

# To build trust for attribution insights, grow your understanding of the data

Validate attribution models to build confidence and momentum



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In marketing, conversions are measurable desired outcomes. From actions showing brand affinity to starting or completing an online process that shows purchase intent, site or store visits, calls, or purchases, marketers need to know which of their efforts are helping make conversions happen, and which are not.

One of the challenges of cross-channel marketing is to fairly assess the influence each experience has on someone's journey to becoming a customer. If a person engages with multiple campaign elements or sites prior to converting, how much credit does each touchpoint deserve?

Attribution is a data-intensive measurement practice that offers answers. As in any data modeling process, the method used to analyze data greatly impacts results. To take confident, strategic action based on attribution recommendations, you need to trust the attribution model.

## Attribution models matter

How should credit be assigned to marketing touchpoints that lead to conversion? The often used last-click attribution model gives all credit to the last ad clicked. Though easy to understand, this approach is arbitrary and leaves many touchpoints out of the equation. Unfair at best, this model is inaccurate at worst.

As an example, marketers have long suspected display ads assist search conversions. Why should 100% of conversion credit go to search simply because a search ad was the last click? Instead, our attribution models should allow data to tell the story of how display inspired search and influenced conversion.

A better way to assign credit is to consider the relative value of each touchpoint in the customer journey. Fractional, data-based attribution models describe the true value of each touchpoint—and even help us see how channels impact each other.

No matter what attribution model we use, the ultimate determination of whether attribution insights are helping is improved return on ad spend (ROAS). To get ROAS from attribution, however, we have to trust our attribution models enough to take actions based on the insights it provides. Let's consider ways to build that trust.

## Becoming a believer

Even if we agree a good attribution model should be data-driven, we need a way to check that attribution findings are valid. Validation can help us make confident decisions based on attribution insights.

While it is impossible to prove that an attribution model is 100% accurate, we can use lift analysis to find some "ground truth" that we can compare with results from our attribution tools. In this way, we can confirm attribution results at the aggregate level.

Lift analysis is simply calculating aggregate-level credit deserved by a set of ad events, then qualitatively matching them with fractional attribution results. It only works at an aggregate level for a specific set of converted users. Consider these examples:

### Impact of display on search clicks:

We can divide search converters into two distinct groups: one that has had interactions with display ads and one that has not. Any difference in conversion rate between these two groups reveals the estimated lift display delivers to search.

If the lift is 100%, it means display exposure doubles the number of search conversions. Display deserves half of the credit for conversions in which both display and search ad events are present.

This is a big finding, especially when you consider that most last-click attribution models would give 100% of conversion credit to search clicks.

### Impact of display impressions on display clicks:

It is often assumed that a clicked display ad deserves more credit than a display impression that is not clicked. The truth may not be that straightforward. Just as display assists search, isn't it possible that display clicks are assisted by previous display impressions that were not clicked?

To look closer, we can divide display clicks on a particular site into two groups: One that has seen previous display impressions on other sites and one that has not. Any difference in conversion rate between these two groups reveals the estimated lift non-clicked display impressions deliver to clicked display ads.

## Real results

The first result (see Figure 1) comes from a large telecom advertiser that spends millions of dollars on both display and search campaigns each month. Data shows a huge lift that display delivers to search—161%. This translates into a credit of 61.6% that should go to display for display-assisted conversions.

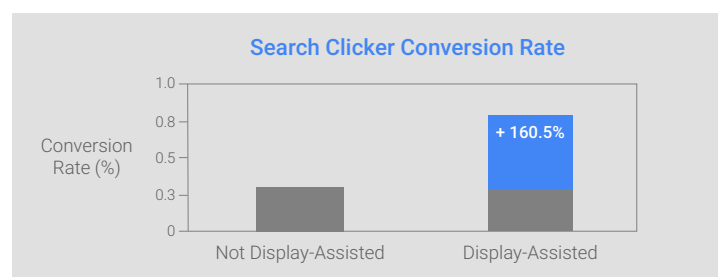


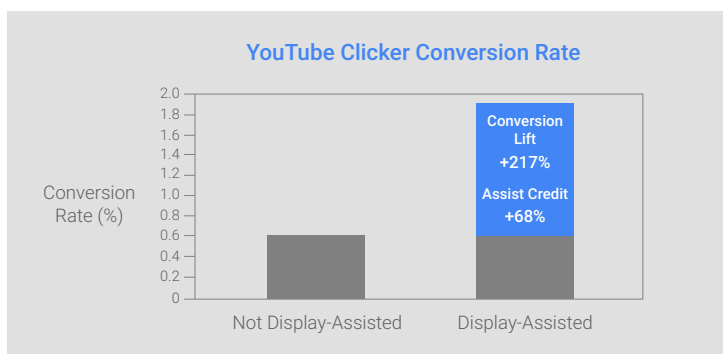
Figure 1: Impact of display on the conversion rate of search clickers.

Checking results from Google Attribution 360, part of the Google Analytics 360 Suite, we see credit of 59.2% for all assisting display impressions. This is close to the credit display deserves according to our lift analysis, offering good validation of Attribution 360's findings.

|                              | Assist Value |
|------------------------------|--------------|
| Lift Analysis (Ground Truth) | 61.6%        |
| Fractional Attribution       | 59.2%        |
| Last-Ad Attribution          | 11.4%        |

**Figure 2:** Assist values from display on search clickers. Note the last-ad attribution is not 0% here, as we considered the assisting impact from display ads after search clicks, i.e., search-remarketing display campaigns.

The second real result is based on data from a large insurance advertiser that runs billions of impressions per month. The data shows the significant impact non-clicked display impressions deliver to clicked display ads.



**Figure 3:** Impact of display impressions (from other sites) on YouTube clickers.

Lift analysis suggests that for converted YouTube clicks from people who have seen display impressions on other sites prior to the click, roughly 68% of conversion credit should go to assisting sites. This matches favorably with the 66% results generated by Attribution 360.

|                              | Assist Value |
|------------------------------|--------------|
| Lift Analysis (Ground Truth) | 68%          |
| Fractional Attribution       | 66%          |
| Last-Ad Attribution          | 0%           |

**Figure 4:** Assist values from other sites' impressions on YouTube Clickers.

## Descriptive, not predictive

With all of this emphasis on validation, it's important to remember that attribution is a descriptive modeling technique, NOT a predictive one. Attribution can't be validated in the same way a predictive model can be.

A predictive model can only be built when the objective is known. When it comes to attribution, the objective is credit for each touch point on a converted path—but this can't be known in advance. While some attribution insights can be used to predict future performance, such as average effective costs per action (eCPA), this is completely different than training a model to predict credit preceding a conversion.

Without a known objective, not only can we not train a model, we also cannot compute error statistics such as mean-squared error or R-squares. Nor can we compare such errors for different attribution models (i.e., benchmarking based on such errors).

As a result, we must check an attribution model's effectiveness with more creative approaches, like lift analysis. Lift analysis helps validate fractional attribution models in a qualitative way, enabling a perceptive estimate of total attribution credit for a specific group of assisting ad events.

We can compare lift analysis results with those coming from Attribution 360 to validate that the model is sound. Real-world data from large advertisers offers good correlation between Attribution 360 findings and lift analysis validation. You can use your data to make similar checks and build organizational confidence for data-driven attribution insights.

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### About the Google Analytics 360 Suite

The Google Analytics 360 Suite offers powerful and integrated analytics solutions for today's biggest enterprises. Measure and improve the impact of your marketing across every screen, channel and moment in today's customer journey. It's easy to use, and makes data accessible for everyone so the "aha" moments are simple to discover and share. Move from insight to impact faster with the Analytics 360 Suite.

For more information, visit [g.co/360suite](https://g.co/360suite)

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