



What do you mean, EXPERIMENTS?



An experiment helps identify
the impact a change in something
has on something else

*“If I had changed A,
it would have resulted in B”*



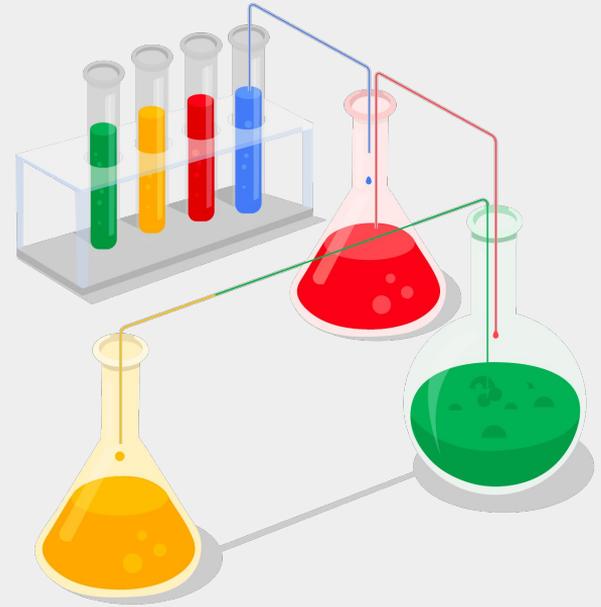
An experiment helps identify
the impact of a “cookie”
on your presentation skills

*“If I had changed A,
it would have resulted in B”*



An experiment helps identify the causal impact a certain change in advertising strategy has on a given success metric

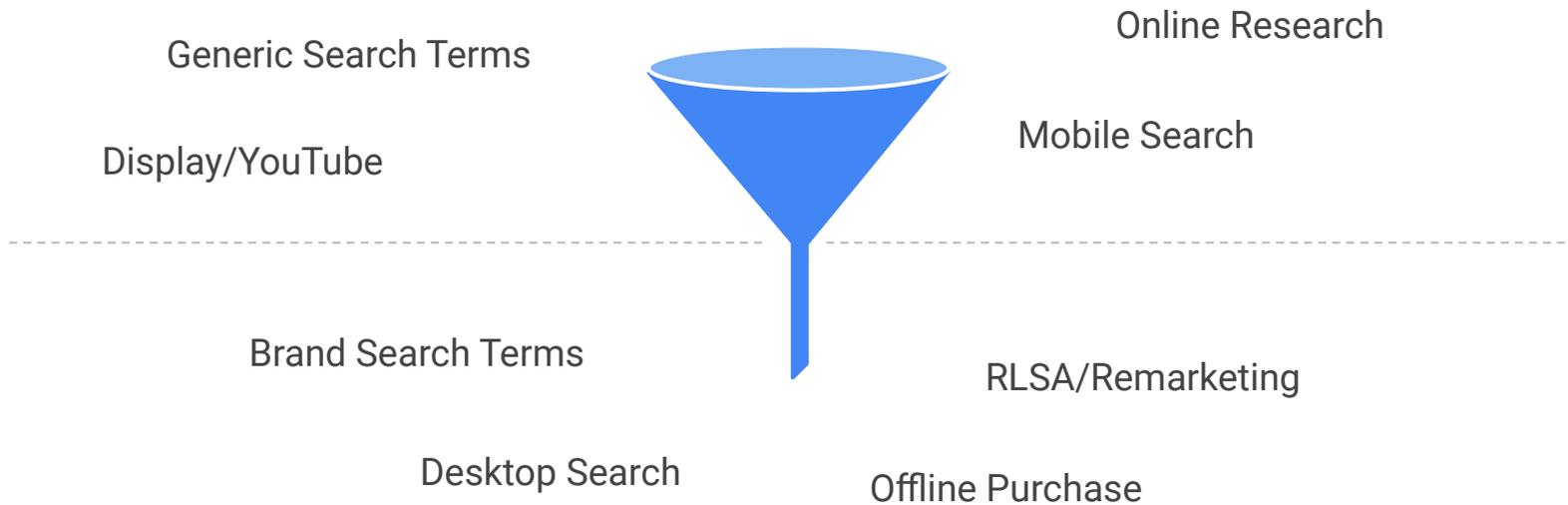
"If I had changed A, it would have resulted in B"



But wait, WHY EXPERIMENTS?



| Why Experiments?

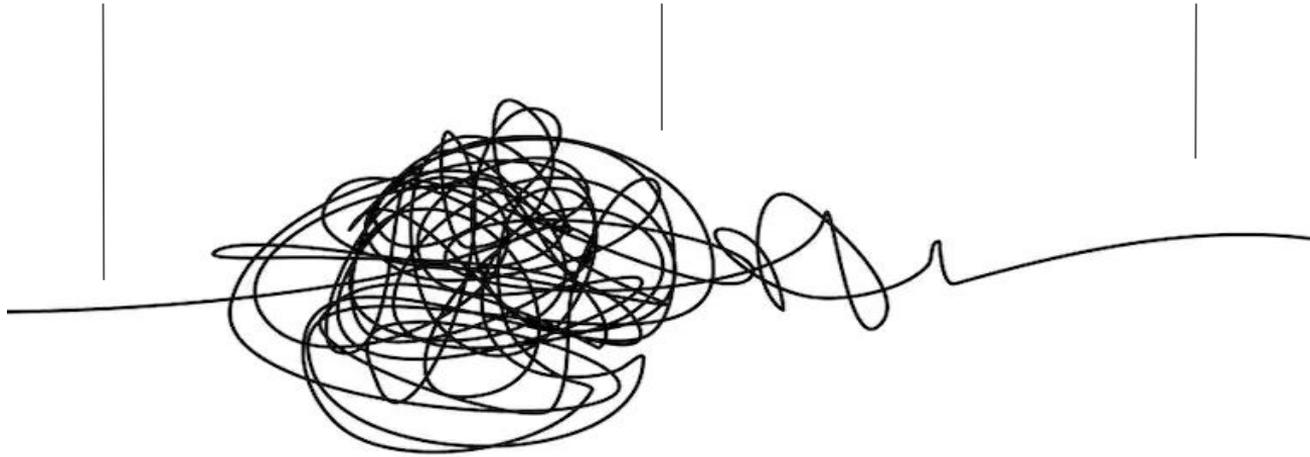


The path to purchase is increasingly complex

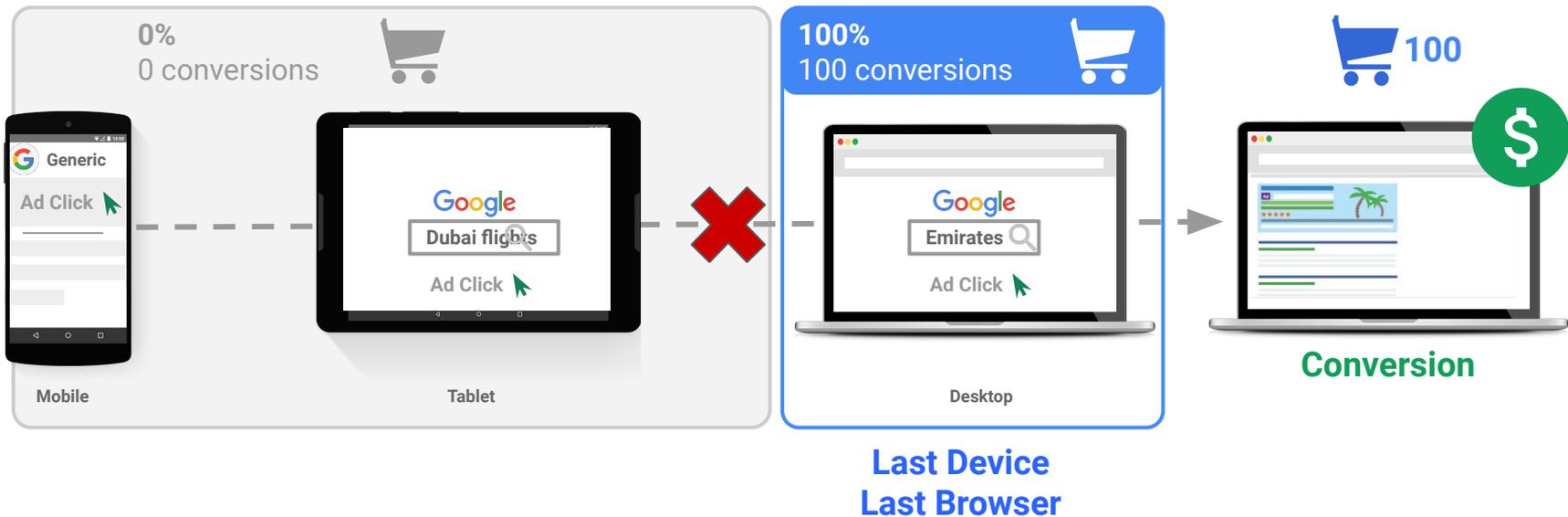
**Customer
intent**

**Research &
Discovery**

Purchase

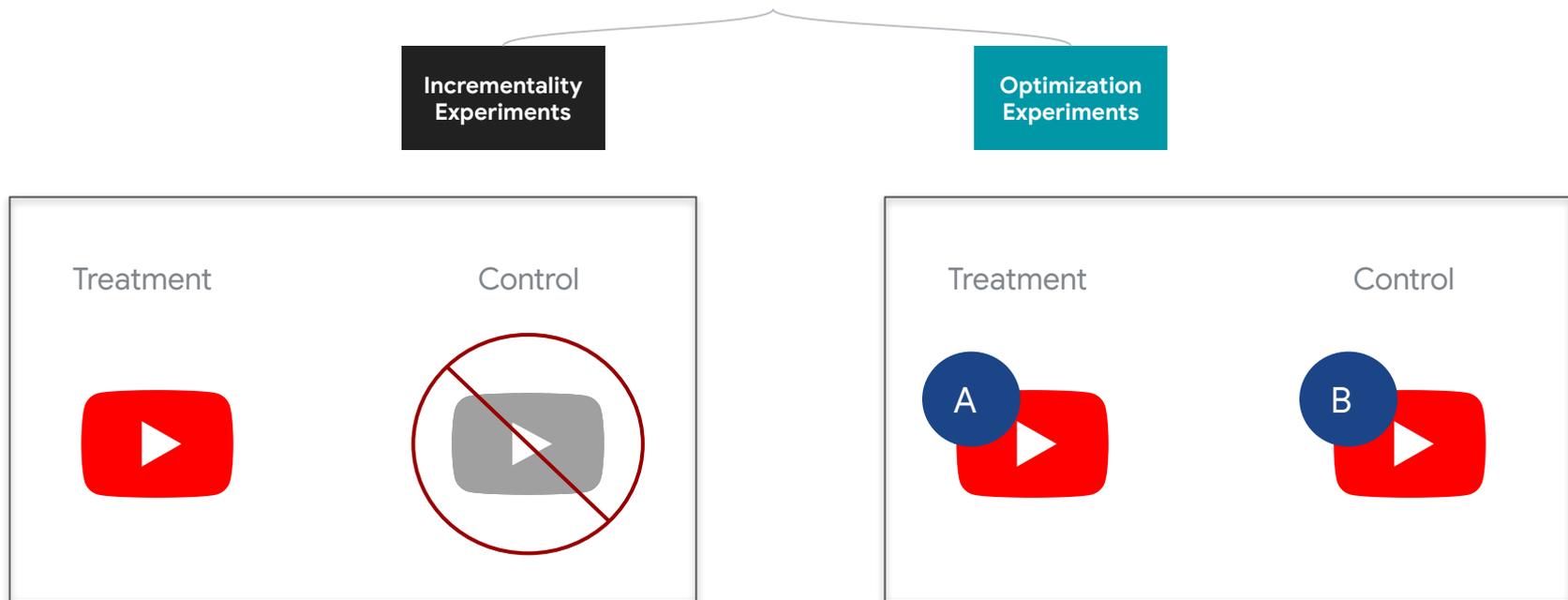


Cross-device measurement is a challenge

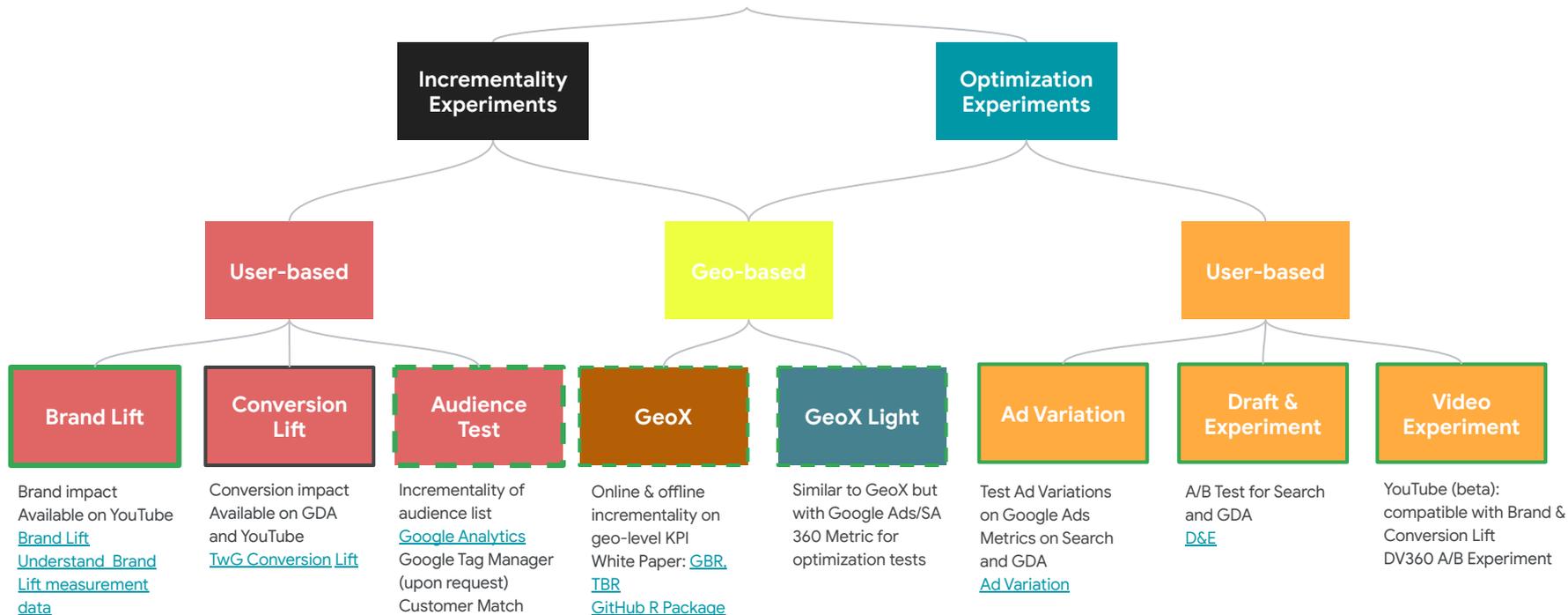
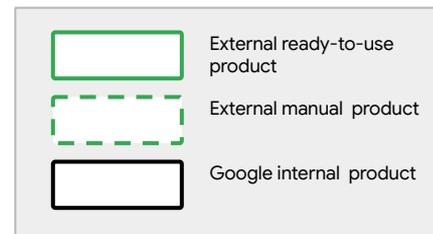


| How can Google help?

Step 1: Identify what you want to test



Step 2: Select your experimental approach



| Overview of Experiment Frameworks*



Campaigns Drafts
& Experiments



Conversion Lift



Brand Lift



Geo Experiments

| Overview of Experiment Frameworks*



Campaigns Drafts
& Experiments



Conversion Lift



Brand Lift



Geo Experiments

What are drafts and experiments?



What happens after the experiment?

What's next?

- Update your original campaign
Your campaign will reflect the changes you made in your experiment
- Convert to a new campaign
Your new campaign will have the same daily budget as your original campaign, and your original campaign will be paused

APPLY CANCEL

Are the results statistically significant?

Yes

No

Apply changes to the original campaign from the experiment

Turn off the original campaign and give your experiment 100% of your budget

Stop the experiment and apply changes manually

2 possibilities:
- Not enough volume
- Change is too subtle, small

Triggers KW/creative review if applicable

No /KW creative review

Triggers KW/creative review if applicable

No need to continue testing for more than 2 months

Learnings carry over for Smart Bidding

Learnings carry over for Smart Bidding

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End this experiment and start a new one (go/de-bestpractices)

Reading and understanding the results

Performance comparison: Jul 20 – Aug 18, 2017 [?](#)

Clicks ▾	CTR ▾	Cost ▾	Avg. CPC ▾	Impr. ▾
19 +90% [-55%, +235%]	2.13% -45% [-86%, -3%] *	\$7.57 +87% [+50%, +125%] *	\$0.40 -1% [-77%, +74%]	893 +243% [+196%, +291%]



Cost (+87%)

* Statistically significant
(p-value < 5%)

There's a < 0.1% (p-value) chance of getting this performance (or a greater performance difference) due to randomness. The smaller the p-value, the more significant the result. [Learn more](#)

Confidence interval [+50%, +125%]

There's a 95% chance that your experiment sees a +50% to +125% difference for this metric when compared to the original campaign.

Experiment	\$7.57
Original	\$4.04

The blue asterisk (*[*](#)) lets you know that the results are statistically significant.

Hover over results to see how the original campaign performed compared to the experiment.

More information about the confidence interval calculation [here](#)

| Summary



Campaign Drafts & Experiments

Challenges being addressed



Example Use Cases/Studies

- Test Landing Pages ([Honest Company](#))
- Test Creative Tactics
- Test Bidding Strategies
- Test Ad Formats

Pros/Cons

- + Very robust methodology
- + Cheap, fast and simple to set up
- + Actionability
- + Few requirements
- Based on Queries/Impressions for Search
- Limited to Search/Display

| Overview of Experiment Frameworks*



Campaigns Drafts
& Experiments



Conversion Lift



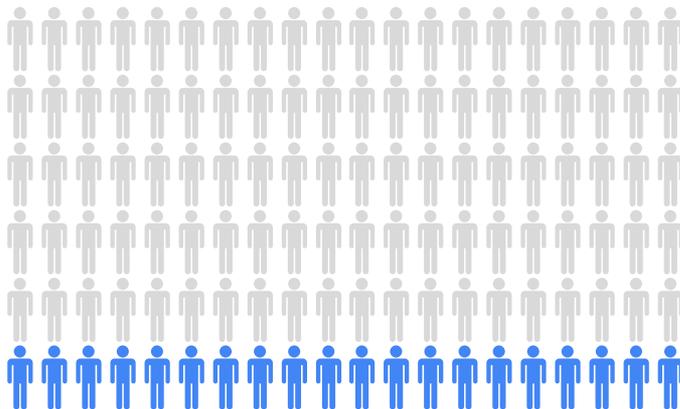
Brand Lift



Geo Experiments



People who visited without
seeing the campaign



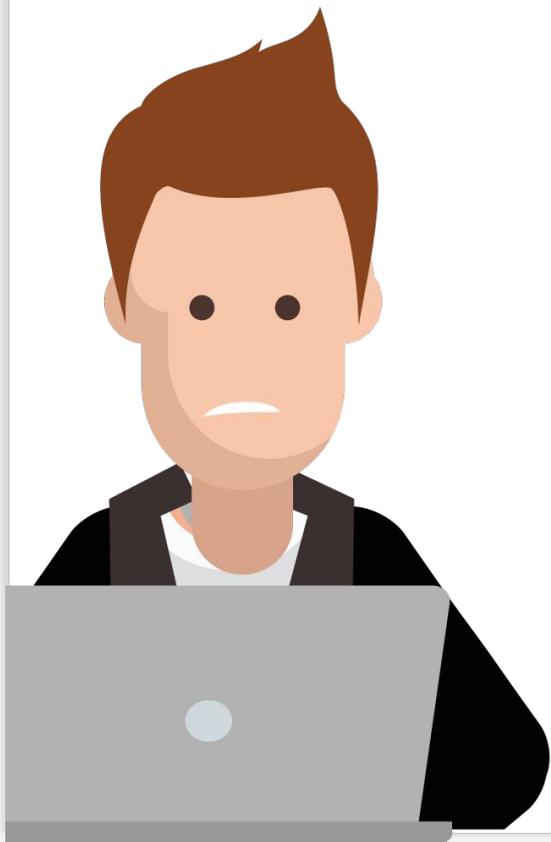
People who visited through a
display campaign



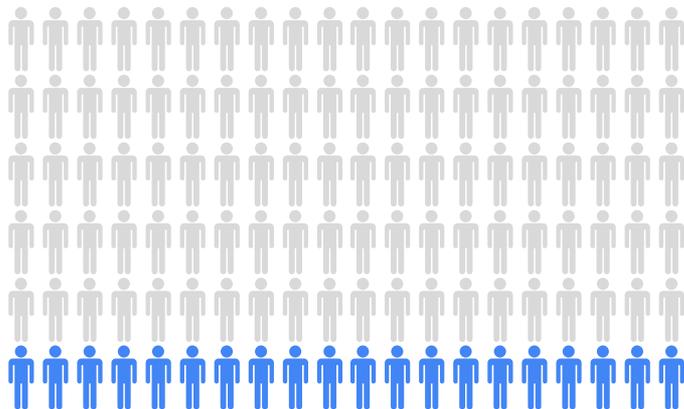
Conversion Rate of people who...

1.5% ... visited through a display campaign

2.7% ... visited without seeing the campaign



People who visited without seeing the campaign

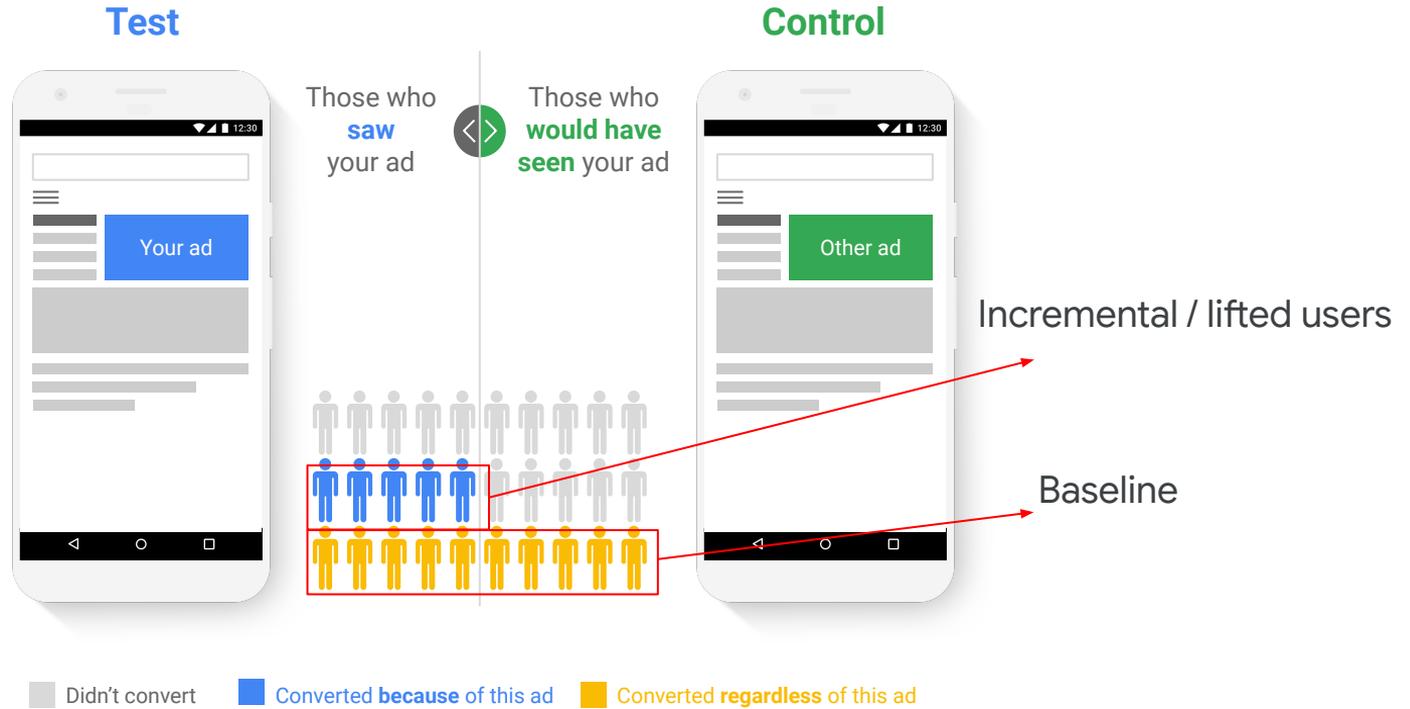


People who visited through a display campaign

Problem

More likely to be loyal users, more likely to be familiar with the site, ...

How Conversion Lift Works



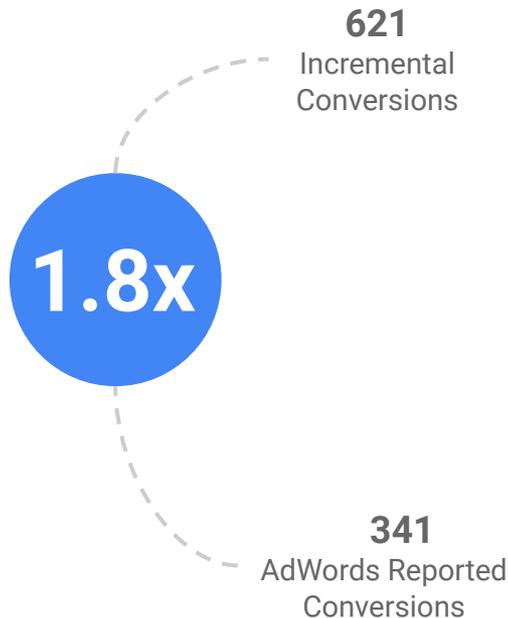
Learn more: [Think with Google](#) | [Methodology Whitepaper](#) | [Pitch Video](#)

Absolute Lift may not align with Google Ads Reported Conversions

Conversions continue to be updated in AdWords frontend because they are reported to date of click. Conversion Lift reports to the date of conversion only.

Reported Conversions in the results deck and spreadsheet are only updated until the Analysis date to match lift numbers

EXAMPLE: If the Analysis date is 31st of January but today is February 2nd, there may have been conversions happening in between these dates which are considered by ICS, but not the slides.



This is the number of conversions which wouldn't have happened without your campaign

These conversions can be found in your Conversion Lift reporting (via AdWords account) and are based on a last AdWords click attribution within the test period

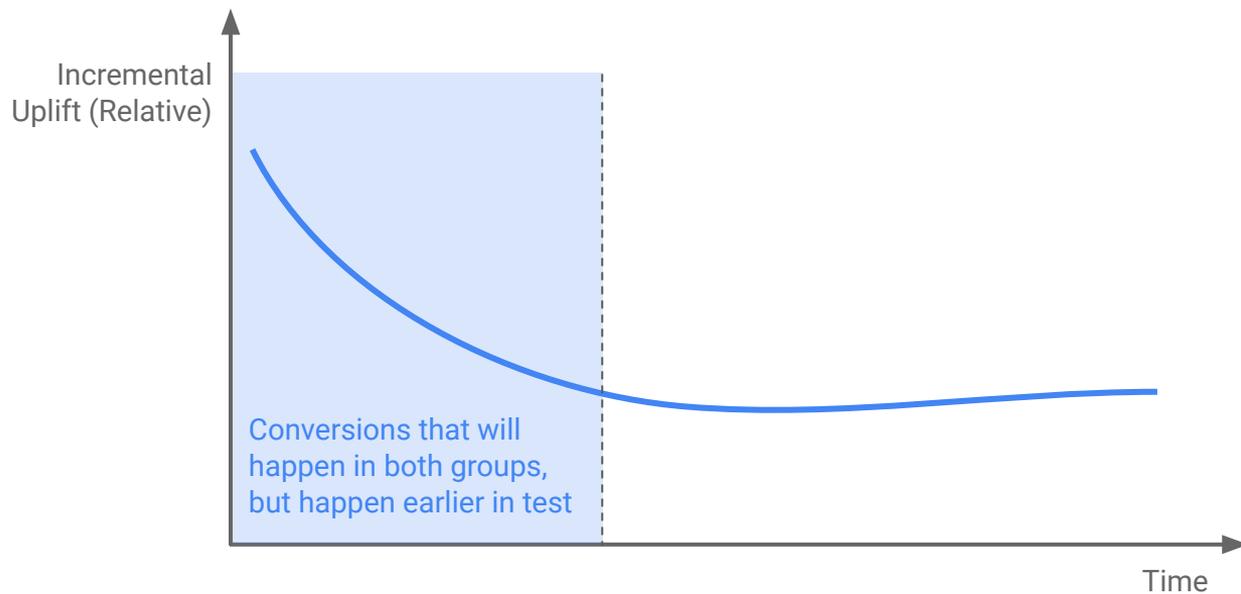


Conversion Rate of people who...

2.5% ... visited through a display campaign

0.5% ... belong to control group

| Uplifts over time



Summary



Conversion Lift

Challenges being addressed



Example Use Cases/Studies¹

- Value of Dynamic RMKT on GDN ([DefShop](#))
- Value of YT TrueView
- Value of Mid-Funnel GDN ([Fujifilm](#))

Pros/Cons

- + Very robust methodology and split
- + Cheap, fast and simple to set up
- Limited to GDN/YT
- Limited Segmentation

| Overview of Experiment Frameworks*



Campaigns Drafts
& Experiments



Conversion Lift



Brand Lift



Geo Experiments



GA buckets

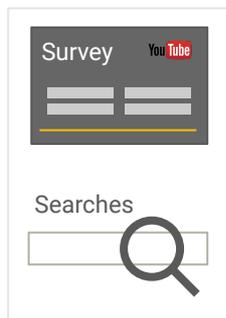


Pre-/Post

| Summary



Brand Lift



We divide your audience into two groups: **test users** will see your ad, **control users** will see the next ad in the auction

We serve **surveys and/or analyze organic searches** on Google.com and YouTube.com to these groups

We gather the responses and **compute the results** as early as 2+ weeks*

What we report



- Ad recall
- Brand Awareness
- Consideration
- Purchase Intent
- Favorability



Brand Interest

Where/How we measure it



Measure TrueView and Reserve ads with surveys



Measure the effect of TrueView, GDN Brand ads and Reserve ads on organic search activity (Google.com and YouTube.com)

| Summary



Brand Lift

Challenges being addressed



Example Use Cases/Studies

- Determining the value of YouTube

Pros/Cons

- + Very robust methodology and split
- + Cheap, fast and simple to set up
- “Soft” Metrics
- Limited to YouTube

| Overview of Experiment Frameworks*



Campaigns Drafts
& Experiments



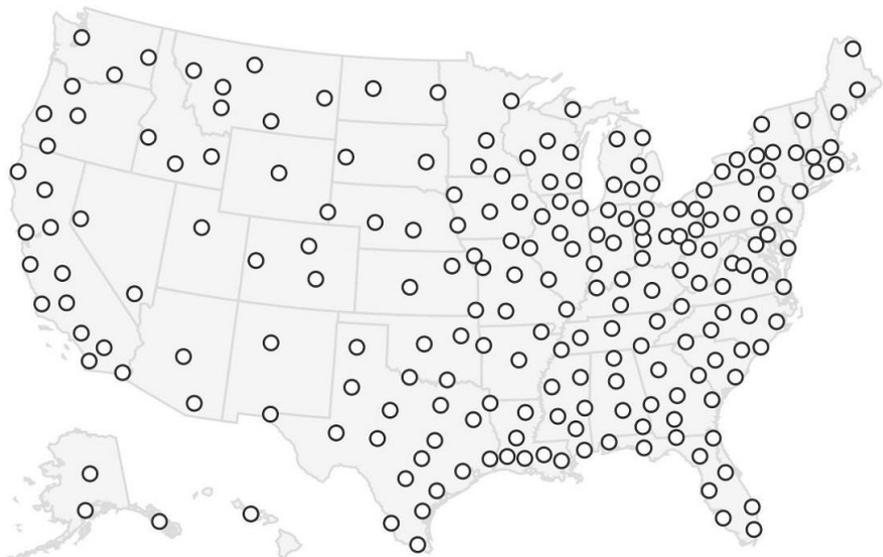
Conversion Lift



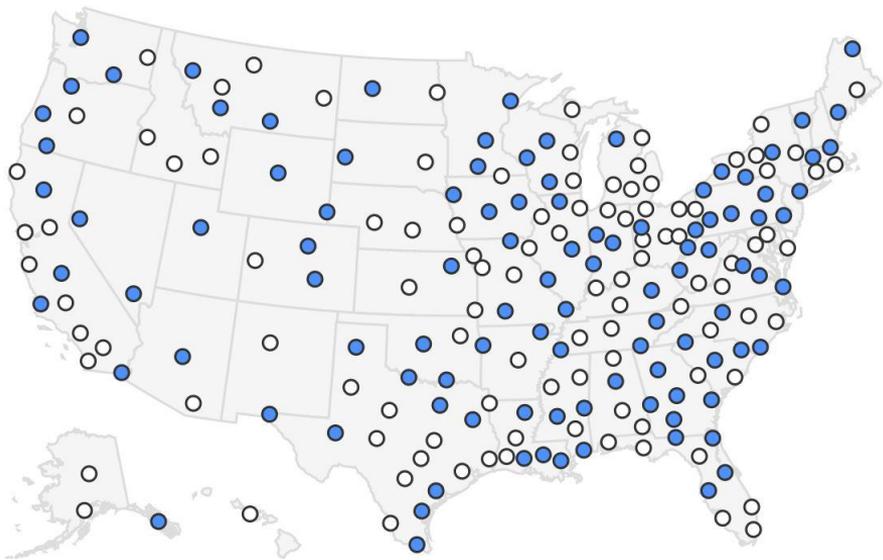
Brand Lift



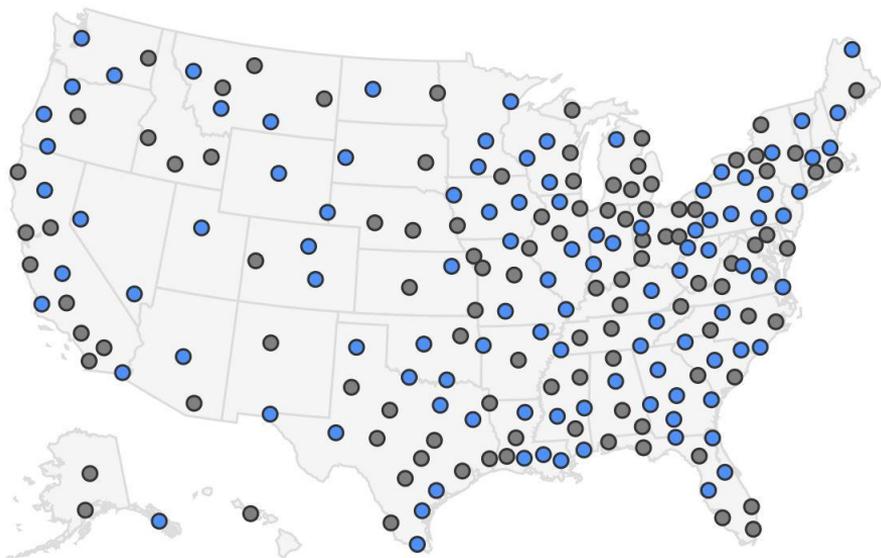
Geo Experiments



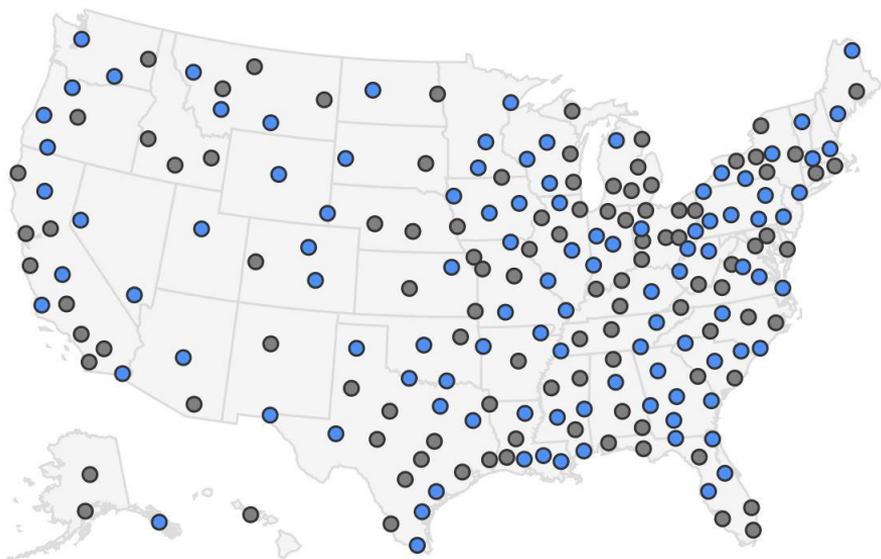
1. Divide country into subregions (GMAs)



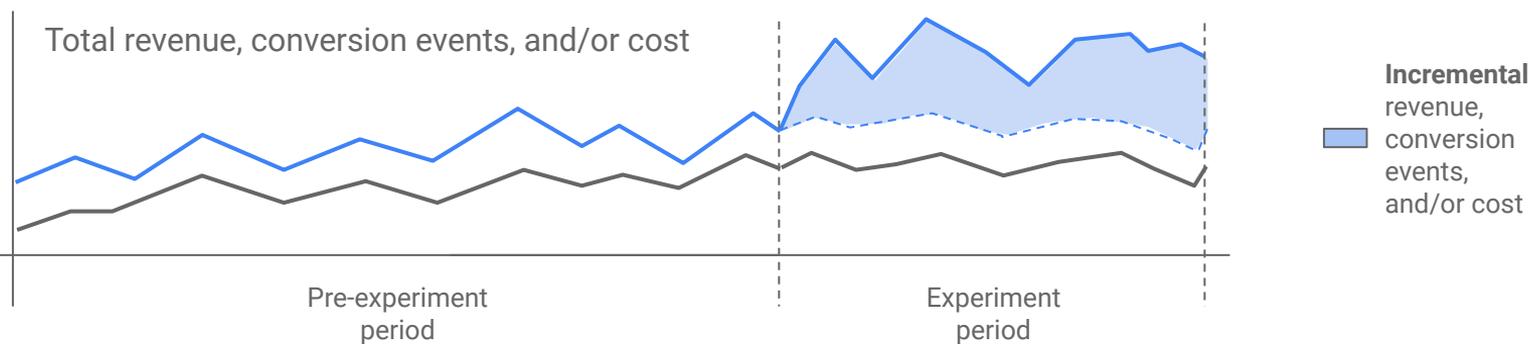
1. Divide country into subregions (GMAs)
2. Expose some subregions to change in ad strategy (treatment group)



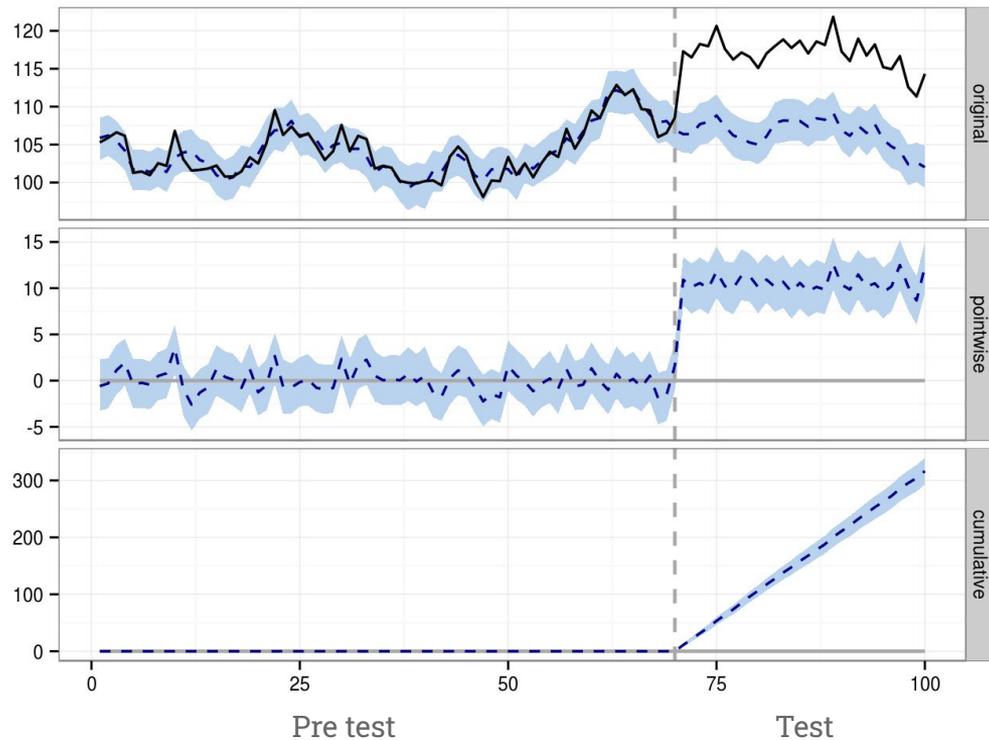
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3. Remaining subregions continue business-as-usual (control group)



1. Divide country into subregions (GMAs)
2. Expose some subregions to change in ad strategy (treatment group)
3. Remaining subregions continue business-as-usual (control group)
4. Measured relative uplift between groups is true, incremental value of media



Example of the output from CausalImpact



— Observed response metric in the test region

- - - Counterfactual response metric (control group)

Here we compare observation to expectation in time series. The difference between observation and expectation is attributable to the change in ad spend under test.

Overview of Lifts



Geo Experiments

Challenges being addressed



Example Use Cases/Studies

- Value of Mobile (photobox)
- Value of GDN ([HomeAway](#))
- Value of Generic ([lastminute](#))

Pros/Cons

- + Very flexible (e.g. can use 3P conversion data)
- + Privacy friendly
- Difficulty of setup
- **Many requirements (e.g. limited by countries)**
- Resource-intensive (time, monetary)

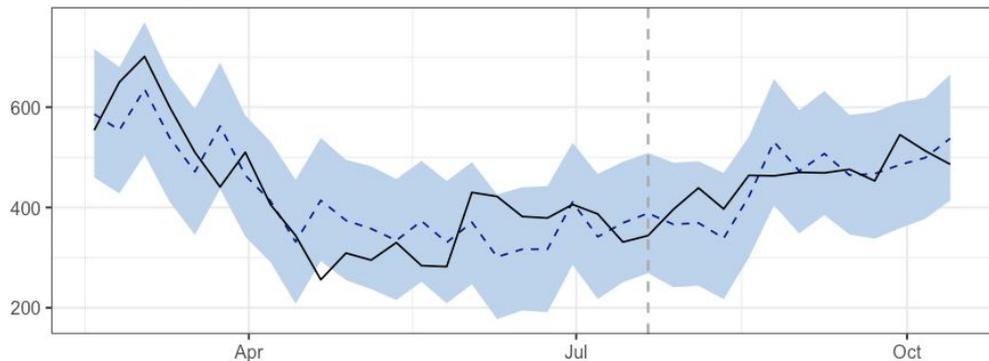
| Case Study

Experiment to prove value of mobile generics

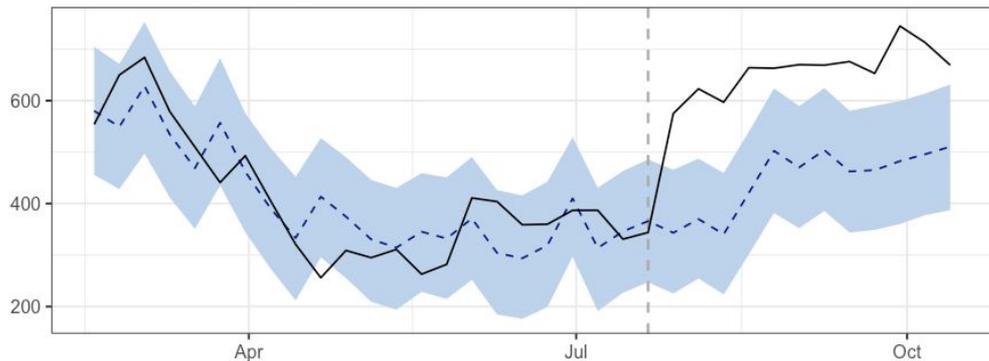
Proprietary + Confidential

Germany

— Actual - - - Prediction



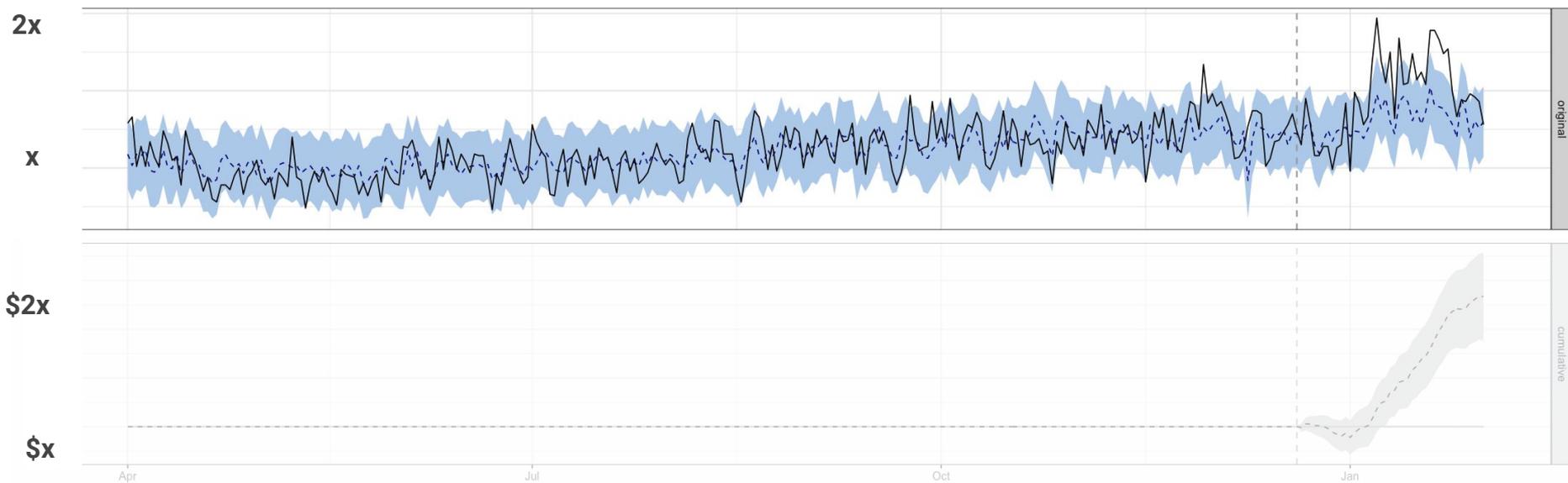
Germany – expected outcome



- Focusing on routes instead of regions.
- Reviewed 3 markets with biggest headroom in terms of clickshare: UK, DE & KSA.
- Germany was the best matching, 16 big-enough routes that we split into 2 categories

Causal Impact Analysis

Proprietary + Confidential

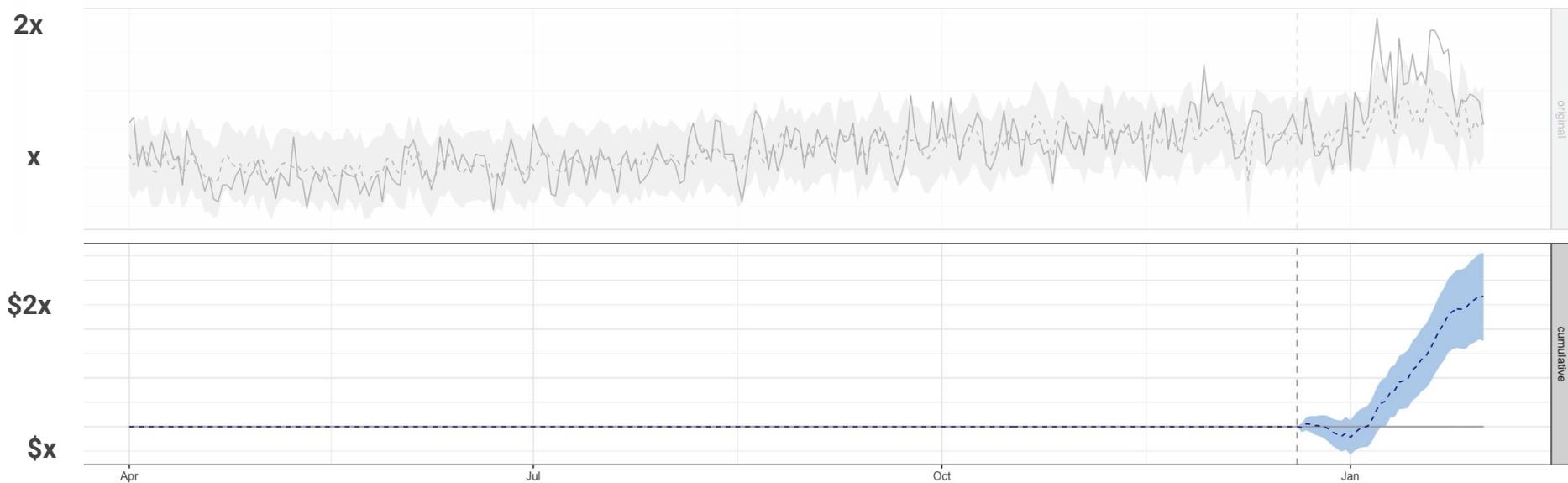


During the post-intervention period, the number of bookings averaged at X /day. By contrast, in the absence of an intervention, we would have expected an average number of booking at Y /day. **This results in $x+25$ incremental bookings/day** with a 95% interval of $[xx, yy]$

The probability of obtaining this effect by chance is very small (Bayesian one-sided tail-area probability $p = 0.001$). This means the causal effect can be considered statistically significant.

Causal Impact Analysis

Proprietary + Confidential



Summing up the individual data points during the post-intervention period, we have observed total of **x bookings**. Had the intervention not taken place, we would have expected **y bookings**.

| When to run experiments

When should or shouldn't you?



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