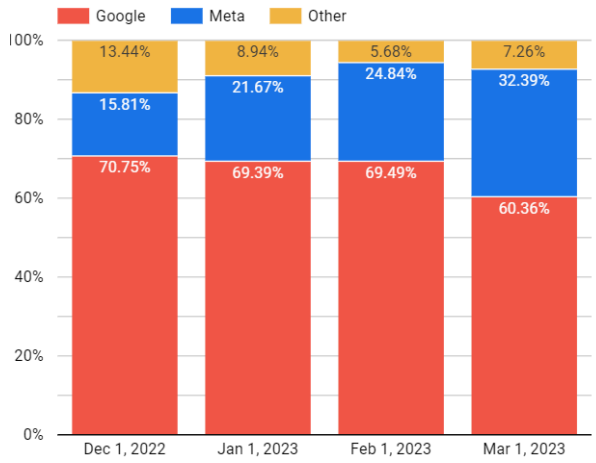


Chart #10: Share of marketing investment

This partially explains why the **CAC skyrockets during March**.

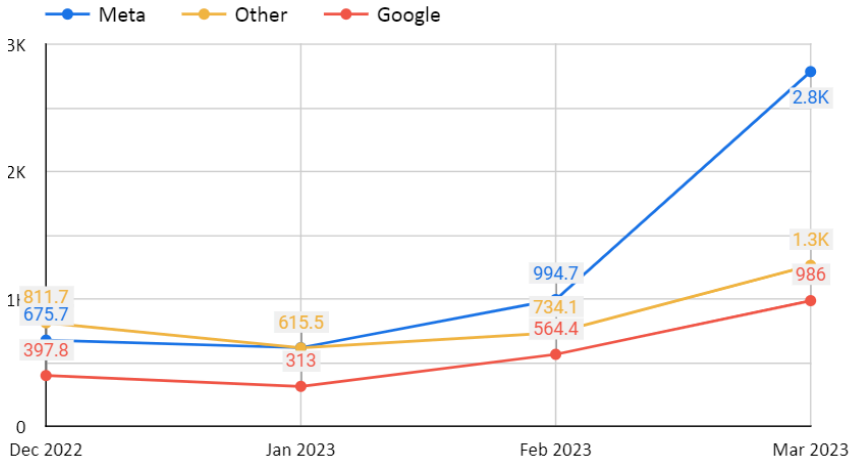


Chart #11: CAC per channel

We can also see this by analyzing the % of Leads contributed by each channel. Despite having maintained the same level of investment, Google maintains and increases its share. Meta, on the other hand, the increase in investment is only enough to reach the same level.

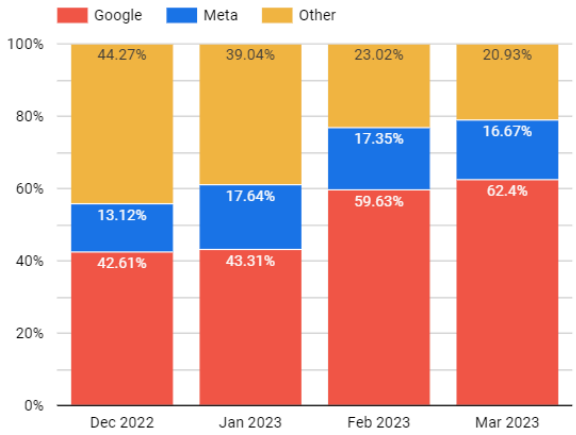


Chart #12: Share of Leads

At this point, some hypotheses arise. One possibility is that at the beginning of the campaign, **a high percentage of the target audience was covered, and in the following months the cost of reaching the remaining target audience has grown exponentially**. Another possibility is that the **content of the campaign has not changed sufficiently, and the audience has quickly reached saturation.**

It is worth noting that the cost of acquiring leads (LAC) is lower for Meta only in the first 2 months of the campaign. So this is another point where it loses out to Google.

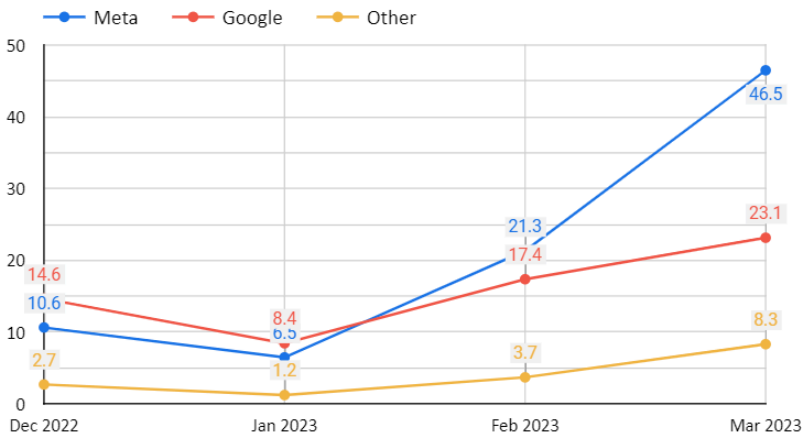


Chart #13: LAC per channel

To answer the question of **how profitable is the investment overall**, we will look at ROI.

The ROI for the overall business evaluated over the four months gives 21.48%. According to some notes consulted (from the OECD -Organisation for Economic Co-operation and Development- and the World Bank) the ROI of a business in the educational area is usually between 10% and 20%.
So, in principle, this value would be within the expected range.

Now, if we disaggregate by channels and months, we see how with the current mix of channels and strategy, business performance has decreased and become less profitable in general.

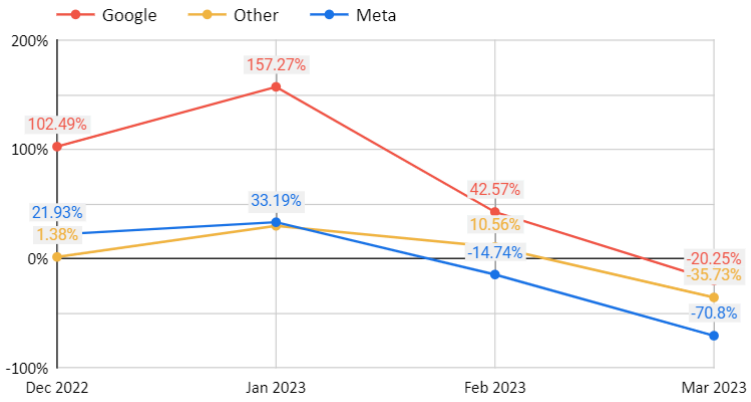


Chart #14: ROI per channel

When analyzing the whole picture it is suggested to explore alternatives in terms of the current target audience, to improve remarketing, to analyze the convenience of testing other markets.

So, **which marketing channel is the more profitable?** Let's explore ROAS values.

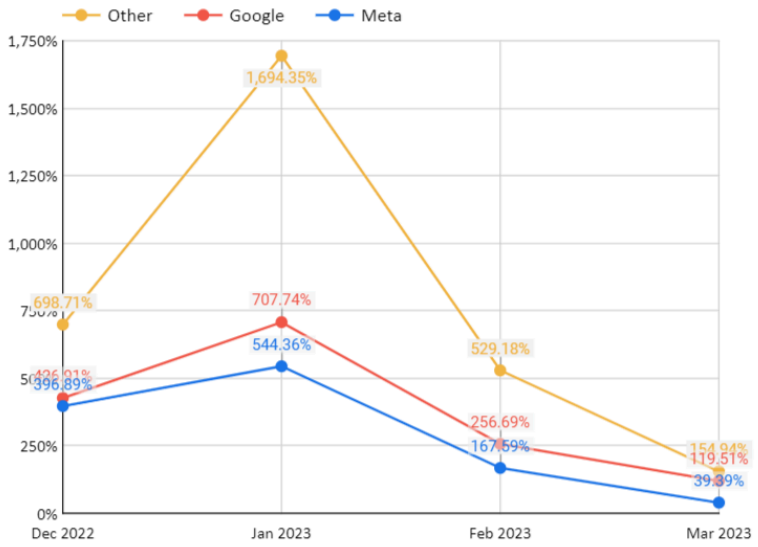


Chart #15: ROAS per channel

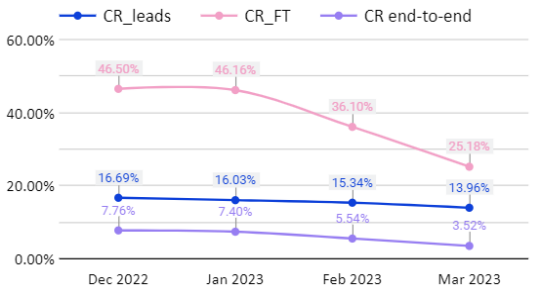
If we rely exclusively on ROAS, the most profitable channel would be **Other**. **But the problem is that in the Other box, in addition to all those smaller channels, fall all the poorly tracked campaigns where we lose attribution.** This is visualized when we see the amount of mkt cost associated with this channel (chart #10).

The recommendation would be to do a deep dive into this channel to better understand what it is made up of and see if we can improve measurement.

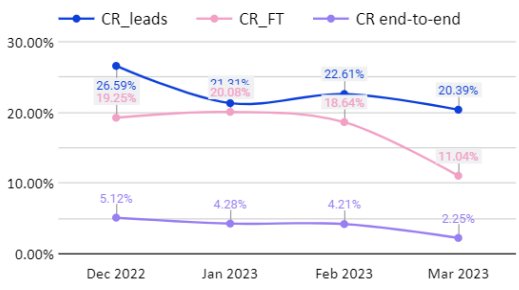
In conclusion: from an ROI perspective, Google is the most profitable channel by far. In terms of Return of Ad Spent, Others would be the best, but as we said, further analysis is needed. Between the two well-attributed marketing channels, Google outperformed Meta in this perspective as well.

To evaluate ***"the development of the quality of leads in terms of likelihood of becoming a customer"*** we only need to analyze the different Conversion Rates.

Google



Meta



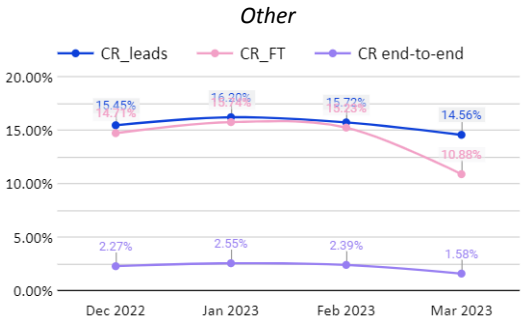


Chart #16: CR's by channel

Just look at the number of Leads who took the FreeTrial (**CR_leads**) and the number of Leads who took the class and signed up for the service (**CR_FT**). Let's complete with the overall **CR**, i.e. the % of Leads that became customers. What we see is a general downward trend, which makes sense, since at the beginning of our campaign we are impacting more interested users, **which means that over the following months, we will be left with less convinced users, and this means that the transition to customers is not so direct. However, the quality of Leads obtained by Google is the best, as it has the best CR and CR_FT.**

D. Marketing stakeholders have an opportunity to increase investment for the upcoming months. What is your advice in which channel to invest and why?

Throughout the analysis, Google was the best-performing channel in terms of ROI (4 or 5 times except for the last month) and beating Meta regarding ROAS.

ROI tell us that is cheaper to get a customer from Google, and in the top of that, customer LTV are bigger.

Google leads traffic represents in avg almost 52%, and 70% of total contracts, and through time, the share has arisen. The quality of the Leads in the best, as we can see from the CR_FT and CR values. Also, it has the better CAC value (the lowest), which is the cost of each new customer. This means that with the same amount of investment, we will get more customers.

We will recommend then increasing the investment in Google, as it is the one with better CAC, CR, CR_FT, ROAS (except for Other), and ROI.

E. Additional note

The last thing we would like to point out is that across the months, **there is an amount of Leads that have not been called even once**. Moreover, they are mainly from Google and Other, and remember **Google's CR is the best**.

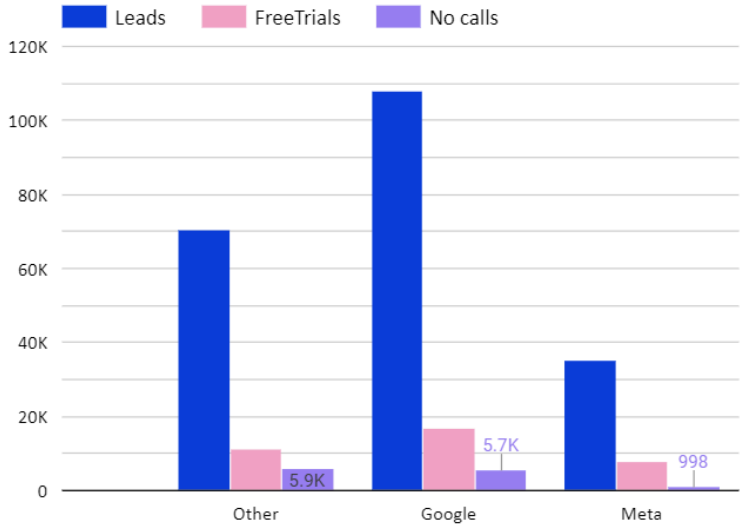


Chart #17: No-called Leads Opportunity

Considering that the cost of acquiring an end-to-end customer (CAC) is always, for all channels, and in all months, higher than the Lead to Customer Cost (LCC), it is worthwhile to reinforce the efforts to call these Leads. Moreover, taking an average of the **LTV**, it gives a value of **€1051**, which is higher over the whole period than the LCC.

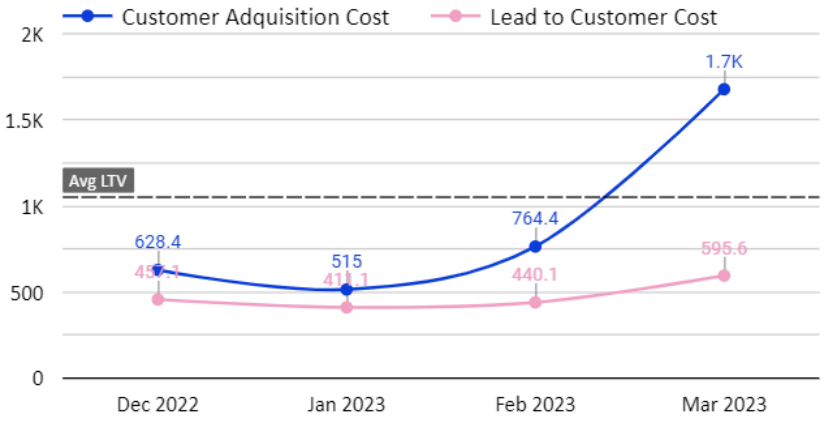


Chart #18: Avg LTV vs LCC and CAC

Takeaways and actions suggested for the upcoming months:

- ***General:***
  - It is important to understand what stage the product is in, to see what stage of the funnel we are investing in, in order to define the requirements for the ROAS.
  - It would be necessary to improve Other's tracking because the investment allocated is not minor (compared to Meta) and certain KPIs are good.
  - Another important point to analyze is that from January onwards, the CR_FT hiring rate drops sharply in almost all channels. It would be necessary to do a deep dive into what happened during those months in the FreeTrials. Some possibilities would be to think of some kind of incentive for teachers, improve training, add some upselling pitch in the classes, hire an agency that challenges teachers, etc.
  - Increasing Meta's mkt investment was not effective and actually, it was very costly.
  - The likelihood of becoming a customer is overall 4% - (How many leads end up with a Contract). However, this average shows that both the Leads and the CR% are experiencing a downturn, the least, dropping from 5,1% to only 2.5%

- ***ROI:***
  - From January onwards ROAS and ROI decreased due to a combination of factors: conversion rates of all channels decreased (mainly the % of Leads that finally contracted the service) - it is speculated, among other things, due to market saturation - and the mkt budget was incorrectly increased in an expensive and inefficient channel (Meta).
  - Investment has been profitable until now, but opportunities need to be seeked as drop in main KPIs threaten the sustainability of the business.

- ***Channel Mix:***
  - Google is the most profitable marketing source. This is not only because Marketing Costs are usually below other channels, but also, because the CR% after trial is very high - this means that when we invest in calling/trials, they usually become long-lasting students. However, as performance has been dropping, campaigns need to be reviewed.*
  - Meta represents an increasingly less attractive investment option. In opposition to google, we easily lose students after trial (=after investing in calls and lessons). Suggestion is to decrease mix and assess commercial Strategy for the Students coming from this channel (e.g. Change Price/Duration of contracts), to positively impact CR% of second part of the funnel.
  - As Others has significant share, suggestion to breakdown in subchannels and further measure

- ***Marketing actions****:
    - Assess campaigns and target audience. Current audience might be saturated or content might require a freshen up (Costs increased and CR% fell).

- ***Sales***:
    - Prioritize calling and pitching Google's Leads, as they are the ones that are more likely to become customers.
    - Over the month sales teams have learned and improved the way they communicate the message.

Task 2

During given period of time sales team was running A/B test with the hypothesis, that active pitching of trial sessions has a positive impact on lead-2-customer conversion rate. Please provide measurement of the test and answer following questions:

A. Would you accept or reject hypothesis based on test data?
B. Should sales team roll it out globally?

Executive Summary

1. The hypothesis that 'Pitching on test sessions does not have an impact on the CR' is rejected, so the hypothesis of the statement is accepted.
2. The test group has a CR improvement of **0.62%**.
3. The measure should be adopted globally, as the cost associated with including the sales pitch is negligible compared to the potential gain.

Analysis

To solve this question, the first thing we are going to do is to set up a statistical experiment. What we want to see is whether the trial pitch affects the lead-2-consumer Conversion Rate (CR in our previous calculations).

For this, we are going to state our hypothesis:

Null hypothesis (H0) = Pitching on test sessions **does not have an impact** on the CR.

Alternative hypothesis (H1) = Pitching on test sessions **has a positive impact** on the CR.

	Test Group	Non-Test Group
Leads	23950	179662
Customers	1187	7792
Lead-2-Customer CR	4.96%	4.34%

What we will do is calculate the Z-statistic and use it to obtain the p-value to compare it with the significance level (we will take 0.05):

$$Z = \frac{\widehat{p_1} - \widehat{p_2}}{\sqrt{p(1-p)\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}}$$

Where:

$\widehat{p_1} = Conversion\ rate\ of\ treatment\ group.$

$\widehat{p_2} = Conversion\ rate\ of\ control\ group.$

$p = Pooled\ conversion\ rate: \frac{x_1+x_2}{n_1+n_2}$

$x_1, x_2 = Number\ of\ conversions\ in\ treatment\ and\ control\ groups.$

$n_1, n_2 = Number\ of\ leads\ in\ treatment\ and\ control\ groups.$

After doing the calculations:

Z-Statistic: 4.38
P-Value: 0.00001

Reject the null hypothesis: There is a significant difference in conversion rates.

What we conclude is that there is an impact.

Let's look at whether there is a significant difference between the costs associated with each strategy so that we can assess whether or not to adopt it.

The average call duration for the test groups is **8.9531** minutes, and for the non-test groups, it is **8.6987** minutes. A further test was performed to calculate the Z-statistic to check that this difference is statistically significant. The null hypothesis, in this case, was: **'the time of telephone conversations is not affected by the specific pitch**'. This hypothesis was disproved, so there is a significant difference.

We then have a difference in minutes between groups of **0.2544** minutes per call. Multiplying this value by the cost of sales per minute (**€1.6952**) gives an extra per Lead contacted of **€0.4313**.

The difference in Lead-2-Customer CR is **0.62%**, which means that by adopting the Trial Pitch we would have an increase in Customers (in the total months analyzed) of 214014*(0.62/100) = **2054**.

The additional cost of sales for the total would be 2054*€0.413 = **€848.302**. To this must be added the additional cost of FreeTrial per class, which is **€13.7422**. That is 2054*€13.7422 = **€28,226.4788**.

Taking an average **CLTV** of **€1051** we would be left with an additional revenue of 2054*€1051 = **€2,158,754**. So the **net gain** from incorporating the pitch (without taking into account costs associated with vendor training) would be €2,158,754 - €28,226.4788 = **€2,157,905.698**.

So the recommendation would be to adopt the measure globally.

Bonus ideas: we could try to analyze the quality of the plans that achieved these Pitches, and determine if, in addition to improving the CR, the quality of the clients won is also improved.