

DIGITAL MARKETING ANALYTICS:

ASSIGNMENT 2 – PART II

GROUP 13

PETROS POLYCHRONIS, MINNA BERGENDAL,
VLADIMIR CRISTEA, PHILIPP MAPARA

Table of Contents

1. Introduction	1
2. Keywords rationale & procedure	1
2.1 Overview of the campaign design process.....	3
2.2 Conversion rate.....	4
2.3 Ad Groups	5
2.3.1 Brunch Ad group.....	6
2.3.2 Speakeasy – Hidden bars Ad group.....	7
2.4 Further tools for enhancing campaign performance	8
2.5 Bidding Strategy and Daily Budget	12
3. Ex-ante analysis	12
4. Post Analysis, Insights & Next steps.....	14
4.1 Conclusions and next actions	19
4.2 Learnings.....	20
5. Appendix	22

1. Introduction

A determined woman stormed into the grand hall of the all obeying followership of one man. She threw her sledgehammer against the wall and showed her resistance to the system. This most memorable scene of Apple's 1984 MacIntosh commercial epitomized the art of advertising during a technologically still nascent world.¹

In today's world of digital advertising, we cannot only rely on a moving message that caught people's hearts, as Apple did in 1984. Advertising is equally driven by numbers, stats and performance metrics. Could a website generate profits from selling ad spaces by funneling traffic through their website and generating a platform for publishers, meaning the companies wishing to advertise? Examples have shown that the answer is *yes*. Thus, a group of 4 students launched their own website. Under the name *londonuncharted*, the group approached a famous, secret bar close by Liverpool Street – The Mayor of Scaredy Cat.

The goal of this report is to outline the trial conducted in corporation with the famous pub. After an exploration phase with the location, we developed a targeted campaign for the pub. In the following, we lead the reader through the process of launching the ads campaign.

2. Keywords rationale & procedure

Before creating and running advertisements on the web, a number of relevant parameters and decision variables must be set. In this section, we will describe in detail the overall process and the intermediate steps we took to setup our campaign(s). In short, the procedure involves answering the following key questions:

- How many campaigns?
- How many ad groups for each campaign?
- Which keywords in each ad group?

How many campaigns?

A campaign is usually tied to a specific landing page, i.e., the page the user is directed to when clicking on the ad². Our [website](#) (London Uncharted: Hidden Treasures) consists of 5 pages in

¹ <https://www.youtube.com/watch?v=VtvjbmoDx-I>

² For completeness sake, we mention here that various "sitelinks" can be added to the displayed ad. These can refer to different sections of the main landing page (depending on the html structure) or be completely different pages, albeit their role is to support the main landing page. Google Ads suggests that adding sitelinks increases attractiveness and click-thru-rate of ads. We will later present how we utilized sitelinks in the context of our advertisement.

total, one of them being the landing page and each of the rest promoting a different "uncharted" place to visit in London. Each student on the team picked an activity or destination that they personally attended, greatly enjoyed, thought of it as hard to discover based on their own searching experience in the past and decided to write about it. As a result, each place/page was unrelated to the rest and the main landing page was used as a general bridge between them. Given our website architecture, deciding how many campaigns to run was equivalent in this context to deciding how many of the 5 pages we wanted/could afford to promote through individual campaigns. The analysis we underwent to make the final decision factored in the available budget ($\leq 20\text{£}$) in conjunction with the estimated campaign expenses for each individual page, as well as the level of competition for the keywords, as estimated by Google. The latter approximations were based on the output of Keyword planner.

Keyword planner is a platform offered by Google, now fully integrated within Google Ads, that aids users in two vital tasks of the online advertising pipeline. The first concerns the discovery of new and popular keywords similar to the ones that user has already come up with and it aims at capturing a bigger share of relevant searches, potentially at a lower cost. This functionality is currently called "Discover New Keywords". For keywords suggested by the software, rough estimates of monthly searches and bid ranges are made available to the users as well. "Get search volume and forecasts" is the second functionality offered, and it outputs the estimated monthly searches and bid ranges for the set of keywords that the user is intending to register in their campaign/ad group.

In our preliminary analysis, we made use of the "Get search volume and forecasts" service for five sets of keywords that each described one of the candidate pages. A summary of the results is presented in Table 2.1, while the exact output obtained by Keyword planner at the time can be viewed in the Appendix (section 5).

Table 2.1: Campaign attractiveness of each candidate page

Page	# of keywords	# of keywords with estimates	Top monthly avg. searches range	Bid ranges (£)	Competition
Main page	16	2	1K – 10K	0.54- 1.59	Low
Village Underground	9	4	10K – 100K	0.51 – 1.88	Low
Chelsea Physic Garden	13	2	100 -1K	0.28-0.99	Low
HR Higgins	10	2	100-1K	No estimate	No estimate
The Mayor of Scaredy Cat Town	10	6	10K- 100K	0.2-0.53	Medium

Decision Analysis

When examining the table, we looked at the ratio of *# of keywords with estimates* over the *# of keywords*, as proxy for the overall search potential ("market size") with respect to both the number of searches for the currently used keywords as well as the additional keywords we would add when using Keyword Planner's further suggestions. Most of the keywords we included did not even receive an estimate, a clear sign that these keyword phrases are not used in practice. In this respect, The Mayor of Scaredy Cat Town showed the highest potential, with 60% of the keyword phrases receiving an estimate. In terms of average monthly searches for our keywords, The Mayor of Scaredy Cat Town and Village Underground showed most promise with each one having at least one keyword in the range of 10K to 100K searches. When investigating *Bid ranges*, it became clear that the expenditure for almost all our pages was going to be high.

As a sidenote, the provided bid ranges in the table cover most (if not all) keywords for which we had estimates, while we excluded keywords for which bid ranges were extremely high. At this point, we remind the reader that these costs reflect Cost(s)-Per-Click (CPC). Given the £20 budget, we roughly estimated that for a realistic bid of £0.5, we could afford at most 40 clicks in total. Under these preliminary estimations, we decided that it would be better to create a campaign for only a single page of the website. In particular, we estimated that The Mayor of Scaredy Cat Town showed the most potential overall, especially after considering the fact that it was also the page with the lowest overall bid range.

When finalizing our decision, we took into account the fact that our page is probably not a "high-quality" page according to Google. There are many reasons for this, ranging from the fact that our page is not a secure one (the weebly student edition does not allow for an https website, that is one with a SSL certificate) to the fact that we had no incoming or outgoing links which made us "organically" less attractive. Thus, we anticipated that our Ad Rank score (to be explained later) was going to be relatively low and we may had to bid closer to the upper bounds to increase our ad position. In light of these considerations, running a campaign for the single most promising page, [The Mayor of Scaredy Cat Town](#), became our final choice.

Campaign planning

Designing a complete ad campaign for The Mayor of Scaredy Cat Town website required a lot of steps and intermediate decisions in the process. The following section outlines which decisions we had to make and provides thorough argumentation for our design choices.

2.1 Overview of the campaign design process

In track with the campaign creation process within Google Ads, the first design choice comes down to deciding the target of the campaign. This target is sometimes referred to as "conversion rate" in

the broader sense, with conversion having to be defined by the user's business needs. After defining the campaign's goal, the next step is to design one or several ad groups. The design process of an ad group involves determining at the very least 3 elements, the search keywords, the headlines, and the descriptions of the ads. These are the minimum requirements for an ad to be eligible for display on a Google page. Moreover, there are various advanced ad settings we can tune or activate to increase the quality score of our ads and their effectiveness with regards to our campaign target. We will dive deeper into how we utilized sitelinks, location targeting, the near-me option settings to enhance our effectiveness, as well as how we customized our website content to increase our quality score. Finally, designing a campaign requires defining at least two economic quantities, the bidding strategy and a daily campaign budget. The simplest of bidding strategies reduces to setting a maximum bid amount (which will be the same) for each keyword registered in the ad groups. These decisions are linked with our ex-ante ROI analysis and calculations and will be further explained in section 4. An outline of the design process described here can be seen in the form of the steps below.

- I. What is our "conversion rate" in this context & why?**
- II. Ad groups: How many ad groups?**
 - a. Keywords: Which keywords did we end up including?
 - b. Headlines: How did we design the ad headlines?
 - c. Descriptions: How did we design our ad descriptions?
- III. Further tools we used to enhance the campaign performance**
 - a. Ad Rank and Quality Score
 - b. Location targeting
 - c. Sitelinks
 - d. Customizing the website content
 - i. Metadata keywords
 - ii. Site description
 - iii. Changing website text
- IV. Economic quantities → Linked with ROI calculations**
 - a. Daily campaign budget
 - b. Bidding Strategy and maximum bid per keyword

2.2 Conversion rate

A plethora of "conversion rates" ranging from online sales to generating website traffic and promoting mobile applications are available in Google Ads. Within the context of promoting a brunch store/night bar as a third-party (i.e., we are not the owners of the promoted business),

relevant conversion definitions include the number of people who clicked on our ad, the number of reservations made through our website and/or the number of people who visited the business website through our own website etc. In reality, the last two definitions are more closely related to the real business environment but probably require some form of collaboration with the business site and a more advanced website on our side. For the assignment at hand, we decided that the success of our **ad campaign can be fairly accurately judged by the number of people that view and click on our ads**, i.e., the **click-thru-rate**. A high click-thru-rate serves as a good proxy for how effective our ads are in terms of search keywords (are we targeting the right people?), headline text (are we advertising the right concepts in the headline?) and ad descriptions (are we providing convincing information in the description?).

2.3 Ad Groups

The main questions we faced when starting to design our ads were: How many ad groups do we need to create? Is one ad group enough or not? Does the number of ad groups depend only on the number of keywords we want to link our ad to? The answer to these questions came through experimentation with the Google Ads platform. After some time invested creating the ads, it became clear that ad groups are associated with different customer segments and different search aspects of the campaign (we call it search dimensions here), rather than the number of keywords. It turns out each ad group is linked to specific ads (headlines and descriptions). As a result, we understood that to identify whether we were in need of a new ad group, we had to answer the question of whether the ad headlines and descriptions already in place covered all potential search dimensions.

Following this methodology, we ended up creating **two ad groups**, based on the two different services that the Mayor of the Scaredy Cat Town offered. The first was brunch and in particular bottomless brunch (i.e., the act of paying a fixed price but being able to refill your plate as many times as you want), and the second was associated with the concept of speakeasy bars³.

Bottomless brunch and speakeasy bar are two completely different utilities that this place offers, thus requiring two different ad groups with distinct search terms as well as headlines and descriptions. For each ad group, we initially inserted the keywords we had come up during our preliminary analysis and subsequently enriched the list with relevant and popular keywords suggested by the Keyword planner and Google Ads.

³ Speakeasy bars are nighttime bars that are hidden and notoriously difficult to enter if you are not aware of their existence. Sometimes a password is even required to gain access (mostly a tradition now). Speakeasy bars are themed after the prohibition era in the US. During that time, people came up with the concept of secret places where small groups of people could secretly meet and drink (illegally). In those "bars" people were supposed to "speak easy", in the sense of speaking quietly so that the existence of the bar would not be revealed due to noise. Most of time only few people had access to a speakeasy bar, requiring a password to enter, in the interest of protecting its secret identity.

In designing the headlines and the descriptions, we became aware that Google Ads randomly selects 2-3 headlines (and 2-3 descriptions), combines them, and previews them together each time it is displaying our ad. We thus focused our efforts on creating headlines and descriptive texts that provided additional information and were not too repetitive. At the same time, we purposefully decided to iterate the main selling points (e.g., bottomless, speakeasy) in several headlines/descriptions to make sure that these end up being previewed most (if not all) of the time. Furthermore, we agreed upon attempting to sell both utilities in the ad descriptions as much as possible, in an effort to create a more unique selling point for the Mayor of the Scaredy Cat Town. Finally, Google Ads seems to have an internal mechanism of factoring in information on the main page of our website (we are aware of that because Google Ads was suggesting keywords found only on the main page). We decided to include some of those main words (hidden treasures, uncharted treasures etc.) in our headlines too, in case such a design improved our quality score. These were in summary the main principles (and tradeoffs among them) that guided our design thinking for headlines and descriptions ex-ante.

2.3.1 Brunch Ad group

Table 3.1 Search keywords for the Brunch Adgroup

Keyword status	Keyword	Match type
Enabled	bottomless champagne brunch london	Broad match
Enabled	cheap bottomless brunch london	Broad match
Enabled	bottomless cocktail brunch london	Broad match
Enabled	[best bottomless brunch london]	Exact match
Enabled	bottomless lunch London	Broad match
Enabled	bottomless brunch sunday london	Broad match
Enabled	affordable bottomless brunch london	Broad match
Enabled	brunch with drinks London	Broad match
Enabled	[best bottomless lunch London]	Exact match
Enabled	brunch & drinks London	Broad match
Enabled	bottomless brunch cocktails london	Broad match

Enabled	brunch & wine London	Broad match
----------------	----------------------	-------------

Table 3.2

ID	Headlines	ID	Headlines
1	Bottomless brunch	7	Delicious authentic recipes
2	Bottomless brunch for foodies	8	Best bottomless brunch London
3	Brunch and Drinks with the Mayor	9	Wine available
4	The Mayor of Scaredy Cat Town	10	Bottomless lunch London
5	Eat in London	11	Hidden Treasures in London
6	Cocktails Available	12	Uncharted Treasures in London

Table 3.3

ID	Descriptions
1	Enjoy one of the best bottomless brunches in London at the Mayor of Scaredy Cat Town
2	Bottomless brunch, drinks available in secret speakeasy bar
3	Book now to have brunch and drinks with the Mayor in Scaredy Cat Town.
4	Brunch & Wine at the Mayor of Scaredy Town. Be sure to inquire the secret password.

2.3.2 Speakeasy – Hidden bars Ad group

Table 3.4

Keyword status	Keyword	Match type
Enabled	speakeasy london	Broad match
Enabled	secret cocktail bar london	Broad match
Enabled	hidden bars london	Broad match
Enabled	secret bars london	Broad match
Enabled	speakeasy bars london	Broad match
Enabled	best secret bars in london	Broad match

Enabled	speakeasy club london	Broad match
Enabled	secret clubs london	Broad match
Enabled	hidden cocktail bar london	Broad match
Enabled	prohibition bar london	Broad match
Enabled	speakeasy shoreditch	Broad match
Enabled	best hidden bars london	Broad match

Table 3.5

ID	Headlines	ID	Headlines
1	Drinks with the Mayor	7	London's hidden gems
2	Best speakeasy bars London	8	Signature Cocktails
3	Best hidden clubs in London	9	Secret nightlife in London
4	The Mayor of Scaredy Cat Town	10	Hidden Treasures in London
5	Best secret bars in London	11	Uncharted Treasures in London
6	Hidden bars in London		

Table 3.6

ID	Descriptions
1	Mayor of Scaredy Cat Town. Drinks and cocktails in authentic speakeasy bar.
2	Seek passage through the hidden door to reach the cocktails. Password required
3	Book now to have drinks with the Mayor in Scaredy Cat Town
4	Delicious signature cocktails and wine at Scaredy Cat Town.

2.4 Further tools for enhancing campaign performance

What has been described so far, is the absolute minimum required to have ads displayed via Google Ads. Several further tools can be employed to improve ads effectiveness (i.e., targeting the correct people and persuading them to click on the ad) and efficiency (i.e., being effective with the lowest cost). In this example, we focused on a few of them that caught our attention, namely location targeting, content customization and sitelinks.

With regards to **location targeting**, we set up the ads to be previewed only in the UK. The reason behind this is that we regard our conversion rate to be the click-through-rate. People who are planning to visit London and do preliminary analysis could be potentially also searching for similar terms. Yet, such a click would not be equivalent to a booking directly (most of the times). By restricting the geographic location, we aimed at bringing clicks closer to conversions. In general, location targeting is a very important tool. Depending on the application at hand, it may be beneficial to open up the ads to more geographic location or narrow it down to smaller areas. When designing ads, it is very useful to contemplate about this feature and make targeted decisions.

Concerning **sitelinks extensions**, Google Ads' suggestion is creating a few of them with specific calls to action or relevant details the user might want to access before making a conversion. Following this principles, we created two sitelinks, one called "Location" and another called "Book now". The former redirects the user to the google maps location and lets them investigate whether the location suits their needs, while the latter is a quick and direct call to action which redirects them to the business site for bookings. In our case, both extensions ended up having a CTR rate of 10%, with 15 clicks in total stemming from them.





Ad · londonuncharted.weebly.com ⓘ

[Drinks with the Mayor | Best speakeasy bars London | The Mayor of Scaredy Cat...](#)

Mayor of Scaredy Cat Town. Drinks and cocktails in authentic speakeasy bar. Seek passage through the hidden door to reach the cocktails Password required.

[Book now](#)

[Address](#)

 secret bar london   

Ad · <http://londonuncharted.weebly.com/> ▼

[The Mayor of Scaredy Cat Town - Best secret bars in London](#)

Brunch & Wine at the Mayor of Scaredy Town. A speakeasy inside the breakfast club. Book now to have drinks with the mayor in Scaredy Cat Town.

[Book now](#) · [Address](#)

Extension status: All but removed

Add filter

SEGMENT

COLUMNS

REPORTS

DOWNLOAD

EXPAND

<input type="checkbox"/>	<div><div></div></div> Extension	Level	Status	Source	↓ Impr.	Cost	Clicks
Mayor of Scaredy Cat Town							
<input type="checkbox"/>	<div><div></div></div> Address	Campaign	Eligible	Advertiser	144	£3.27	15
<input type="checkbox"/>	<div><div></div></div> Book now	Campaign	Eligible	Advertiser	144	£3.27	15
Total: Sitelink extensions					144	£3.27	15

1 - 2 of 2

1 - 2 of 2

Finally, **website content and metadata optimization** are standard best practices in improving ad quality. As we will explain in more depth in the next section, the proximity of the website content to search keywords, ad headlines and descriptions, is a major factor Google uses to determine ad quality. As a result, we spend some time trying to rewrite some of the sentences such that they include more keywords such as bottomless, secret bar etc. Finally, we also filled the metadata and site description boxes on weebly with relevant keywords, as seen in Figures

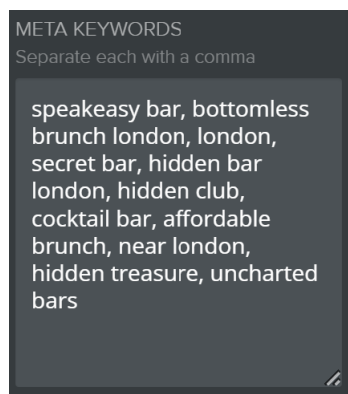


Figure 1

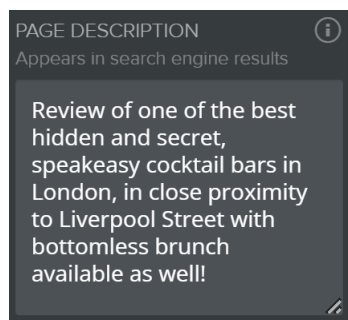


Figure 2

We will now try to explain how the quality of the designed ads is evaluated by Google, why that is important to digital marketers and which diagnostic tools are available for improving our ads.

Ad Rank & Quality Score

Quality Score⁴ is measured on a scale of 1 to 10 and captures the attractiveness of our ad(s) with respect to the selected keywords in the eyes of Google. The higher the quality score, the more "relevant" the ad is considered for the interested user, and thus the higher the expected utility for Google if it decides to display it in a good position on the page. Google is providing a Quality Score for each keyword once enough data about it has been gathered.

Quality Score information and much more (location of the user, search device, time of search, etc.), are factored in a metric called Ad Rank⁵ which is estimated by Google every time an auction takes place.

Advertisers who receive a high Ad Rank from Google can effectively bid less to maintain the same ranking in the auction process. As analyzed in class, the use of the generalized (i.e., with multiple slots) Vickrey auction paradigm used by Google, guarantees that the bidder will pay at most their own bid, but no higher than that. Subsequently, chasing a high Ad Rank is a proxy for chasing bid minimization for our campaign (given the level of competition)

While the exact details of how Quality Score and Ad Rank are calculated have not been made public by Google, partly to shield the auction process from gaming and adversarial attacks, Quality Score is the only qualitative tool Google provides as guidance for improving ads it is known that it takes three components into account:

- [Expected Click-Through Rate \(CTR\)](#): What is the likelihood that a user will click on the ad when they see it.
- [Ad Relevance](#): How relevant is the ad (headline + description) to the keywords we have selected.
- [Landing Page Experience](#): How closely related is the information on the website compared to what the ad is promising.

Ad Relevance measures the connection between the ad and the search terms. As per Google's instructions⁶, if Ad Relevance is low, it is highly suggested to make sure that the text in headlines and ad descriptions contains more of the search keywords and vice versa.

Expected Click-Through Rate (CTR) is mainly concerned with the overall ad's ability to attract a user's click. Consequently, the metric factors in several attributes, including ad relevance in part, but its main focus is on successful copywriting and strong calls to action. To improve the CTR score, Google suggests to first increase Ad Relevance, and subsequently experiment with different selling points (e.g., free delivery) of the product/service and various calls to action (e.g., buy now!, book now!, etc.) until the strongest one is found.

The Landing Page Experience is calculated using many different characteristics of the website. While it is perhaps the most important one in practice, it is also the least relevant within the context of this assignment. For completeness sake, however, we do provide a reference to a complete

⁴ <https://support.google.com/google-ads/answer/6167118>

⁵ <https://support.google.com/google-ads/answer/1722122>

⁶ <https://support.google.com/google-ads/answer/6167130>

guide later on when we discuss our keyword ratings. It is perhaps useful to mention in parallel that one of the relevant actions we can take to increase our Landing Page Experience, is to increase the proportion of the keyword terms and words from the ad headlines/descriptions in the landing page text and the site's metadata.

In our ex-post analysis, we will demonstrate how evaluation in these three metrics can be used as feedback to improve ad quality. Higher ad quality increases the likelihood of receiving a higher Ad Rank and that in turn reduces the bid amount required from the user to achieve the same position in the auction.

2.5 Bidding Strategy and Daily Budget

When creating the ad groups, we had to specify two parameters in terms of economic quantities. The first is the Bidding Strategy. Following Google's suggestion, we let the platform run a "maximise clicks strategy" which lets it select our bids optimally such that our click-through-rate gets maximised. This means that the platform may select a higher or lower bid for a specific auction depending on various factors and will also determine to some extent the position that the ad will be placed at. Of course, we got to specify the maximum bid amount per click which constraints the platform to never bid higher than this threshold in an auction. We set our upper limit to 0.75£ (that is even higher than the upper limit from Keyword planner estimates) to increase our chances of getting at least some impressions and clicks. It turned out that we never had to pay more than 0.6£ for an ad. The second factor we set up was the daily budget. We split the available budget between the two ad groups. The team's goal was to spend £20 at most, so we set a 10£ daily budget for each ad group. We ended up pausing the campaigns at a total cost roughly 15£ after two days.

3. Ex-ante analysis

The starting point of our ex-ante analysis revolves around a sound estimation of revenues per click (RPC). For all the struggle surrounding access to profit margins and fees for digital marketing intermediaries (as we have seen in HW3), we may still be able to "guesstimate" within reasonable error margins using available data on restaurants/bar in the UK. In fact, the average net profit margin of restaurants and bars in the UK is reported at roughly 15%⁷ ⁸. Moreover, the average drinks or brunch expenditure per conversion in London, can be conservatively estimated at 30£⁹ (a brunch booking will consist of roughly 2 people where 15£/person can be easily achieved with

⁷ <http://beerandpub.com/wp-content/uploads/2018/08/Running-a-pub-2018-cost-guide-for-tenants.pdf>

⁸ <https://www.sage.com/en-gb/blog/understanding-profit-margins-for-restaurants/>

⁹ <https://www.statista.com/statistics/1088573/spending-on-nights-out-in-the-uk/>

a meal and a hot drink; 30£/click in clubs and bars is again a very conservative estimate considering that again at least 2 people will be visiting the bar – who goes completely alone?). Having defined (for simplicity) our conversion rate as the click-through-rate of our ads, we can claim a 3% of the estimated revenue per booking made through our ads. This lowers the net profit margin of 15% to roughly 12%, yet no further costs are incurred on the owner (no extra rent or salaries costs since bars who are interested in digital marketing are mostly those that do not operate at full capacity) which renders our estimation reasonable. A 3% cut of a 30£ estimate thus amounts to revenues of 0.9£ per conversion (here: a click).

At this point we would like to acknowledge that click-through-rates and conversion rates are mostly far apart in the digital marketing funnel. In fact, only a (small) portion of the clicks ends up becoming bookings (i.e., conversions). While it is not fully unlikely that a digital marketing agent gets paid by clicks, as many other factors beyond digital marketing effectiveness affect the decision to book (e.g., the restaurant might be fully booked at some point, or recent negative reviews might hinder bookings even though digital marketing was quite successful), it is still safer to assume a Pay-per-Action model in practice. However, due to the limiting budget of 20£, the relatively short time period of the ad campaign, as well as our recent and relatively "primitive" in terms of design and architecture website, we are unable to capture the drop from clicks to conversions.

We would thus demonstrate the concept of our analysis using the, perhaps, more simplistic version of click-through-rate as conversion rate. In this case, it becomes quite apparent that our campaign ends being profitable if the average CPC is lower than 0.9£ (i.e., the estimated RPC). From that point on we can do some design calculations by estimating what the difference Δp (= RPC-CPC) can be. Using Table 2.1 and a pessimistic CPC estimate of 0.5£ (upper bid bound is 0.53£), we can estimate a (gross) profit for the marketing agency of $0.9 - 0.5 = 0.4£$ per conversion (=click in this analysis). With those estimates, the ROI of the (simplistic) campaign has also been fixed:

$$ROI = \frac{0.9 - 0.5}{0.5} \cdot 100\% = 80\%$$

Another calculation which might be useful is to estimate how many clicks we need to reach a certain target (gross) profit. For example, a profit of 10,000£ requires:

$$\frac{10,000£}{\frac{0.4£}{\text{click}}} = 25,000 \text{ clicks}$$

Is that a lot of clicks? Well, if we run the ad for the full year (i.e., 365 days), that is equivalent to roughly 68 clicks per day which is quite a lot. Similar analyses can be conducted in the same way.

When factoring in both CTR and conversion rates, the next step in our ex-ante analysis would be to estimate a CTR for paid search ads on Google. Most sources converge on a percentage between

2%¹⁰ - 4%¹² for restaurants and bars. Furthermore, estimates on the conversion rates of ads in the restaurant and catering sector are centered around 9.8%¹³. We might then ask, what the ratio of RPC to CPC should be such that this campaign breaks even. Let the number of impressions be X , then:

$$X \cdot 0.02 \cdot \text{CPC} = X \cdot 0.02 \cdot 0.098 \cdot \text{RPC}$$

$$\frac{\text{RPC}}{\text{CPC}} = \frac{1}{0.098} = 10.2$$

In other words, we need the revenues to be more than 10 times the average CPC. In our case $\frac{\text{RPC}}{\text{CPC}} = \frac{0.9}{0.5} = 1.8$ which is quite low. We might ask ourselves, where should the average CPC lie such that the campaign can break at least even. In that case:

$$\frac{0.9}{\text{CPC}} = 10.2 \leftrightarrow$$

$$\text{CPC} = \frac{0.9}{10.2} = 0.088\text{£}$$

In other words, if the average bid amount is higher than 0.088£, we will not be able to generate profit with our current RPC, assuming that the estimates of CTR and conversion rates are of course valid. According to Table 2.1, 0.088£ is far lower than the lower bid bound (=0.2£) which means that we will most probably have to negotiate a higher RPC with the business. Such questions can be answered during the ex-ante analysis. We will now proceed to presenting our results and conducting the ex-post analysis of our ad groups and overall campaign.

4. Post Analysis, Insights & Next steps

Table 5.1: Financial performance of the Brunch ad group

Keyword	Clicks	Impr.	CTR	Avg. CPC (£)	Cost (£)
bottomless champagne brunch london	3	14	21.43%	0.27	0.8
cheap bottomless brunch london	0	7	0.00%	--	0
bottomless cocktail brunch london	1	6	16.67%	0.28	0.28

¹⁰ <https://www.wordstream.com/average-ctr>

¹¹ <https://cxl.com/guides/click-through-rate/benchmarks/>

¹² <https://www.39celsius.com/google-ads-for-restaurants/>

¹³ <https://www.smartinsights.com/ecommerce/ecommerce-analytics/ecommerce-conversion-rates/>

[best bottomless brunch London]	5	39	12.82%	0.26	1.29
bottomless lunch London	1	38	2.63%	0.27	0.27
bottomless brunch sunday london	3	25	12.00%	0.21	0.62
affordable bottomless brunch london	3	20	15.00%	0.26	0.79
brunch with drinks London	0	0	--	--	0
[best bottomless lunch London]	0	0	--	--	0
brunch & drinks London	0	0	--	--	0
bottomless brunch cocktails london	0	0	--	--	0
brunch & wine London	0	0	--	--	0
bottomless brunch london	13	181	7.18%	0.6	7.74
Total Keywords:	29	330	8.79%	0.41	11.79

Brunch ad group performance

The Brunch ad group exhibited an overall CTR of 8.79% in 330 impressions, with a total cost of 11.79£. This is equivalent to an average CPC of 0.41£. Considering a revenue of 0.9£ per conversion (here: clicked ad), this ad group ends up generating profits of:

$$\text{profits} = (0.9 - 0.41) \cdot 330 \cdot 8.79\% = 14.21\text{£}$$

The ad group ROI can be then calculated as:

$$\text{ROI} = \frac{14.21\text{£}}{11.79\text{£}} \cdot 100\% = 120.5\%$$

Generally, it can be argued that as long as the average CPC of the ad group is lower than the revenue per conversion, profits and ROI will be positive. The ROI is of course different than the one in our ex-ante analysis since the avg CPC ended up being 0.41 instead of 0.5! In our click-through-rate = conversion rate model, we have thus outperformed analysis with the Brunch ad group.

Table 5.2 Financial performance of the Speakeasy – Hidden bars ad group

Keyword	Clicks	Impr.	CTR	Avg. CPC (£)	Cost (£)
speakeasy london	1	52	1.92%	0.31	0.31
secret cocktail bar london	0	3	0.00%	--	0
hidden bars london	4	38	10.53%	0.21	0.85
secret bars london	4	33	12.12%	0.46	1.83

speakeasy bars london	0	13	0.00%	--	0
best secret bars in london	1	3	33.33%	0.18	0.18
speakeasy club london	2	4	50.00%	0.17	0.33
secret clubs london	0	2	0.00%	--	0
hidden cocktail bar london	1	3	33.33%	0.23	0.23
prohibition bar london	0	0	--	--	0
speakeasy shoreditch	0	0	--	--	0
best hidden bars london	0	0	--	--	0
Total Keywords:	13	151	8.61%	0.29	3.73

Speakeasy – Hidden bars ad group performance

The Speakeasy – Hidden bars ad group exhibited an overall CTR of 8.61% with 151 impressions and a total cost of 3.73£. This is equivalent to an average CPC of 0.29£. Considering a revenue of 0.3£ per conversion (here: clicked ad), this ad group ends up generating profits of

$$\text{profits} = (0.9 - 0.29) \cdot 151 \cdot 8.61\% = 7.93\text{£}$$

or equivalently a ROI of:

$$\text{ROI} = \frac{7.93\text{£}}{3.73\text{£}} \cdot 100\% = 212.6\%$$

Again, in this case the average CPC is 0.29£, much lower than the pessimistic 0.5£ estimate.

Campaign performance

The overall campaign performance can be calculated using the total clicks and costs of both ad groups combined. The total impressions amount to 481, with 42 clicks and a total cost of 15.52£. The profits and ROI can then be estimated through

$$\text{profits} = 42 \cdot 0.9 - 15.52 = 37.8 - 15.52 = 22.28\text{£}$$

$$\text{ROI} = \frac{22.28\text{£}}{15.52\text{£}} \cdot 100\% = 143.6\%$$

Table 5.3 Financial performance of both ad groups combined

Keyword	Clicks	Impr.	CTR	Avg. CPC (£)	Cost (£)	ROI
speakeasy club london	2	4	50.00%	0.17	0.33	76%
best secret bars in london	1	3	33.33%	0.18	0.18	67%
bottomless brunch sunday london	3	25	12.00%	0.21	0.62	43%
hidden bars london	4	38	10.53%	0.21	0.85	43%
hidden cocktail bar london	1	3	33.33%	0.23	0.23	30%
[best bottomless brunch London]	5	39	12.82%	0.26	1.29	15%
affordable bottomless brunch london	3	20	15.00%	0.26	0.79	15%
bottomless champagne brunch london	3	14	21.43%	0.27	0.8	11%
bottomless lunch London	1	38	2.63%	0.27	0.27	11%
bottomless cocktail brunch london	1	6	16.67%	0.28	0.28	7%
speakeasy london	1	52	1.92%	0.31	0.31	-3%
secret bars london	4	33	12.12%	0.46	1.83	-35%
bottomless brunch london	13	181	7.18%	0.6	7.74	-50%
cheap bottomless brunch london	0	7	0.00%	--	0	-
brunch with drinks London	0	0	--	--	0	-
[best bottomless lunch London]	0	0	--	--	0	-
brunch & drinks London	0	0	--	--	0	-
bottomless brunch cocktails london	0	0	--	--	0	-
brunch & wine London	0	0	--	--	0	-
secret cocktail bar london	0	3	0.00%	--	0	-
speakeasy bars london	0	13	0.00%	--	0	-
secret clubs london	0	2	0.00%	--	0	-
prohibition bar london	0	0	--	--	0	-
speakeasy shoreditch	0	0	--	--	0	-
best hidden bars london	0	0	--	--	0	-

Supposing our RPC was higher than the average CPC of some keywords but lower than of some others. How would we proceed then? Assuming that $RPC = 0.3£$, we can then select which of the keywords of each ad group ended up being profitable for us and keep only those in the overall campaign. We will demonstrate how to do that in the following paragraphs.

Provided that we do not actively try to improve the Ad Rank of our ads, profits are maximized by limiting the keywords in each ad group to those whose avg CPC is below our revenues per click. Assuming a revenue of 0.3£ /click, we can easily cut off all keywords with a CPC higher than 0.3£, by merging the ad groups and sorting according to avg CPC. A threshold line is drawn at the highest CPC below the revenues per click. This is indicated in Table [] by the orange line. In the "ROI" column, we can calculate the ROI obtained by each keyword individually.

For profit maximization, we would modify our ad groups to keep only those keywords found above the threshold line. Following that, we can calculate the overall ROI of the modified campaign which maximizes profits. The calculation involves weighting the individual ROI contributions of each keyword according to their cost contribution to total costs brought about by the profit-generating keywords. In this example, the total costs amount to roughly 5.6£ (just adding all the cost elements above the orange line). We can then calculate the ROI using:

$$ROI = \sum_{i \in \text{profitable keywords}} \frac{c_i}{c} ROI_i$$

$$ROI = \frac{0.33}{5.6} \cdot 76\% + \frac{0.18}{5.6} \cdot 67\% + \dots + \frac{0.28}{5.6} \cdot 7\% = 27.15\%$$

Ex-ante analysis pt 2: Ads evaluation and improvement

Using the Quality Score reports provided by Google Ads, we can perform a qualitative analysis for our ads and search keywords. Below, we present the scores received by some of our keywords. This tool can be used to re-iterate our ad design, increase our Ad Rank and potentially decrease CPC. We should thus be highly interested in such analyses

Speakeasy – Hidden bars Ad group

Keyword	Quality Score	Exp. CTR	Ad relevance	Landing page exp.
speakeasy london	5	Average	Above average	Below average
secret cocktail bar london	--	--	--	--
hidden bars london	7	Above average	Above average	Below average
secret bars london	5	Average	Above average	Below average
speakeasy bars london	1	Below average	Below average	Below average
best secret bars in london	--	--	--	--
speakeasy club london	--	--	--	--
secret clubs london	--	--	--	--
hidden cocktail bar london	7	Above average	Above average	Below average

prohibition bar london	--	--	--	--
speakeasy shoreditch	--	--	--	--
best hidden bars london	--	--	--	--

Brunch Ad group

Keyword	Quality Score	Exp. CTR	Ad relevance	Landing page exp.
bottomless champagne brunch london	5	Above average	Below average	Below average
cheap bottomless brunch london	3	Average	Below average	Below average
bottomless cocktail brunch london	--	--	--	--
[best bottomless brunch London]	5	Average	Above average	Below average
bottomless lunch London	--	--	--	--
bottomless brunch sunday london	3	Average	Below average	Below average
affordable bottomless brunch london	--	--	--	--
brunch with drinks London	--	--	--	--
[best bottomless lunch London]	--	--	--	--
brunch & drinks London	--	--	--	--
bottomless brunch cocktails london	--	--	--	--
brunch & wine London	--	--	--	--
bottomless brunch london	--	--	--	--

4.1 Conclusions and next actions

In terms of ad design, we will mostly take some feedback from the Ad relevance and Exp. CTR columns.

Speakeasy – Hidden bars Ad group: This group is performing well, with almost all rated keywords receiving an Above average Ad relevance. This indicates that the headlines and descriptions of our ads match the search keywords well, and that the current ad groups are not too broad (i.e., confirmation that at least 2 ad groups are needed). In terms of Exp. CTR, most keywords are on average or above, indicating that our ads are compelling and seem to be persuasive for the users. However, one particular keyword, "speakeasy bars london", is performing poorly in both criteria. In fact, ads related to this search term have been displayed 13 times but have received 0 clicks. One potential reason is that the search intent behind this keyword could be oriented more towards a list of bars rather than a single one.

Brunch Ad group: In this group, most keywords have received a below than average Ad relevance which signals that we should either edit headlines and descriptions to match our current search keywords better, or target different keywords. Nonetheless, Exp. CTR for almost all keywords is

close to average, indicating that the overall language used, notwithstanding the low relevance, seems persuasive for the users to click on.

All Landing page experience ratings are below average, indicating that the website can be drastically improved. There are many guides online with practical tips as to how to improve the website experience¹⁴, but it is considered out of scope for this particular assignment which concerns mostly digital advertisements.

Overall, more data is required to gather ratings on most of the keywords and make sure that the scores are statistically accurate, i.e., not volatile. To this end, one would let these ad groups run a bit longer. To demonstrate how one would utilize these ratings, we will be describing in the next section a summary of the actions one would take, assuming that these are stable and accurate.

Potential next steps:

- **Speakeasy – Hidden bars:** Improve effectiveness of the call-to-action terms to increase CTR and improve the landing page experience through better website structure/design and more relevant, to the search keywords, headlines and descriptions, text.
- **Brunch Ad group:** Add terms from search keywords that have generated a considerable number of impressions like "Champagne" and "Cheap" and "Sunday", to ad headlines and descriptions to enhance Ad relevance and potentially CTR. Descriptions should also refer less to the drinking utility and focus more on the brunch/lunch aspect. (We had initially thought that selling the drinking option would make the selling point more unique, but the impressions generated by those keywords were minimal). Redesigning the webpage and adding more relevant text would also be helpful in improving the landing page experience.

4.2 Learnings

In spending time with this assignment, we purposefully tried to explore many tools available on Google Ads and become more experienced in the full ad design pipeline. Our main learnings can be summarized in the following points:

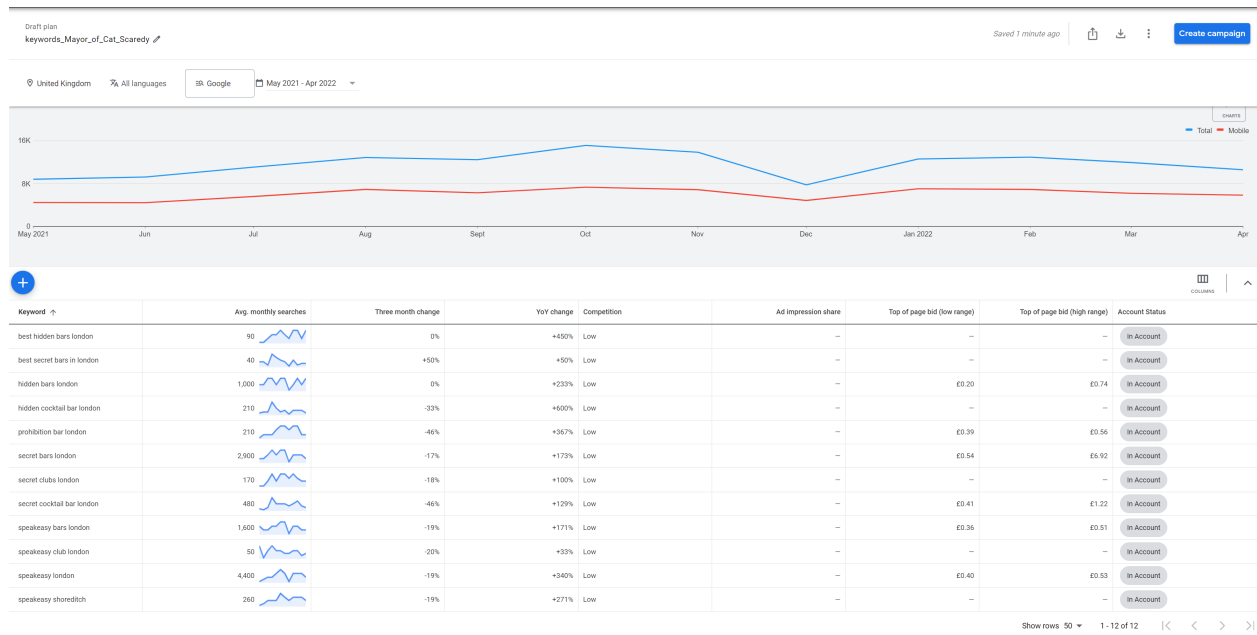
- Upon deciding to run a campaign, it is important to define the appropriate conversion rate for the task at hand, as well as decide how many ad groups are required according to the various customer segments identified and the different products/utilities offered.
- The initial design of the ads should bear in mind the principles outlined in ad quality evaluation. Integrating those improves Ad Rank and minimizes the bids required to achieve

¹⁴ <https://instapage.com/blog/quality-score>

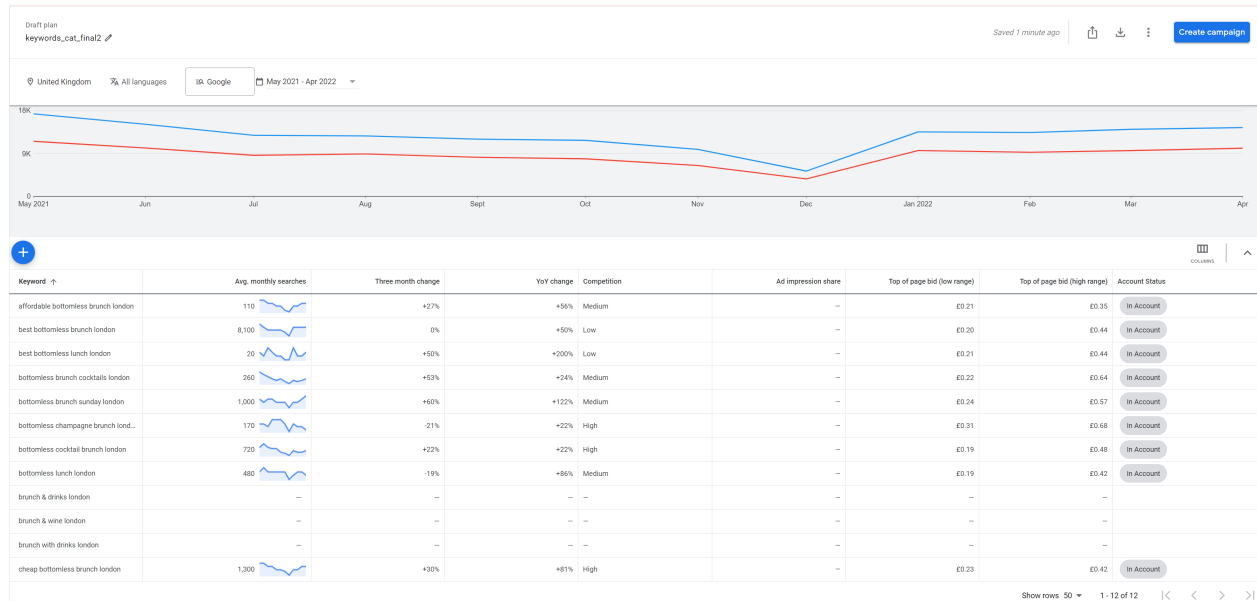
competitive impressions (e.g., being shown on top of the google page). Keyword planner is an excellent tool that can be used to come up with many additional relevant keywords that capture a bigger share of relevant searches.

- The process of designing and improving ads is an iterative one. That means that we constantly evaluate our ads both quantitatively (ex-ante economic analysis) as well as qualitatively through the Quality Score reports.
- Upon fine-tuning our search keywords, ad texts and website content, we are also able to select which keywords are generating profits and which are incurring losses according to our standing among competitors. We iteratively fine tune our ad groups, re-run and re-evaluate the performance.
- There are many additional tools available such as location targeting, sitelinks, the near-me option which can help improve the effectiveness and efficiency of the ad campaigns. Spending time familiarizing with those proved helpful and is considered a must for digital marketers in practice.

5. Appendix



Ad group 2: Brunch



Keyword planner screenshots

Google Ads Keyword plan

Keyword ideas

Forecast

Keyword plan

United Kingdom All languages Google May 2021 - Apr 2022

Saved keywords

Negative keywords

Keyword	Avg. monthly searches	Three month change	YoY change	Competition	Ad impression share	Top of page bid (low range)	Top of page bid (high range)	Account Status
discover brach london	--	--	--	--	--	--	--	--
discover gardens london	--	--	--	--	--	--	--	--
discover new places london	--	--	--	--	--	--	--	--
discover nightlife london	--	--	--	--	--	--	--	--
discover parks london	--	--	--	--	--	--	--	--
explore gardens london	--	--	--	--	--	--	--	--
explore nightlife london	--	--	--	--	--	--	--	--
explore parks london	--	--	--	--	--	--	--	--
london hidden gems	1K - 10K	0%	0%	Low	--	£0.54	£1.58	--
london hidden surprises	--	--	--	--	--	--	--	--
london new places	10 - 100	-100%	0%	--	--	--	--	--
london surprising places	--	--	--	--	--	--	--	--
london uncharted places	--	--	--	--	--	--	--	--
london undiscovered locations	--	--	--	--	--	--	--	--
london unexplored places	--	--	--	--	--	--	--	--
uncover nightlife london	--	--	--	--	--	--	--	--

Show rows 100 1 - 16 of 16

Google Ads Keyword plan

Keyword ideas

Forecast

Keyword plan

United Kingdom All languages Google May 2021 - Apr 2022

Saved keywords

Negative keywords

Keyword	Avg. monthly searches	Three month change	YoY change	Competition	Ad impression share	Top of page bid (low range)	Top of page bid (high range)	Account Status
art at night london	--	--	--	--	--	--	--	--
artistic nights london	--	--	--	--	--	--	--	--
creative nights london	--	--	--	--	--	--	--	--
night festival london	10 - 100	++	++	Low	--	--	--	--
nightclubs london	10K - 100K	0%	+90%	Low	--	£0.51	£2.44	--
nightlife events london	100 - 1K	0%	+90%	Low	--	£0.52	£1.88	--
nighttime events london	--	--	--	--	--	--	--	--
underground festival	10 - 100	0%	0%	Low	--	--	--	--
underground nightlife london	--	--	--	--	--	--	--	--

1 - 9 of 9

Google Ads Keyword plan										
Keyword ideas	Draft plan keywords_chelsea_garden									
Forecast	Saved 12 minutes ago									
Keyword plan	United Kingdom All languages 1K Google May 2021 - Apr 2022									
Saved keywords										
Negative keywords										
Keyword	Avg. monthly searches	Three month change	YoY change	Competition	Ad impression share	Top of page bid (low range)	Top of page bid (high range)	Account Status		
diversity botanic garden london	--	--	--	--	--	--	--	--		
flower garden chelsea	--	--	--	--	--	--	--	--		
gardens chelsea	100 - 1K	0%	0%	Low	--	--	--	--		
historic gardens london	--	--	--	--	--	--	--	--		
historic parks london	--	--	--	--	--	--	--	--		
natural gardens london	--	--	--	--	--	--	--	--		
natural parks london	--	--	--	--	--	--	--	--		
old botanic garden london	--	--	--	--	--	--	--	--		
old gardens london	--	--	--	--	--	--	--	--		
old parks london	--	--	--	--	--	--	--	--		
parks chelsea	100 - 1K	+900%	+900%	Low	--	£0.28	£0.99	--		
traditional gardens london	--	--	--	--	--	--	--	--		
traditional parks london	--	--	--	--	--	--	--	--		

Google Ads Keyword plan										
Keyword ideas	Draft plan keywords_cat									
Forecast	Not saved									
Keyword plan	United Kingdom All languages 1K Google May 2021 - Apr 2022									
Saved keywords										
Negative keywords										
Keyword	Avg. monthly searches	Three month change	YoY change	Competition	Ad impression share	Top of page bid (low range)	Top of page bid (high range)	Account Status		
anniversary brunch london	--	--	--	--	--	--	--	--		
anniversary celebration london	10 - 100	0%	0%	High	--	--	--	--		
bottomless brunch london	10K - 100K	0%	0%	Medium	--	£0.20	£0.46	--		
clubs with password	--	--	--	--	--	--	--	--		
clubs with password london	--	--	--	--	--	--	--	--		
secret bars london	1K - 10K	0%	+900%	Low	--	£0.53	£5.78	--		
secret clubs london	100 - 1K	0%	+900%	Low	--	--	--	--		
speakeasy brunch london	--	--	--	--	--	--	--	--		
speakeasy london	1K - 10K	0%	0%	Low	--	£0.39	£0.52	--		
vintage bars london	10 - 100	0%	0%	Low	--	--	--	--		

Further ads as seen on Google

Ad • <http://londonuncharted.weebly.com/>

Best bottomless brunch London - Delicious authentic recipes

Drinks available in the secret speakeasy bar. Do not forget the password. **Brunch & Wine** at the Mayor of Scaredy Town. Be sure to inquire the secret password.

[Book now](#) · [Address](#)



bottomless brunch london



Ad · <http://londonuncharted.weebly.com/> ▼

Hidden nightlife gems London - Bottomless brunch for foodies

Book now to have drinks with the mayor in Scaredy Cat Town. **Brunch & Wine** at the Mayor of Scaredy Town. A speakeasy inside breakfast club.