Setting CPAs

SEGMATIC

Expert Series #4

The comprehensive guide to leveraging the power of target cost per acquisition

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1. What are CPAs & why should you set them?

Target Cost Per Acquisition, or CPA, is a useful number. It tells you how much money you should be willing to pay to acquire a customer, bringing together factors like price, margin, and lifetime value.

If you consider all of these factors and decide to pay £100 a head to acquire a particular type of customer, or a customer associated with a particular keyword, then £100 is your target CPA for that type of customer.

This figure will be a key consideration for you in decisions on bidding, account structure, and more.

Setting cost per acquisition can seem simple, and as a result a lot of companies don't give it the time and attention it deserves.

It's a little more complicated than that

Too many businesses have 'a CPA', when in fact they should have hundreds of them.

It's tempting to apply a formula like 'target CPA = profit within 6 months' or 'target CPA = 50% of revenue of purchase', and not give it any more thought. Formulas like this one can be a useful rule of thumb, but do they really capture the complexities of your product and your customers?

If you sell different products at different price points, if you offer time-limited propositions, or if you are impacted by external factors like fluctuations in currency markets, then you should calculate a range of different CPAs to reflect this complexity.

The perils of a poorly calculated CPA

Because CPAs are a factor in lots of important decisions, the stakes are pretty high. Get your CPAs wrong and you will miss out on money and opportunities.

Set a CPA too high and you'll pay over the odds for low-value customers; too low and you won't attract the high value customers you need. Either way you lose money, customers, or both.

The most common mistake that companies make is not being granular enough when they set CPAs. Something as simple as setting the same CPA for different products or failing to factor propositions into your CPAs can be the difference between making a profit and making a loss.

Another mistake we often see is companies so focused on new business that they calculate CPAs based on first transaction, without considering the long-term value of repeat customers. This leads to poor bidding decisions, which in turn leads to under-investment; and these companies fail to acquire the sort of customers that pay off over a longer period of time.

Get your CPAs wrong and you will miss out on money and opportunities.

Target CPAs are a prediction, an informed forecast of how much value you are likely to derive from an interaction with a customer. To make this prediction, it's useful to look back at your old target CPAs with the benefit of hindsight, and to ask yourself what they should have been. We call this number the 'actual target CPA', and it's something that we consider when we're setting CPAs in real time.

For example, if we're setting a CPA for a particular keyword in Q2, it's useful to look back with the benefit of hindsight and calculate the actual target CPA for Q1. It's a helpful number, but it's only one part of a bigger puzzle.

2. Good CPAs rely on good data

The key to calculating accurate target CPAs is solid, usable data. If you can analyse the data generated by your paid search campaigns and use that to plan future campaigns, you'll see increased conversions and profits.

Whenever we use data, we have to challenge assumptions. The number one assumption that trips people up is the belief that the conditions in which past data were generated have not changed, and will continue to be the same into the future.

This is rarely true. Since last quarter, your customers, your company, and the world have changed. There is an endless list of factors related to the context in which your data was generated that you need to consider. This is especially important when you set target CPAs.

Analysing CPAs

When we first started calculating CPAs, all those years ago, we gave a lot of thought to the keyword and not that much to the person doing the searching. At that time, we didn't know very much about the person. We knew what country they were in and whether they were searching on mobile or desktop. We could factor those things into our CPA calculations—but that's about all we did. The fundamental unit of analysis for CPAs in those days was the keyword.

Today, people targeting is much more advanced; so we have evolved our approach to strike a balance between keyword targeting and people targeting when we set CPAs.

If we had infinite data, it would technically be possible to calculate a CPA for every combination of keyword and person. With actual, finite data, we face the challenge of how to disaggregate our data into discernible units of understanding, and how to aggregate those billions of data points into coherent sets that we can use to draw conclusions and make good decisions.

That's a bigger question than we can cover in this white paper; so we'll just touch on it lightly and suggest that as you think about segmenting your CPAs, consider how you use your own data—both keyword targeting and people targeting—to make these decisions.

4. The 7 ways you should segment your CPAs

Like horcruxes, you should split your CPAs up seven ways.

There are seven big factors that pretty much every business needs to take in account when setting CPAs. These are the bare minimum that we recommend for any business: different CPAs for different products; generic words; high- and low-value customers; time-limited propositions; changes in margin drive changes in CPA; and whales.

Master these seven and you'll see improvements in how you understand, analyse and optimise your paid search campaigns, and how you use insights from past campaigns to inform future ones.

1. Different CPAs for different products

This one is pretty simple: if you're selling different products at different price points, set a CPA for each of them.

A single CPA across different products basically hands money to clever competitors who are more granular in their approach. It means you'll pay too much to acquire customers who buy low value or low margin products, and at the same time you won't bid high enough to attract higher-value customers.

Unless you're only selling one-size fits all grey jumpsuits in North Korea, segment by product type.

Also consider the fact that demand for products tends to fluctuate over time. A company that sells Easter eggs, Hallowe'en costumes, and Christmas trees needs different target CPAs for each product in each quarter.

Let's take a slightly more subtle example: a company that sells skincare products and perfume. They have noticed that perfume sales rise in Q4, because of a pre-Christmas rush. This changes the proportion of sales for skincare versus perfume in different quarters, like this:

TYPE	Q1 VALUE	Q2 VALUE	Q3 VALUE	Q4 VALUE
Skincare products	1,000	1,100	900	1,200
Perfume	400	500	300	2,000

If they were to take an average figure for sales across all four quarters and calculate CPAs for each product based on that, they would lose money. For skincare products, your target CPA should be pretty stable across the four quarters. But for perfume it should spike in Q4. Average quarterly perfume revenue is 800, but if they were to use that figure to calculate target CPAs, they would be too high in the first three quarters and way too low in Q4.

The key here is to read the data and be granular in your approach. Averaging revenue across multiple quarters, or across multiple different products, usually leads to inaccurate CPAs.

Look carefully at the changes in your product mix over time, and set CPAs that reflect this.

2. Generic keywords

Many of the keywords you bid on are generic. They don't relate to specific products. If for example you sell suits, shirts, and ties, you should also be live on more general keywords like menswear and men's clothes. To calculate CPAs for terms like these, consider the products that make up the group, and their individual CPAs. Use those numbers to calculate a weighted aggregate.

TYPE	Q1 VALUE
Suits	1,000
Shirts	700
Ties	400
Average value	700

In this simplified example, where the set [mens clothes] is made up of suits, shirts, and ties, we would calculate the target CPA for menswear based on the average value of the products that make it up, which in this case is 700.

Many of the keywords you bid on don't relate to specific products.

Search term analysis can be helpful here. Then they calculate the relative frequency of these products' conversions. For example, last quarter they sold two suits, three shirts, and five ties, so these products will make up 20%, 30% and 50% of the aggregated CPA respectively. Finally, they multiply this weighting by each of those products' individual CPAs and calculate an average CPA for [MENS CLOTHES].

3. High and low value customers

Your customer base is a mix of high- and low-value customers, and revenue per customer changes over time.

You might find that the customers you acquired in July contain a higher number of extremely high-value customers ('whales') than the cohort you acquired in August. This will skew the value of an average check-out basket to be higher in July than it is in August.

TYPE	JULY	AUGUST
Standard customers	100	100
Whales	3	1
Standard customer average value	£50	£50
Whale average value	£800	£800
Average customer value	£71.84	£57.43

As an advertiser, try to understand how your company's average revenue per customer fluctuates over time: see the patterns in this fluctuation and use this insight to inform your campaigns.

Later in this paper we'll tell you how to set target CPAs to acquire more whales.

4. Long-term value

When you bid to acquire a new customer, consider their lifetime value, not just the value of the initial sale. You're not just bidding to sell a shirt, you're bidding to acquire a customer who, you hope, will go on to buy many things from you over the course of their life. The amount you are willing to pay for that click should reflect that long-term potential.

Look for the patterns and clues that suggest what a customer's long-term value (LTV) is likely to be. Customers who make their first purchase in January might have higher LTV than those whose first purchase is in December. Or a person whose first purchase is a suit may have higher LTV than someone whose first purchase was a tie.

To calculate LTV, we assign each new customer a unique identifier, and compare day one value to day x value. Typically, x = 360 days. We calculate a numerical value for their LTV and factor that into our CPA calculations.

Two-speed decision-making

One of the challenges we face with this approach is that you have to wait 360 days before you know a customer's 360-day value. And we want to make decisions now.

To be able to take action while we wait for this to play out, we need a metric that we can use to make quicker decision; effectively making both short-term and long-term decisions based on what in the initial stages is short-term data.

For day-to-day tracking and decision-making, we use what we call proxy metrics—basically 'did we make a conversion, yes or no?' We should have an answer to that question within a day of the click.

We've found this really powerful when converting off-line the leads you've generated online.

For longer-term management we use complete metrics. These tell us how our campaigns were performing six months ago, using data from the last six months. This gives us a more accurate long-term view that takes into account the time delay between first contact and lifetime value, and drop-off rates.

Once we get this up and running, we can work efficiently at two speeds of tracking and decision-making—proxy and complete. Over time, as the proxy data is built into the complete data, the complete data is improved and we update our targets and our approach based on this better data.

We've found this to be a really powerful technique for clients that generate leads through their website and convert them off-line.

5. Time-limited propositions

This is another simple one: if your company offers a proposition on some or all of its products, that should be factored into your target CPA calculations. If the proposition changes, your target CPA should change with it.

If you offer 10% off a product, that will have an impact on the value of a sale. So the proposition should be factored into your CPA for that product for as long as it's on offer.

By analysing your data, you can figure out the relationship between propositions and target CPAs, so next time you offer 10% off you'll know how to adjust the CPA.

6. Changes in margin drive changes in CPA

Your margin differs from product to product, and margins shift over time.

Identify the factors that drive changes in margin and use these insights to predict future changes. Then factor these predictions into your target CPAs.

Most of the time, the factors that drive these changes are beyond your control; they're things like exchange rates or the cost of rent. While you can't control these, you can understand them and use them in your planning.

To account for projected profit margin, identify the variable that's driving the shift in margin and use that knowledge to predict the shift. Express the variation as a multiplier and apply it to your margin.

7. Whales

Whales are rare but extremely high value customers, and they tend to be expensive to acquire. A question many of our clients face is whether chasing whales is worth the investment.

PPC campaigns can be a very effective way to acquire whales, but a lot of companies acquire them without really understanding how they did it, or how to replicate these successes in the future.

At Segmatic, we've answered this question by developing techniques to set target CPAs that allow us to decide which whales to chase, and to systematically acquire the ones we do go after.

How do you set target CPAs to systematically attract whales?

This part is basically the opposite of the plot of Free Willy—we're not proud of that, but it works.

Let's say you're looking at your data from the last quarter and you see that, out of a thousand customers you acquired through PPC advertising, ten of them accounted for 40% of your total value.

You're happy to have these whales, you want to retain them and acquire more. You also know that there's probably a way to segment your target CPA to target whales.

There is a way, but whales are outliers. These ten customers are ten data points out of a thousand, and it can be both scary and risky to make business decisions based on such small data.

Should you chase the whales?

Whether or not you decide to target whales, you're taking a risk. You have two options:

- Go after the whales: you might nab some more, but you risk losing a big ad spend
- Don't go after whales: and risk losing them to your competitors.

If you're risk averse, you'll say those customers are outliers and it's not worth investing the sort of money that's needed to acquire them. You'll set a target CPA that's too low to really go after them.

You're not the only one hunting whales

The danger here is your competitor. They also had 10 customers accounting for 40% of their value in the last period. If they're confident that they can acquire more whales, and clever in their approach, they will take your whales.

Before you decide one way or the other, you need to be sure you explore all the ways you can use the data at your disposal to make an informed decision.

Whales are outliers, but they aren't mysterious, chance occurrences. By asking the right questions and being clever in how you use your data, you can get a handle on how to acquire them.

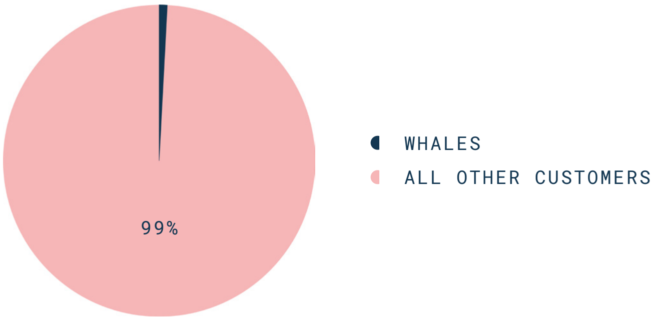
How to chase the whale

The secret to making this big decision with small data is to benchmark the relatively small data set of your PPC customers against your overall customer profile.

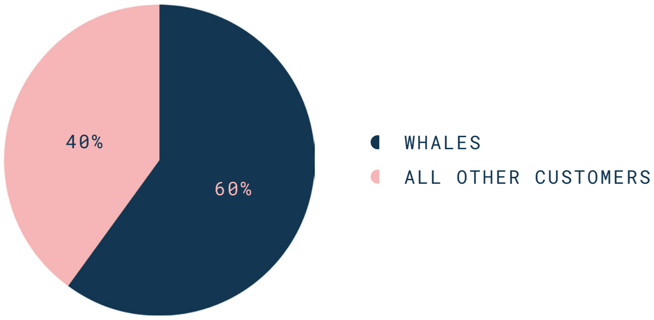
Ten data points isn't enough to make a good decision on whether or not to chase whales, so think about what you know about the behaviour of your total customer set, and use that knowledge to better understand your whales.

Start by looking at your PPC customers. They look like this:

Column 1 / Percentage of customers



Column 1 / Percentage of sales



As you can see, about 60% of your total value comes from 1% of your PPC customers.

If you look at the totality of your total customer data and see a picture that's similar to the PPC data, then you can draw conclusions from your total customer base and apply them to your PPC customers with some confidence. Because you are drawing on a much bigger data set, you're on firmer ground.

If, however, you look at that data and learn that the proportion of whales in your customer data is much higher or lower than it is for your your PPC customers, you can't draw the same parallels between the two data sets, and you can't draw conclusions from the larger data set and apply them to the smaller one.

Get inside the mind of a whale

If you can understand the factors that lead a person to become a whale, and identify patterns of behaviour that are common amongst your whales, you'll be able to attract more of them.

You might find that whales are buying one particular product or product type, or that most of your whales are in a particular city, or they're searching on mobile rather than desktop. All of this is information you can use.

We know, for example, that some whales are driven by product mix. If your whales search for and buy a particular product—rugs for example—then you shouldn't be asking 'Is our paid search acquiring whales?'. The better question is this: 'Is our paid search acquiring people who buy rugs?'

Ignore whales at your peril. Be smart about how you use the information at your disposal, both quantitative and qualitative, and you can nab more whales while mitigating the risks involved in acquiring them.

5. Beware the death spiral

CPA setting is about competitive advantage. If you can set CPAs that are more accurate than your competitors, you'll gain a real and consistent edge in the auction. On the other hand, if you're too broad or inaccurate in setting your CPAs, you won't just lose in the auction, you'll send your campaigns into a downward spiral of bad decisions and wasted spend. We call this the death spiral.

To illustrate the spiral effect, we'll use the example of a company that fails to set different CPAs for different products. This is a convenient example; and the same principles apply to the other six ways you should be segmenting your CPAs.

If your CPAs are too broad or inaccurate, you won't just lose the auction...

Our imaginary company sells shirts and suits. Because this is not a very smart company, they decide to set a single CPA for all of their suits and shirts. This decision will be their undoing. Here's how...

At the end of Q4, our company sits down to do some CPA setting. They start with their Q4 data, which looks like this:

Q4	SPEND	PAGE POSITION	CONVERSIONS	ACTUAL CPAS	TARGET CPAS	AVERAGED CPA
Shirts	£1000	3.0	50	£20	£25	£39.33
Suits	£1000	3.0	10	£100	£110	

As you can see, our company spent the same amount on advertising shirts and suits in Q4, and their average page position for both products was the same. However, they sold 50 shirts and only 10 suits, meaning that their actual CPA for Q4 was £20 for shirts and £100 for suits. In other words, they spent £20 on advertising for every shirt they sold, and £100 for every suit. That's what they know about Q4.

Based on this data, and lots of other factors like projected margins and propositions, they calculate that their target CPA should be £25 for shirts and £110 for suits. Two different CPAs seems like a lot of work, so they weight them by the Q4 conversion numbers and calculate that their Q1 CPA will be £39.33. The sums that got them there:

$$\frac{(£25*50\ \text{conversions}=£1250)+(£110*10\ \text{conversions}=£1110)}{60\ \text{total conversions}}=£39.33$$

Q1 begins and our company goes into battle armed with a single CPA, at once flimsy and unwieldy.

If you've read this far in this white paper, you can predict what happens next. With its one CPA, our company will overpay for shirt buyers and under-bid for suit buyers, squandering money and opportunity.

Here's how things play out in Q1:

Q1	SPEND	PAGE POSITION	CONVERSIONS	ACTUAL CPAS	TARGET CPAS	AVERAGED CPA
Shirts	£3000	1.5	100	£30	£25	£28.30
Suits	£200	5.0	4	£50	£110	

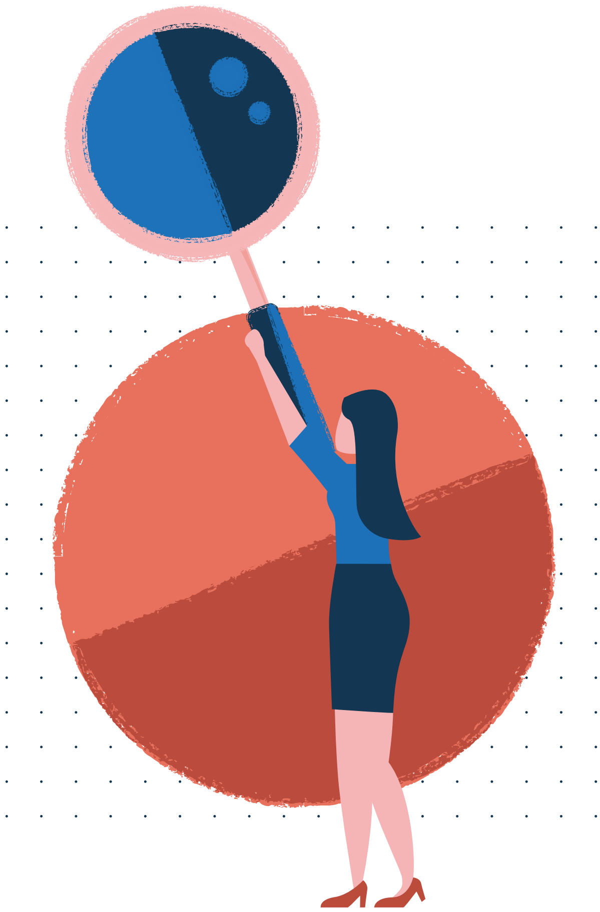
In Q1, our company sold a lot of shirts, but they paid 50% more for each of them then they did in Q4, eating into their margins. At the same time, the actual CPA for suits went down from £100 to £50, but they only sold 4 suits in Q1, against 10 in Q4.

Once again, our company looks back at the previous quarter and calculates its target CPAs. This time, it's £25 for shirts and £200 for suits, and once again they weight these by conversions and average them out. Reflecting the swing in conversion numbers, their target CPA for Q2 works out at £28.27.

In Q2, because our company sold so few suits the average CPA is weighted more heavily towards the shirts CPA, which means that the average CPA of £28.27 is pretty close to the target CPA of £30 that they calculated for shirts. As a result, we can expect that the Q2 page position and conversion rate for shirts will be similar to what we saw in Q1. We can also expect bad news for suits—a continued slide in both page position and conversion rate.

Take a more nuanced approach to setting CPAs and you'll reap the benefits.

If our company was to continue on like this, and its competitors were to continue their strategy of calculating different CPAs for each product, the slide would continue. Pretty soon suit sales will drop to zero; and they will be paying so much for each shirt sale that they're making a significant loss on each shirt they sell.



The lesson here is that the damage done by poorly calculated CPAs can compound over time, leading to disastrous results.

The good news is that the opposite is also true. If you're competing in the auction against a company like the one in this example, you're golden. Take a more nuanced approach to setting CPAs then theirs and you'll reap the benefits of their descent into the death spiral.