



# Display Smart Bidding User Guide



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# Overview and How It Works

**Smart Bidding** is Google's set of free programmatic bidding tools which automatically manage your bids across all devices to drive more conversions and increase your advertising efficiency. Smart Bidding's intent is to deliver the best possible performance against your goals with the greatest possible efficiency. This guide is meant for advanced users who want a detailed overview of Display Smart Bidding and want to implement it in the most optimal manner. It contains best practices for setup, campaign management, and reporting in addition to transparency into how our algorithm works. For a more basic description of Smart Bidding, please see the [AdWords Help Center](#).





When you use Smart Bidding, you can choose one of three strategies: **Enhanced CPC (ECPC)**, **Target Cost-Per-Action (Target CPA)**, or **Target Return on Ad Spend (Target ROAS)**.

<b>ECPC</b>	The algorithm uses your CPC bid and makes bid adjustments up or down to -100% based on conversion likelihood. Can be activated at the campaign level or via <a href="#">portfolio bid strategies</a> .
<b>Target CPA</b>	The algorithm predicts the conversion probability of each impression to achieve the maximum number of conversions within your target CPA. Can be activated at the campaign level or by selecting a portfolio bid strategy.
<b>Target ROAS</b>	The algorithm predicts both conversion probability and expected conversion value to get the maximum total value from all of your conversions within your target ROAS. Can be activated at the campaign level or by selecting a portfolio bid strategy.

## Signals Used

Our programmatic bidding algorithm **analyzes key attributes about each auction** and determines conversion likelihood. When used properly, the algorithm often delivers better performance than manual optimization while saving a significant amount of time.

The algorithm considers a **myriad of signals** about each auction and over 70 million permutations of those signals when calculating a bid. The signals considered include:

<b>USER BEHAVIOR</b> 	<b>USER CHARACTERISTICS</b> 	<b>WEB PAGE &amp; SESSION CONTEXT</b> 	<b>AD CHARACTERISTICS</b> 
<ul style="list-style-type: none"> <li>• How recently a user left your site</li> <li>• How many pages a user viewed on your site</li> <li>• Value of products viewed</li> <li>• Conversion funnel progress</li> <li>• Previous sites visited</li> <li>• Cross-device behavior and conversions</li> <li>• Remarketing list membership</li> <li>• Conversion delay</li> </ul>	<ul style="list-style-type: none"> <li>• Age and gender</li> <li>• Location</li> <li>• Device</li> <li>• Interests</li> </ul>	<ul style="list-style-type: none"> <li>• Content of website viewed</li> <li>• Structure of website viewed</li> <li>• Keywords present on website viewed</li> <li>• Time of day</li> <li>• Day of week</li> </ul>	<ul style="list-style-type: none"> <li>• Format of advertisement</li> <li>• Relative creative performance</li> </ul>

## How Does the Algorithm Work?

Target CPA, ROAS, and ECPC use the same underlying AdWords “programmatic bidding” algorithm. We model the entire market of auctions that the advertiser could participate in with different bids. By doing this, the algorithm is able to determine the best bidding rule to maximize volume while obtaining the desired Target CPA or ROAS.

<b>Step 1</b>	Advertiser defines the Target CPA and the algorithm models a conversion rate. With Target ROAS, the algorithm also models an expected conversion value. CPA should be set based on your business goals and metrics, as well as any past performance data from previous campaigns. For enhanced CPC we look at your traffic and infer your CPA goal.
<b>Step 2</b>	The algorithm uses the Target CPA or ROAS, the predicted conversion rate and predicted conversion value, and its understanding of the entire market of auctions to determine the right CPC for each auction.
<b>Step 3</b>	The CPC bid is converted to a CPM bid and compared with all other advertisers’ bids (both AdWords and DSPs buying on AdX or other exchanges). The advertiser with the highest CPM bid wins the auction.
<b>Ongoing</b>	The algorithm regularly evaluates predicted vs. actual conversion rates and predicted versus actual CPA or ROAS to drive accuracy over time.

# Part 1: Setting Up Smart Bidding

**Prerequisite:** Ensure conversion tracking is set up properly. Smart Bidding is able to bid towards conversions from [AdWords conversion tracking](#), [Google Analytics conversion tracking](#) if imported to AdWords, as well as conversions imported to AdWords via [offline conversion tracking](#).

Check conversion volume in AdWords and compare it to Google Analytics or the 3rd party conversion tracking tools you might use. If you notice a discrepancy between the two values, make sure to account for that when calculating target CPA/ROAS. Read more about setting up conversion tracking in our [Help Center](#).

**Optimal campaign settings and targets** are the first step to bid automation success.

**Step 1** Set ad delivery to “standard” to avoid running out of budget early in the day or “accelerated” if you expect an uncapped budget. Smart Bidding performs best with an uncapped budget, so uncap the budget whenever possible; budget constraints can hinder performance as the campaign is not able to participate in auctions that may be highly likely to drive a conversion. Ad Rotation is automatically set to “Optimize for Conversions” when using Smart Bidding to ensure the system chooses a creative most likely to convert. Remove any frequency caps as this can hinder performance.

**Step 2** **Bidding type:** If using ECPC or Target CPA, start with those bidding types immediately so the algorithm can bid based on conversion likelihood from the start. If using Target ROAS, start with ECPC or Target CPA and when eligible, switch to Target ROAS bidding. You usually need a **minimum of at least 15 conversions in a 30 day period**, but some advertisers with relevant historical data may be eligible sooner. The programmatic bidding algorithm is able to evaluate all historical performance at the advertiser domain level.

**Important:** While you can start with target CPA immediately and switch to target ROAS very quickly it’s hard to measure ROI and performance with low conversion volume. If you are sensitive to consistently hitting your target over a 30 day period using automation, we recommend driving at least 30 conversions per month, per ad group.

## **Why Are There Zero Eligibility Requirements to Bid with ECPC or Target CPA?**

The programmatic bidding algorithm is able to learn from how well publishers, keywords,

and targeting performs from aggregate conversion data, as well as evaluate all historical performance at the advertiser domain level. As a result of using this pre-existing learning Google Smart Bidding performs best by immediately opting in new campaigns to ECPC or Target CPA. These campaigns consistently outperform Manual CPC bidding even during the 2-4 week learning period. During the learning period the bidding algorithm learns even more about what works for the specific advertiser and campaign to further improve performance.

**Setting targets:** Start with targets that align with your historical CPA or ROAS. If current performance differs significantly from your target, the algorithm will lower bids and your total volume may decrease. To regain volume, you can increase your CPA, lower your ROAS goal or expand targeting. If efficiency is more important, you can continue using your current target but remember to assess volume using the conversion volume chart on [page 9](#).

If enabling Target CPA in a campaign with no conversion history, we recommend using your CPA from other display campaigns and/or using your business goals to inform the ideal CPA. You can then explore the CPA/volume tradeoff by raising/lowering your CPA target (similar to how you would raise your CPC in ECPC). Once the campaign gains enough data on Target CPA, you can use our [bid simulator](#) to further explore CPA and volume tradeoffs.

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**Step 3** Invest at least 2 weeks without changes for the initial learning period - performance may be more volatile during this time as the algorithm makes optimization decisions. You can see if a campaign is in learning mode by looking in the [campaign status column](#).

**Only segment ad groups when necessary.** Smart Bidding performs best when allowed to evaluate performance and optimize bids across as much traffic as possible. Over-segmenting campaigns into many ad groups is discouraged unless there is a compelling business reason. Here are scenarios under which you would want to segment your campaign.

- **Segment if assigning different conversion values to user attributes**  
If you report conversion value and use target ROAS, Smart Bidding will automatically optimize to deliver higher value conversions in line with your ROAS goal. If you don't report conversion value but you know some conversions are more valuable than others, then you should use Target CPA and segment.

- **Segment ad groups to show different creative**  
For instance, show a brand focused creative to an upper-funnel user and a direct response creative to a lower funnel user.
- **Segment if you have specific insights the algorithm won't know**  
For instance, if you know time-to-departure is an important statistic for a travel advertiser, use this metric to segment ad groups. Create one ad group targeting only users whose departures are imminent and another for users with trips farther in the future and tailor creative messaging accordingly. Another common use case is segmenting for offline metrics or customer lifetime value.
- **Segment to provide additional insight or reporting**  
Another time to create a new ad group is when you want to completely split out reporting between targeting or creative groupings. When you have two separate ad groups, you'll receive statistics for each ad group on a separate line item in the Ad Groups report.
- **Segment if you value new users vs. existing users differently**  
Many advertisers set a higher CPA/lower ROAS target for new users.
- **Segment if you see attribution discrepancies for different segments based on 3rd party reporting**  
For instance, if AdWords reports 50% more conversions than a 3rd party reporting tool for your keyword targeted campaign, but only 20% more for in-market segments, you should segment to account for that.

Even if you segment ad groups, **evaluate performance towards goal at the campaign or account level** rather than focusing on ad group fluctuations and remember to consider conversion delay when evaluating.

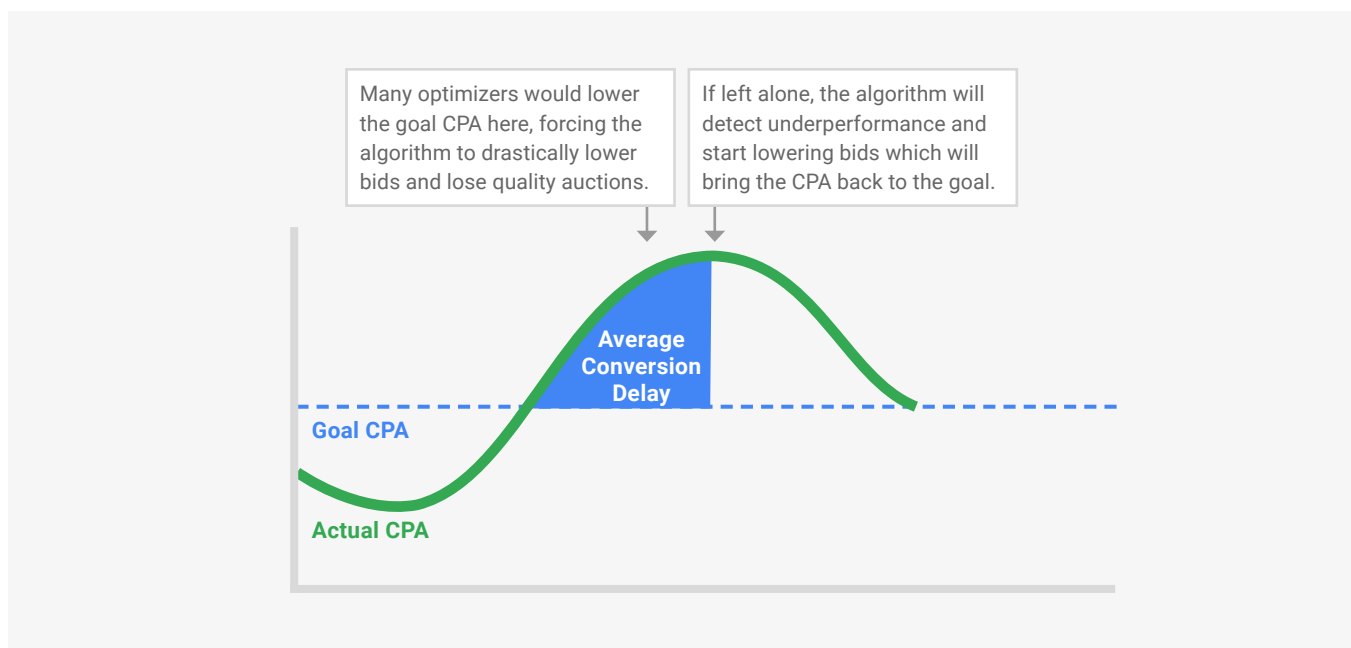
# Part 2: Managing Smart Bidding

Once you've turned on Smart Bidding and confirmed progress towards your goals after the initial 2 week ramp up period, **very little manual campaign management is needed**.

**Significant campaign changes will disrupt performance** because the algorithm will need to learn about and adjust to the new settings. These changes include, but aren't limited to, bid increases, adding new creative, and targeting and audience list adjustments. For example, if you just opted in to [automatic targeting](#) and became eligible for a significant number of new impressions on which Smart Bidding doesn't have historical data, you may see a short term performance disruption. If you must significantly change a campaign currently running with Smart Bidding, make all the changes at once to reduce learning time. You can [check the status column](#) to see if the algorithm is still learning about your settings.

**If you need to make optimizations to the campaign, limit bid changes to only +/- 20% and wait a week between changes.** Small, infrequent target CPA/ROAS bid changes aren't likely to cause a noticeable problem. If you have very high conversion volume in an ad group (100+ conversions per day) you can make more frequent changes.

**If you see a temporary performance decline, don't panic!** The algorithm learns over time and adjusts bids to compensate for poor performance. Lowering the Target CPA or increasing the Target ROAS can significantly hurt volume and performance — see the following chart:





**Conversion delay** is the cause of many perceived performance declines. It can take up to several weeks for some users to see an ad and then convert. Advertisers pay the CPC cost almost immediately but the conversions for those clicks come in over time based on the set conversion window. As a result, very recent performance may look poor but gets better over time as more users convert and those conversions are attributed back to the day the click took place. Check your web analytics data to determine your average conversion delay. You can learn more about conversion delay [here](#).

Consider conversion delay when setting your conversion window to make sure you are capturing all conversions. If you set a shorter conversion window it can help to see results more quickly and speed up Smart Bidding learning, but you will not see the full impact of your advertising.

If you are limited by budget, and performance is worse than your target CPA/ROAS, either lower the CPA or raise the ROAS by 20% until either performance is at target or you are no longer budget constrained. Budget constraints can hinder performance as the campaign is not able to participate in auctions that may be highly likely to drive a conversion.

## Part 3: Assessing Results



Evaluate overall performance to minimize statistical noise. Don't focus too narrowly on individual ad groups or short time periods (such as performance on a specific day), especially if you set a target at the campaign level.

In the chart to the left, Ad Group C is performing above the goal CPA whereas Ad Groups A and B are hitting the goal.

Since the campaign is hitting the goal, don't pause Ad Group C or overall volume will suffer.

The programmatic bidding algorithm will learn attributes about Ad Group C which lead to CPA above goal and compensate with lower bids.

**Best practice:** Combine Ad Groups C and B/A to maximize shared learning and allow Smart Bidding to optimize across your traffic – unless segmenting for one of the reasons in section 1.

Expand the date range considered to include multiple weeks. When evaluating performance, **set a date range that accounts for delayed conversions**. For instance, if you have a 24 hour average conversion delay, don't include yesterday in performance statistics.

## Smart Bidding Accuracy and Conversion Volume

Smart Bidding is more likely to perform at your target CPA or ROAS if you evaluate a time period with more conversion volume. The chart below shows expected accuracy given the conversion volume in a time period or campaign hierarchy evaluated.

The following chart applies to any reasonable **account structure** or **time period analyzed**. If one ad group out of a large campaign only has 15 conversions during a time period analyzed, we'd expect daily CPA volatility in that ad group. The overall campaign might be consistently hitting the CPA over multiple days though. The chart does not apply for longer time periods (e.g. all time or multiple months).

Focus on overall campaign performance trends rather than individual ad groups or short date ranges with more volatility. The algorithm is designed to react and hit the target over time in each ad group.

Impact of Conversion Volume:			
Number of Conversions	Daily CPA or ROAS Performance Fluctuation	Reaction Time to Changes	Initial Learning Period
15	Medium to High	Slow (up to 2 weeks)	Up to 4 weeks
50	Medium	Medium	Up to 3 weeks
100	Low	Fast	Up to 2 weeks
500	Very Low	Very Fast (as few as 6 hrs)	Up to 2 weeks

# Smart Bidding and Campaign Scale

Our programmatic bidding algorithm is designed to provide your campaigns with the most conversion volume at the chosen performance goal; CPA goal for Target CPA, and ROAS goal for Target ROAS. As the market shifts (e.g. inventory, conversion rate, seasonality, user behavior, etc), conversion volume and spend may fluctuate in order for our programmatic bidding algorithm to continue to meet your performance goal. There are a couple of steps you can take to scale your campaigns:

- **Increase your CPA goal or ROAS goal** – Both of these will allow our algorithm to bid higher in each auction resulting in a higher chance of winning impressions that result in conversions.
- **Expand your targeting** – With more impressions to bid on, our algorithm is able to find more conversions.

## How Does a Change in Conversion Rate or Bid Impact Scale?

Typically there is a linear relationship between bid and scale, and conversion rate and scale. A bid or conversion rate increase is likely to result in more scale, whereas a bid or conversion rate decrease in less scale.

**Note:** Switching to ECPC from Target CPA or Target ROAS does not increase scale at the same performance goal. For example, switching from Target CPA to ECPC will not increase scale at the same CPA. Instead, you may see higher conversion volume but at a higher and less efficient CPA. The same goal can be achieved by remaining on Target CPA and increasing the CPA goal.

# Seasonality + Promotions

- More seasonal volume only improves Smart Bidding. As long as your conversion rate isn't changing drastically on a daily basis due to short-term sales or other factors, Target CPA/ROAS is the optimal way to achieve your CPA and ROI goals.
- If your conversion rate is changing drastically due to a short-term sale or seasonal event or holiday (1-7 days in length), we have the ability to inform the algorithm of the expected spike. Reach out to your sales team to discuss next steps.
- The programmatic bidding algorithm quickly recognizes if auction dynamics are changing.

# Creative Best Practices With Smart Bidding

- Ensure your creatives are well tailored to your audience. Try to avoid full creative swaps where you change all ad creatives in an ad group.
- If you need to do a full creative swap, expect a temporary performance shift while your new ads gather performance history; scale will only return to previous levels if the ads perform similarly in terms of clickthrough rate and conversion rate. New ads may have different performance vs. the current ads.

## Why does adding new ads impact performance?

- Ad rotation settings affect which creatives enter the auction.
- New ads don't have performance history to understand their expected clickthrough and conversion rates — therefore Google automated bidding has less data to make a bidding decision.
- When determining how much to bid for a particular creative, we evaluate factors such as historical CTR, CVR, device, publisher, ad size to set the bid.

## Recommendations to minimize performance volatility when refreshing creative on GDN

- **Do** swap out one ad (per ad size) at a time and pause down the lowest performer in the ad group. Pause ads, don't delete, if you plan to relaunch.
- **Do** relaunch paused creative rather than uploading the same creative again. We can use the old history to ramp up.
- **Do** remember that if you are using 3rd party serving with your ads, you limit the data google can see and optimize toward.
- **Do** follow all GDN creative best practices — outlined [here](#).
- **Do** use ECPC rather than target CPA or target ROAS if you are changing all creatives out weekly in an ad group.
- **Do** not pause all creative assets in an ad group at one time — this results in performance volatility. If you must swap out all, raise bids 20%.
- **Do NOT** drop bids at the same time you add new creative assets to an ad group.

## Best practices for frequency caps

- Smart Bidding bids in each auction towards the likelihood of a user to convert - if a user is unlikely to convert, and therefore the impression is not valuable, Smart Bidding will not set a high bid or show the ad to that user. Smart bidding incorporates signals like recency and frequency into its estimation of how likely it is if a user will

convert. Therefore, we do not recommend setting a frequency cap because Smart Bidding already accounts for this and it can hurt the performance and scale of your campaigns.

# Summary of Key Concepts

## **Provide more conversion data for best programmatic bidding performance**

- Campaigns with significant conversion volume have more consistent data points for the algorithm to learn from, and have fewer performance fluctuations over time.
- If you're looking at a date range for a campaign or set of ad groups with under 100 conversions, expect more performance fluctuations.
- Assess performance at the campaign level to evaluate results.

## **Only segment when necessary**

- If a campaign is segmented into many ad groups, individual ad groups may experience performance fluctuations due to low conversion volume.
- Remove unnecessary segmentation to ensure easy performance tracking.

## **Do not manually optimize – Smart Bidding optimizes for you, using the power of automation**

- It can greatly improve ROI or increase volume (though not overnight).
- It doesn't overreact to short term changes.
- It only acts on statistically significant data.
- If performance is not hitting the goal, the algorithm will adjust bids.
- Uses Optimize for Conversions as the ad rotation setting to maximize performance.

## **Set campaign settings according to Smart Bidding best practices**

- Smart Bidding takes creative performance history into account but doesn't decide which creative to show; Optimize for Conversions is the ad rotation setting anytime you are using Smart Bidding.
- Smart Bidding doesn't consider budget constraints. If you're limited by budget and Smart Bidding is having a difficult time reaching your goal, you can switch to a lower CPA or higher ROAS to more effectively utilize budget.

# FAQs

## **How can I restart Smart Bidding? I don't like the data it has already collected.**

Smart Bidding cannot be restarted but is always learning and reacting to changing auction environments, so restarting is unnecessary.

## **How can I let the algorithm know I expect an upcoming increase in conversion rate due to a sale or seasonal date?**

We are able to inform the algorithm of upcoming conversion rate changes due to a sale or seasonal event. We recommend discussing this topic with your sales team.

## **What devices or inventory types does Smart Bidding work for on display?**

Smart Bidding works across all devices and inventory types including desktop, tablet, mobile, and AdMob apps.

## **What do you recommend if I have low conversion volume?**

Consider bidding towards a micro-conversion that shows intent or likelihood to leave to a sale. This may be something such as an time on site, pages visited or an email capture.

## **Does it matter if the Target CPA or ROAS is set at the campaign or ad group level?**

No, Smart Bidding will work the same way regardless of where the target is set. However, ad group targets override the campaign level target.

## **If I add multiple remarketing lists to one ad group will Smart Bidding bid differently for each?**

Yes, we will learn against and bid differently for each individual list ID.

## **What is the best course of action if there is a site or pixel issue that affects data for Smart Bidding?**

We are able to blackout data in certain circumstances such as a site or pixel issue. We recommend discussing the issue with your sales team to see if your situation warrants a blackout of data.

## **Does Smart Bidding include view-through conversions?**

No, Smart Bidding only bids towards click-based conversions. When evaluating performance, remember that we only bid towards and consider click-based conversions when reporting on CPA or ROAS. If you want to include view-through conversions in your reporting, you can do this via [AdWords "Custom Columns"](#).

### How can I switch on Smart Bidding as quickly as possible?

- For ECPC and Target CPA, you can activate immediately. For Target ROAS, using ECPC or CPA allows the system to collect data most quickly. Do not use CPM bidding.
- Sometimes you'll be able to turn on Target ROAS sooner than expected because we have significant prediction data from your previous advertising campaigns.

## Next Steps

- Implement Target CPA or Target ROAS
- Make only small changes (+/- 20%) to target CPA/ROAS during initial ramp up
- Allow 2-4 weeks for the algorithm to learn