### Advising Air France to Modify Its SEM Strategies Through an Analytical Approach

Mansi Patel, Akash Navneeth, Neel Patel

University of Texas at Dallas

ITSS 4352.002

Vatsal Maru

05/08/2023

# **Table of Contents**

Introduction	3
Method	4
Results & Conclusion	8

## Advising Air France to Modify Its SEM Strategies Through an Analytical Approach Introduction

In today's world, the majority of individuals travel for either business or leisure purposes, with air travel being a crucial aspect of the travel industry facilitated by numerous airline companies. Many people now purchase their airfare tickets via online ticketing systems like Expedia or Google Flights. However, prior to the current frequency of air travel, there were limited options for potential customers to book their tickets in person. With the world's increasing reliance on the Internet, airlines had to adjust their marketing strategies and adopt Search Engine Marketing (SEM) to maximize profitability. In this context, we will explore how Air France has historically utilized SEM and identify ways to optimize it to improve their business profitability.

As with any analytics pertaining to website performance - or web analytics, there are several metrics that we will need to examine to better understand Air France's SEM practices and performance. These include the click-through rate, the transaction conversion rate, the costper-click, and the return on ad or investment. In addition to these metrics, we will need to understand the key performance indicators which will ultimately determine the performance of Air France's SEM strategies. Next, we will look at the metrics in greater detail and clarify the approach to determine the performance of the campaigns and publishers for Air France's various SEM strategies among the different publishers.

#### <u>Method</u>

Throughout the article, many SEM metrics are identified. First, the click-through rate, also known as CTR, is the percentage of customers who click through on a link. Second, the transaction conversion rate, TCR, is the percentage of customers who purchased after clicking through that website. The third performance matrix is the actual cost per click or CPC. CPC is the actual cost paid when users click on the ads. Return on ad, ROA, is the metric measure of the efficiency of generating net revenue from ad dollars spent. Lastly, Air France mentions other performance metrics, such as pay-per-click or sponsored search, where businesses bid on keywords for sponsored link listings consisting of a title and a short description, and a display URL. The campaigns using Pay-per-clicks were considered easily measurable due to their ability to track precise actions on the internet.

The optimization of the public strategy focuses on identifying which publisher, out of all, is getting the best result. The visual representation of the publisher strategy is divided into a total of four quadrants. The upper left quadrant has the highest cost per click and low take rate, making it the worst-case scenario. The second quadrant, the upper right corner, has a high take rate and high cost-per-click rate. This quadrant can be optimized by reducing the overall cost. The third quadrant is the optimal quadrant, where the take rate is high, as well as the cost-per-click. Every other quadrant tries to be in the third quadrant to be optimal. The third quadrant represents the best-case scenario. Lastly, the fourth quadrant is located in the lower left corner, where the cost-per-click is low, as well as the take rate leading to no revenue being generated. To get to the optimal quadrant, the take rate should be improved, as well as the usage of keywords.

Using the article Air France, A pivot table was created to analyze the overall publisher strategy showing the sum of the average cost per click, the sum of the total cost, and the sum of

the take rate. A bubble chart was generated showing each of the public strategies which fall into the four quadrants. The main goal of performing the analysis is to maximize the take rate and minimize the cost-per-click. Looking at the publisher, Google-US, which falls into the upper right quadrant of the publisher strategy, displays a high CPC and take rate. In order for Google-US to reach the optimal quadrant, their focus revolves around optimizing cost. Yahoo-US falls into the third quadrant representing the most optimal compared to other publishers. Yahoo-US has a high take rate and low cost-per-click, making it the best-case scenario. The primary recommendation for Yahoo-US is to sustain where it is. Lastly, the rest of the publishers, Overture-Global, Google-Global, MSN-US, and MSN-US, all fall into the fourth quadrant, where the take rate and CPC are the lowest. To move to the optimal quadrant, these publishers would have to focus on the usage of keywords and focus on improving the click rate.

When it comes to optimizing campaign strategy, the visual representation differs. The worst and best case scenario is changed. This strategy focuses on campaigns within a specific publisher on the dimensions of Click through rate and transaction conversion rate. The upper left quadrant has a higher transaction conversion rate and low click-through rate leading to not enough people buying the products even after many people click the link. The upper right quadrant represents the best-case scenario. The campaigns are doing well but have high TCR and CTR rates. The lower right quadrant has a high click rate, but the transaction rate is low. The lower left side is the worst-case scenario when discussing campaign strategies. This quadrant has low numbers of TCR and CTR, meaning fewer people are clicking on the link as well as fewer people are buying the product; having a business in this quadrant can lead to low-profit campaigns. The primary goal for this visualization is to perform analysis on maximizing the TCR and CTR.

When Analyzing the campaign strategy for each publisher, Google-US and Yahoo-US campaigns have the most data to analyze the results. Google-US Geo Target NewYork campaign has a high CTR and TCR rate making the campaign the best-case scenario. The recommendation for the Target New York campaign is to maintain sustainability. On the other end, all of the other campaigns fell toward the lower left quadrant, making it the worst-case scenario. The recommendation for all of the campaigns falling in the lower left quadrant would be to improve on web search. The second visual analysis was done one Yahoo-US. Similar to Google-US, the graphics represented Western Europe Destinations to be on the 2nd quadrant with high CTR and TCR rates. The other campaigns were located towards the lower left, 4th quadrant. The recommendation for this is also improving the web search to maximize the CTR and TCR rates. The rest of the campaigns for publishers such as Google-Global, MSN-Global, MSN-US, Overture-Global, and Overture-US has campaigns that fall in the second quadrant where the CTR and TCR rates are maximized. The recommendation for these campaigns is to sustain the rates of CTR and TCR.

The best campaign among the variety of publishers would be Western Europe Destinations. We don't have enough campaigns for each publisher to make a fair comparison. However, the majority of the campaigns for Yahoo-US fall in the fourth quadrant. Western Europe Destinations falls into the second quadrant, where the CTR and TCR are maximized. For Western Europe Destinations, the count for keyword combinations is 395, which could be proven good or bad depending on the situation. Calculating the average for the position, ad rank, and quality score is needed, which isn't given to us in the data; therefore, we are looking at the overall number and concluding that it is better to have a lower number for the average of position. The average position for this campaign is 1113.47. It is relatively higher than other campaigns. Lastly, the count of bid strategy for Western Europe Destinations is 395, which also can vary depending on the situation. Overall, the best two publishers to compare the campaigns from are Google-US and Yahoo-US due to those publishers having a more significant amount of campaigns to analyze. Both of those publishers had campaigns that were examples of the bestcase scenario by falling into the second-quadrant as well as the worst-case scenario by having campaigned in the fourth-quadrant.

The impact of campaign changes on key performance indicators (KPIs) such as net revenue and ROA. The ROA can be calculated by dividing net revenue by cost. The ROA for Google-Global is 7.69, Google-US is 4.94, MSN - Global is 11.97, MSN - US is 11.28, Overture-Global is 6.69, and Yahoo-US is 19.10. As soon as the ROA is determined, the KPI can be calculated by multiplying ROA and CPC. KPI for Google-Global is 17.100, Google-US is 11.78, MSN - Global is 25.77, MSN - US is 32.34, Overture-Global is 5.38, and Yahoo-US is 38.17. The total KPI for all of the publishers is coming out to be 11.67. When comparing the KPI of the total publisher vs. kayak, the numbers are far apart due to the data used to calculate Kayak being small. Only one row of data is used to calculate the KPI of the kayak. The KPI of all the publishers is 11.67, whereas, on the other side, the KPI for Kayak is 81.05. The impact is essential for defining how much you are willing to bid for keywords in the future.

### **Results & Conclusion**

Overall, we have discussed the KPI impact and compared it with the kayak to measure the performance. The KPI for all publishers is 11.67 compared to Kayak stood at 81.05. The best campaign chosen, Western Europe Destinations, contained keyword combinations 395. The average position for this campaign is 1113.47, which is relatively higher than most of the average positions for other campaigns. When looking at the optimization of publishers, Yahoo -US is the best-case scenario due to the take rate being high and the Cost per click being relatively low.

Based on our findings, we recommend that Air France take specific steps to enhance the effectiveness of their Search Engine Marketing (SEM) practices. Firstly, the company should allocate a larger budget towards advertising on Yahoo-US, as this publisher has demonstrated optimal performance. Secondly, Air France should focus on promoting Western European Destinations, which possess a strong set of relevant keyword combinations, thereby increasing the likelihood of capturing the target audience's desired results. By doing so, the company can boost conversions and subsequently generate more revenue, leading to increased profits and a higher return on investment.