



Attribution: Measuring the real impact of your campaigns in 2026



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WHITE PAPER

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INTRODUCTION

Since the introduction of App Tracking Transparency (ATT), the mobile ecosystem has entered a new era: that of **advertising performance without identifiable user data**.

In 2024, Apple continues to push the envelope with **SKAdNetwork 4.0**, which promises a more flexible but still opaque and fragmented attribution. At the same time, **Meta has reactivated its Advanced Mobile Measurement (AMM) program**, under strict conditions, giving partial access to more granular data via certain certified MMPs.

Faced with these transformations, CMOs, growth marketers and Acquisition experts have to deal with **less precise** signals, **less deterministic** models, but an **ever-increasing need for ROI management**.

This white paper aims to lay the foundations for understanding and mastering the new measurement levers in a **post-IDFA world**:

- How to combine available **attribution models** (SKAN, AMM, MMP, internal data)?
- How to go beyond attribution with robust **incrementality** analyses?
- How can we structure a relevant **data-driven strategy** despite the fragmentation of sources?

Our conviction: **measurement remains possible, relevant and even differentiating for those who know how to use it intelligently.**

PART 1:

**A paradigm shift
for UA campaigns**



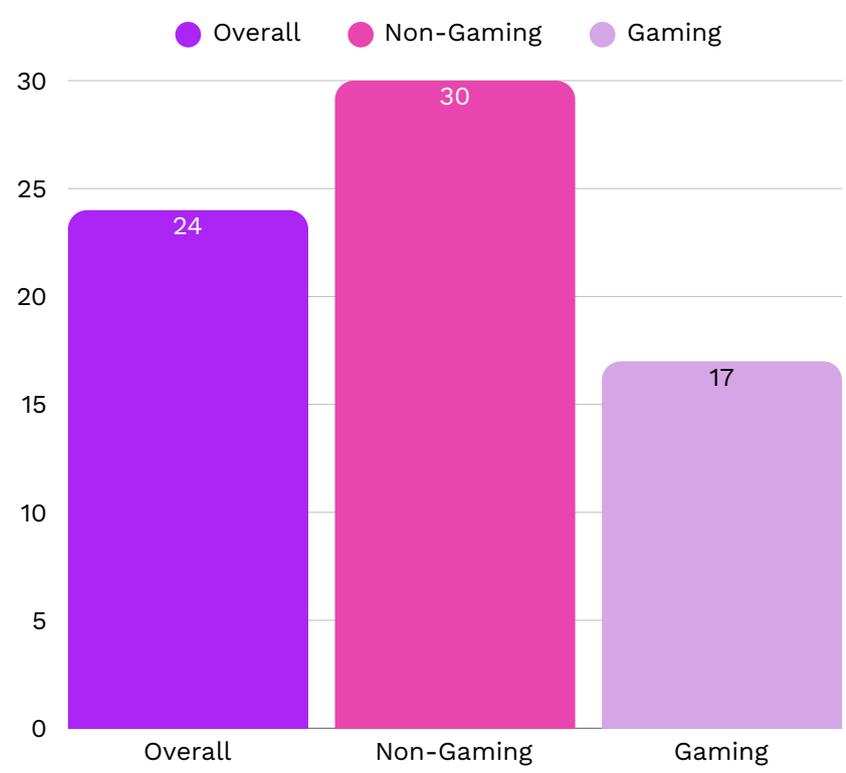
PART 1

A paradigm shift for UA campaigns

With the introduction of ATT in 2021 (iOS 14.5), Apple has made it mandatory for any mobile app to **request explicit user consent** to access the IDFA, the advertising identifier used in classic attribution.

As a result, opt-in rates stalled at **around 24% on average** in 2024, making deterministic attribution unusable on more than three-quarters of iOS traffic (Source: [Appsflyer](#)). How has this change affected user acquisition campaigns?

Share of apps with an increase in IDFA between day 7 and day 0 (March 2022)



Source: [Appsflyer](#)

THE END OF DETERMINISTIC ATTRIBUTION ON IOS

What is deterministic attribution?

The deterministic model in mobile attribution is based on explicit, direct links between a user and an advertising campaign. It relies on identifiable data, such as [IDFA](#) (Identifier for Advertisers), cookies and unique identifiers.

Calculation Method

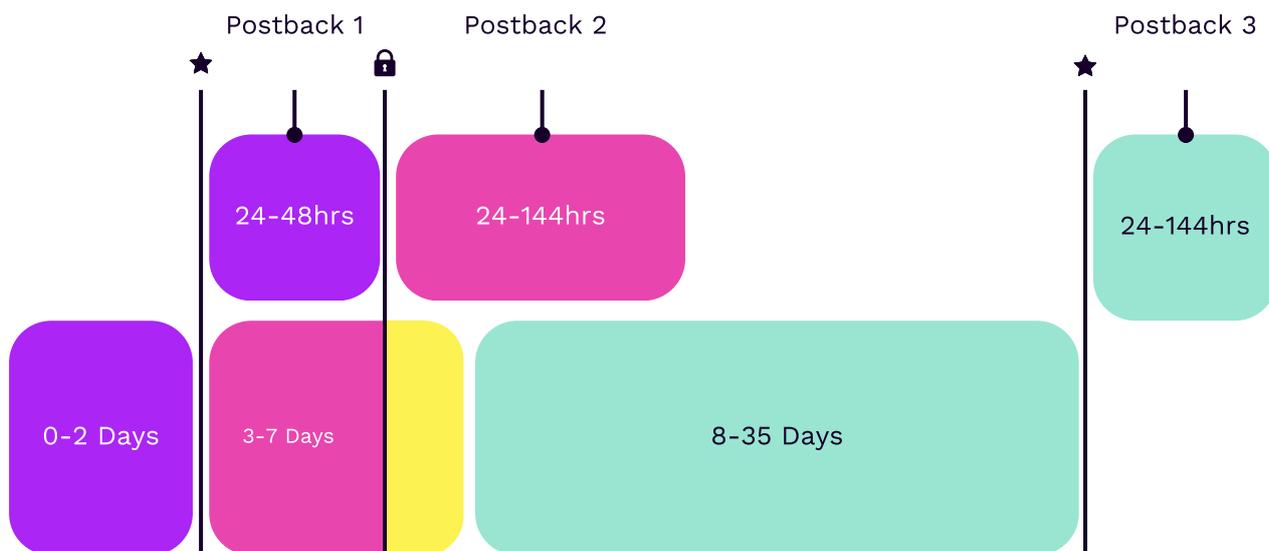
- Direct tracking: Each click or impression is associated with a unique identifier.
- Post-click attribution: An action (installation, purchase) is linked to an ad using a common identifier.
- [Attribution window](#): A conversion is attributed to the campaign if it occurs within a defined timeframe (e.g. 7 days after a click).

This model is considered accurate because it is based on concrete, traceable data.

To address these challenges, Apple introduced **SKAdNetwork**, a privacy-centric attribution framework, while Meta developed solutions like [Aggregated Event Measurement](#) (AEM) and, more recently, reactivated its [AMM program](#).



SKAN 4 Process:



SKAN 4 sends up to 3 postbacks, delayed between 24–144h, based on activity and anonymity within a 35-day window.

ATT clearly marked a turning point, fundamentally disrupting conversion tracking methods and introducing new constraints for marketers.

Criterion	Pre-ATT (2020)	Post-ATT (2025)
IDFA Access	Yes, by default	No, except for explicit opt-in
Attribution	Deterministic (MMP)	Aggregated (SKAN, AMM)
Granularity	Per user, per creative	Per campaign, anonymized
Data Access	Real Time	Up to 48-72h (SKAN 4)
Post-install Views	Yes, full view	Limited to a few signals

NEW CHALLENGES FOR MARKETERS

Every shift brings new challenges for marketers, who must rethink both their acquisition strategies and attribution methods. Let's explore the three main challenges here.

CHALLENGE #1

Loss of granularity

SKAdNetwork, in its fourth version, introduced several improvements (conversion windows, crowd anonymity, hierarchical source ID), but the data remains:

- **Anonymous:** no direct link to individual users
- **Delayed:** postbacks may be delivered up to 48 hours after install
- **limited:** only one main post-install event can be tracked, encoded via a single “conversion value”.

Since ATT, it has become impossible to know if a campaign performs differently by age or audience segment — something MMPs could previously analyze using the IDFA.

CHALLENGE #2

Growing fragmentation

ATT, combined with the constant evolution of the ecosystem, has led to increasingly fragmented data. With multiple sources—some relying on their own attribution models—data analysis has become significantly more complex.



Source	Data Available	Limitations
SKAN	Anonymous iOS postbacks	Low granularity, delays
 (AMM)	Opt-in data via MMP	Accès restreint
	Aggregated post-installs	Low Transparency
TikTok Ads	SKAN Postbacks + Split tests	Partial allocation without CRM
CRM Data	Transactions, LTV	Off the advertising route

CHALLENGE #3

Analytic complexity

This fragmentation forces marketing teams to navigate across multiple tools and methodologies to make the most of the available data. Today, teams must:

- Reconstruct **acquisition funnels** from disconnected data fragments
- Make decisions based on incomplete or **probabilistic** signals
- Manage **several attribution models** in parallel (e.g., SKAN, AMM, MMM...)



WHY MEASUREMENT REMAINS CRITICAL

Despite this increasingly opaque environment, performance measurement is more critical than ever—for three key reasons.

REASON #1

Budget Management

Accessing this data only makes sense if it leads to clear insights about channel effectiveness. Performance measurement is therefore critical to **avoid blind budget allocation and uncover uplift opportunities.**

If I'm spending €50,000 on Meta but only seeing 8,000 installs reported in SKAN, should I really keep going?



REASON #2

Daily Optimization

Without access to user-level data, it becomes essential to:

- Test Creatives
- Cut underperforming geos
- React quickly to market signals.

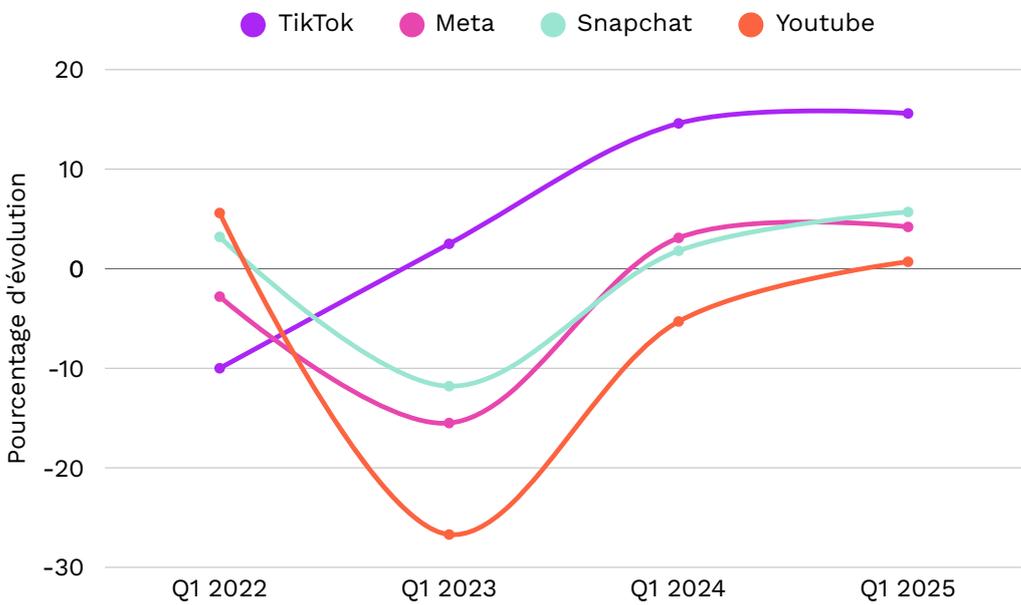
While anonymized data no longer allows for large-scale automated optimization, it can still fuel **valuable feedback loops** — if leveraged properly.

REASON #3

Show ROI

Finance teams expect hard numbers. And with **CPMs on iOS rising by over 22% between 2022 and 2024**, every euro spent must be justified through a credible measurement method — whether it's SKAN, incrementality testing, or proprietary dashboards.

Percentage change in Social & Youtube CPMs in the USA (Q1 2022 - Q1 2025)



Source : [Emarketer](#)

👉 IN SHORT

Measuring performance has never been so complex... but it's also the key to regaining a strategic advantage over competitors who have given up on taking it seriously.

PART 2:

Post-ATT Attribution: Current Situation & Alternatives



PART 2

Post-ATT Attribution: Current Situation & Alternatives

While ATT marks the end of deterministic attribution, alternative solutions still exist, allowing marketing teams to establish reliable links between conversions and their sources. Let's take a closer look at what those are.

Context Reminder

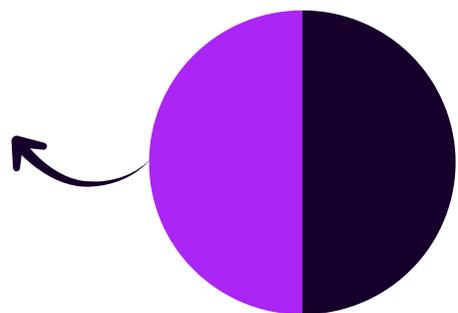
According to recent data from AppsFlyer, opt-in rates have stabilized **around 50%** — but this only applies to users who were actually shown the ATT prompt.

When accounting for the need for dual consent, the effective availability of the IDFA drops to around 25–30%.

This means that over half of all installs are no longer eligible for device-level deterministic attribution, highlighting the need for alternative, actionable measurement strategies that support smarter investment decisions.

50%

of users now consent to tracking, a significant 10% increase since the initial launch of ATT.



AppsFlyer data shows that iOS ad spend initially dropped following the rollout of ATT, but later rebounded — continuing its upward trend — partly driven by the adoption of validated probabilistic attribution models to help close measurement gaps.



SKADNETWORK: WHAT IT IS (AND WHAT IT ISN'T)

There's no longer any need to introduce SKAN. However, in this white paper, we take a look at the different versions, their advantages and disadvantages.

How it works: SKAN 3 vs. SKAN 4

Since iOS 14.5, Apple has imposed SKAdNetwork as the default framework for ad attribution on iOS without IDFA. Its version 4, widely deployed from 2023, marks a strategic turning point for advertisers. Apple also announced an enhanced AAK, now offering more flexibility and granularity for better performance visualization.





Want to know more about SKAN?

Discover our complementary content on our website!



SKAN 3 vs. SKAN 4 vs. AAK :

Version	Features	Main Limitations
SKAN 3	<ul style="list-style-type: none"> • 1 postback only • No detailed source • Conversion value (6 bits) 	<ul style="list-style-type: none"> • Low granularity • No web-to-app support • Unique attribution, often late
SKAN 4.0	<ul style="list-style-type: none"> • Up to 3 postbacks • Extended source ID (4 bits → 2 digits) • Crowd anonymity concept • Extended conversion value (coarse + fine) 	<ul style="list-style-type: none"> • Variable reception time • Less accurate at low volume • Increased setup complexity
AdAttributionKit	<ul style="list-style-type: none"> • Faster, more detailed attribution • Web-to-app and cross-platform compatibility • Better data granularity (redownloads, multiple touchpoints) 	<ul style="list-style-type: none"> • Available only from iOS 17 • In adoption phase (partial support from MMP/DSP) • Not backwards compatible



Postbacks are sent in a random and delayed manner (between 24 and 72 hours), preventing real-time optimization.



SKAN 4 ADVANTAGES

- **Privacy by Design:** no user data, no consent required
- **Increased trust** in the Apple ecosystem (vs. fingerprinting)
- **Interoperability with MMPs** via SKAN schemas (Appsflyer, Adjust, Singular...)



SKAN 4 LIMITATIONS

- **Delayed postbacks:** rapid optimization impossible
- **Limited post-install events:** loss of tracking on actual LTV
- **Crowd Anonymity:** data not transmitted if traffic too low
- **No crea ID, no country:** loss of tactical vision

SKAN only awards around 70% of advertising commitments, because it doesn't see everything. There's a lot more to measure than SKAN reports.



Gil Bouhnick
Product Director

For example, if your campaign has a low volume in a region or crea, Apple will not transmit any data, considering the level of anonymity to be insufficient.

PROBABILISTIC MODELS: A COMPLEMENTARY OPTION

While SKAN has proved a popular alternative with professionals, it remains incomplete. The use of probabilistic models can fill the gaps left by SKAN. What are these probabilistic models? Let's find out.

Definition

Probabilistic models rely on statistical estimations of conversion origins by combining weak signals such as time, OS, location, and general user behavior.

Today, they are mainly divided into two categories:

- **Probabilistic fingerprinting (declining):** Primarily used on Android or outside strict ecosystems (like the web), this method is non-compliant with ATT on iOS and is now strongly discouraged. Apple may reject apps or MMPs that rely on it, and its accuracy is further weakened by factors like IPv6 adoption and device/OS restrictions.
- **Media Mix Modeling (MMM):** MMM is an econometric approach that estimates the impact of each marketing channel by analyzing overall trends in media spend and conversions over time.



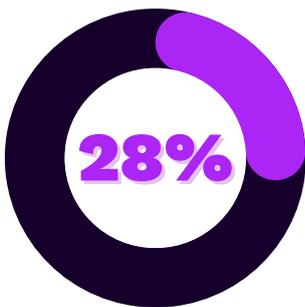
Avantages & Inconvénients du MMM

Advantages	Disadvantages
Doesn't rely on IDFA	Requires several months of data
Adaptable to multi-source environments	Set-up and calibration difficulties
Provides strategic insights (channel, creative, geo...)	Complex interpretation without expertise

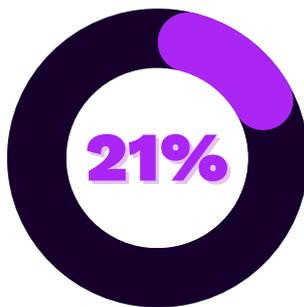
 Google now provides an open-source MMM tool via [LightweightMMM](#), and Meta offers its own in-house version.

Example of Uplift via MMM

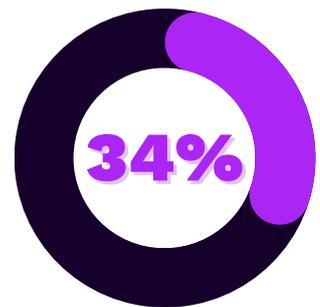
A sports app observes via MMM that each source contributes to incremental sales in the amount of:



Meta



Google



Organique

Thanks to this analysis, the company reduced its inefficient retargeting budget by 40%.

MULTI-SOURCE DATA: RECONCILE TO MANAGE BETTER

In a fragmented ecosystem, no single source can provide a fully reliable view of performance. SKAN remains incomplete, platform data is partial, and CRM insights are often disconnected from media efforts.

To steer campaigns effectively, it's essential to merge these data streams and build a unified view from imperfect but complementary signals.

Why reconcile sources?

Post-ATT attribution is fragmented: no single source offers a complete picture of performance. Reconciliation helps fill in the blind spots of each data stream to build a more accurate, cross-channel view for better decision-making.

Tangible benefits :

1. **Filling SKAN gaps:** SKAN, for example, doesn't provide revenue or LTV insights. That's where CRM or in-app data steps in to enrich the picture.
2. **Identifying discrepancies between spend and value:** By comparing media costs (via a MMP) with internal revenue, it's often possible to spot mismatches or over-attributed campaigns — and correct them accordingly.
3. **Managing cohorts, not just conversions:** A campaign with a great CPI might still attract low-retention users. Your BI tools will surface this, whereas SKAN won't.
4. **Understanding each channel's true contribution:** By cross-referencing all sources, you reduce risks of double attribution and halo effects.

SKAN alone is no longer enough. Smarter campaign measurement now requires combining:

- anonymized postbacks (SKAN),
- CRM and in-app data (user-level),
- aggregated platform insights (Google, Meta AEM, etc.),
- and unified dashboards from MMPs.

Example of a unified stack

Source	Type of Data	Main Purpose
SKAN 4	Anonymous, install/conversion	Basic iOS tracking
 (AMM)	Granular opt-in via MMP	Creatives / cohort / optimization
 (UAC)	Post-install per campaign	Android / cross-device
TikTok Ads	SKAN + split test (MMP)	Creative testing, iOS/Android control
	Revenue, churn, segmentation	LTV, cohort

Example of a reconciled dashboard (Addict Mobile setup)

Source	Installs	Revenue D7	Estimated ROAS
SKAN (Meta)	8 500	10 200	1.20
SKAN (Google)	6 300	8 900	1.41
AMM (opt-in)	2 400	3 800	1.58
CRM (web/app)	-	6 700	-

Thanks to this unified view, teams can:

- Identify gaps between media spend and actual revenue
- Track LTV evolution by channel or source
- Make informed adjustments based on multi-level signals

IN SHORT

Post-ATT attribution now relies on balancing multiple sources — none of which is sufficient on its own. SKAdNetwork is essential but limited, MMM offers a strategic view, and AMM (Meta) brings back some granularity for opt-in users. Combining these sources — MMP, CRM, SKAN, web — is now key to accurate decision-making.

👉 There is no longer a single source of truth: only by combining signals can you make informed choices.

But one question remains: **how much of your results were truly caused by the campaign?**

PART 3:

Incrementality: Going Beyond Attribution



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Incrementality: Going Beyond Attribution

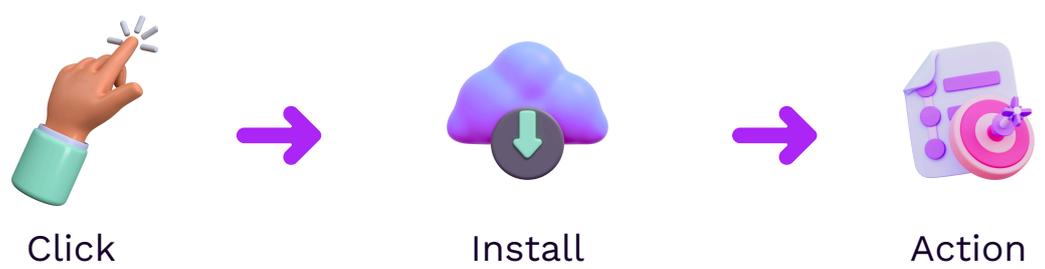
In a context of limited access to user data, it becomes clear that attribution alone is no longer enough. It is crucial to combine other analysis methods to fill in the grey areas.

WHY ATTRIBUTION IS NO LONGER ENOUGH

While attribution provides a view of the user journey, it doesn't give a complete picture of the campaign's overall effectiveness.

Attribution ≠ Causality

Advertising attribution (even in its advanced forms such as SKAN or AMM) simply describes an observed route:



But it does not allow us to conclude what the real impact of the campaign was, i.e. **what would have happened without this exposure.**

Would a user who installs your app after seeing a Meta ad have installed it anyway via organic search?

The answer is beyond the reach of traditional attribution, but it's crucial for :

- Justify investments in expensive levers (e.g. [retargeting](#), [CTV](#))
- Avoid interpretation bias (halo effect, duplication)
- Identify channels that really generate growth

AppsFlyer's incrementality enables teams to scientifically, yet effortlessly, validate what really drives growth, whether that's testing new channels, expanding into new markets, or optimizing their current media mix for maximum incremental impact.



Niv Reshef Klein
Head of Product, Incrementality

Les Risques de l'Attribution seule

Risk	Description	Consequence
Double counting	Several channels claim the same conversion	Overestimated ROI
Misleading last click	A channel "picks up" non-causal conversions	Bad budget distribution
Underestimated organic effect	Natural traffic is absorbed by paid	Loss of margin

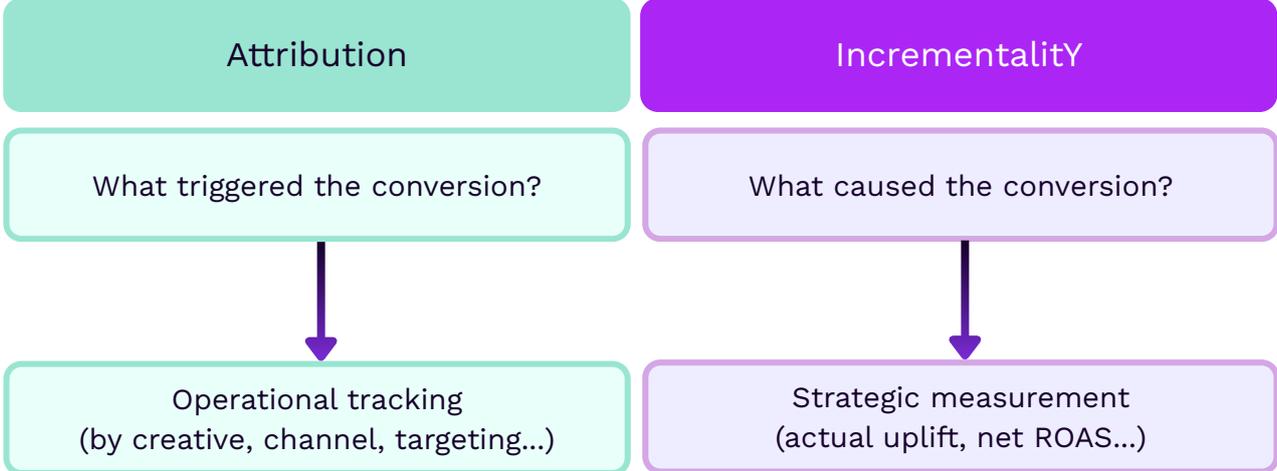
A [Meta Conversion Lift](#) study conducted in 2024 on over 1,000 campaigns revealed that **up to 30% of conversions attributed to retargeting** would have taken place even without ad exposure.

However...

Incrementality shouldn't be seen as a replacement for last-touch attribution. Last-touch delivers broad coverage and real-time insights that are required for programmatic ad optimization, while incrementality completes the measurement picture with causal proof and more accurate omni-channel measurement. Using both together provides the most accurate picture for decision-making.



Niv Reshef Klein
Head of Product, Incrementality



INCREMENTAL ANALYSIS METHOD

Incremental analysis seeks to answer this essential question:



How many conversions does my campaign actually generate?

Definition



Incrementality is a metric that measures the incremental impact of a marketing campaign. It determines the difference between the behavior of users exposed to an advertising campaign and those who were not. The aim is to isolate the direct effect of the campaign and exclude conversions that would have occurred naturally.

This concept is essential for understanding whether an advertising campaign has generated new conversions or simply captured users who would have installed the application anyway.

The method always involves comparing an exposed group with an unexposed one. Here are the main techniques used today.



Calculation Method

The classic approach to calculating this value is based on a **comparison between a test group (exposed to the campaign) and a control group (unexposed)**.

The basic formula is as follows:

$$\text{Incrementality} = \frac{\text{Conversions}_{\text{Test}} - \text{Conversions}_{\text{Control}}}{\text{Conversions}_{\text{Control}}}$$

Other methods include more advanced analyses such as Bayesian models or machine learning algorithms to predict the impact of a campaign.

Hold-out Test

A **test group is exposed to the campaign**, while a **control group (hold-out)** is **voluntarily excluded** from all advertising.

Group	Exposure	Measured Result
Test	Yes (ads are visible)	10 000 conversions
Control	No (no exposure)	7 200 conversions
Uplift	-	+38%

Advantages and drawbacks of incrementality

Advantages	Drawbacks
Rigorous, straightforward method	Requires volume (statistics)
Very useful for testing a new channel or a new country	Requires technical coordination with platforms (Meta, Google, DSP...)

Geographical tests *(GeoLift, Conversion Lift)*

Principle

We select comparable regions or markets, some of which are exposed to the countryside, others not.



Example: a fitness subscription app launches a campaign in 5 countries. 5 others serve as controls. After 3 weeks, +27% subscriptions in exposed areas.

Recommended Tool

- GeoLift (open-source by Meta via [lift.calibration](https://lift.calibration.com))
- Meta Conversion Lift (integrated studies available via AMM or CAPI)
- Google Ghost Ads / Conversion Lift (on request)

Advantages	Disadvantages
Works without IDFA	Risk of geographical contamination
Suitable for branding & CTV	Not always possible in small markets

Segmented A/B Tests *(Audience-based)*

Principle

The target audience is divided into two random groups:

- Exposed group: receives the campaign
- Control group: excluded or exposed to another crea



You can also test the effect of a new creative, format or message.

Use Case

- Testing a new retargeting strategy
- Comparison between video and static
- Creative optimization on Meta or TikTok



This type of testing is often implemented via the platforms themselves: A/B Experiments Meta, TikTok Split Testing, etc.



RESULTS INTERPRETATION

What is a significant uplift?

An uplift is the **percentage of additional conversions observed in the exposed group** compared with the control group.

Example

Control = 5 000 installs
Test = 6 000 installs

→ **Uplift = +20%**
(1000 installations caused by the campaign)

Warning: to be statistically significant, the uplift must:

- Be above the confidence interval
- Have a p-value < 0.05
- Be based on sufficient volumes (> 1,000 conversions per group is a good benchmark)

Turning results into decisions

The main advantage of incrementality is operational: it allows **budgets to be reallocated** with full knowledge of the facts.

Significant Uplift >20%	Low but positive Uplift	No or negative Uplift	Uplift above estimated ROAS
Increase budget, broaden target	Optimize creative or targeting	Reduce or stop the affected channel	Reassessing classic attribution

In an era of signal loss and fragmented data, marketers can no longer afford to rely on siloed insights. What they need is attribution they can trust — complete, validated, and actionable — unified into a single source of truth that delivers clarity and confidence for smarter decisions.



Gil Bouhnick
Product Director

Use Case #1

Retargeting vs Organic



An e-commerce app observes that **40% of sales** are attributed to **retargeting**.

An A/B test shows an **actual uplift of only 9%**.

Result: retargeting budget reduced by 50%, redistributed to prospecting.

Use Case #2

Branding TV + Meta

A consumer app runs a TV campaign and relays it on Meta.

Geographical test results: **+35% installations in regions exposed to TV**, but no significant uplift in paid Meta.

Decision: passage of Meta in branding support only (video awareness), no conversion campaign.

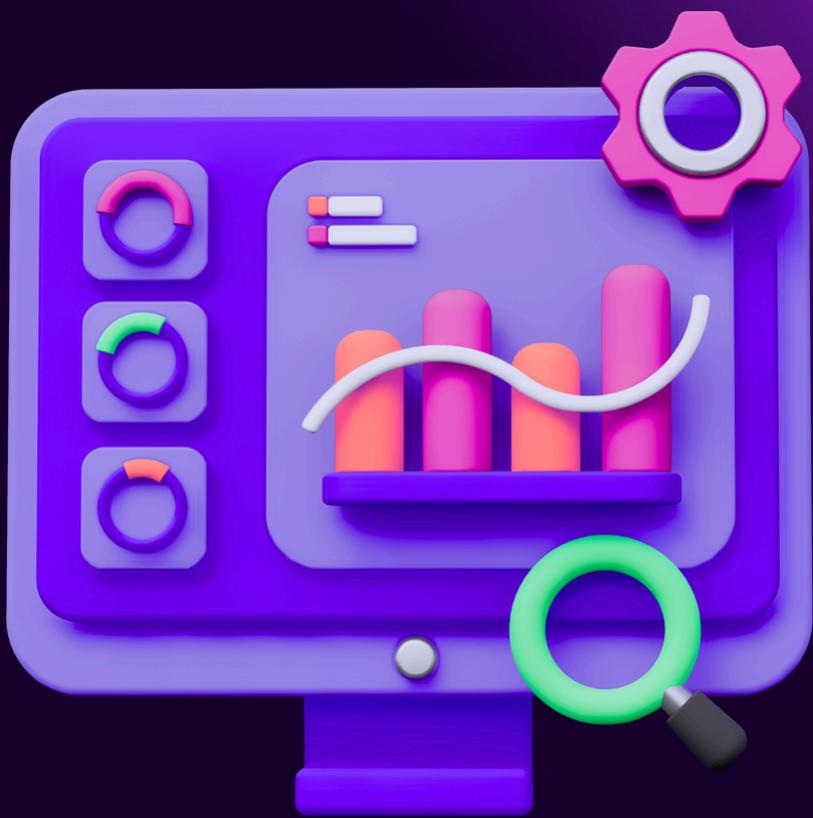


Conclusion

Incremental analysis is the most reliable method of measuring the real impact of a lever.

- It adds a causal dimension to attribution.
- It optimizes budgets where traditional attribution reaches its limits.
- It is now accessible via tools such as Meta Lift, GeoLift or MMP.

Incrementality is no longer an indicator, it's a pillar of ROI marketing in a post-ATT environment.



Structuring your data-driven strategy

 <p>Attribution Models</p>	<ul style="list-style-type: none">• Low → SKAN + basic MMP• Medium → SKAN 4 + Dashboards + AMM (if use of Meta)• Advanced → Multi-sources stack + MMP + Lift Tests <p> <i>A model that's easy to interpret is always better than one that's complex and difficult to use.</i></p>
 <p>Feedbacks creative / media / data</p>	<ul style="list-style-type: none">• Identify discrepancies (e.g. crea that performed well on SKAN, but not in CRM)• Cross-reference weak signals• Prioritize the right variants• Reduce bias <p> <i>Reconstituting your cohorts is a key lever for maximum optimization</i></p>
 <p>Internal Analytical Assets</p>	<ul style="list-style-type: none">• Monitoring of KPIs : LTV, churn, ARPU• Centralization of CRM, web and in-app data• Proprietary dashboards (Looker, Tableau, Metabase) <p> <i>Once again, cohort analysis plays a central role at this stage of the process.</i></p>
 <p>Incrementality Testing</p>	<ul style="list-style-type: none">• Clear groups (audience, geo, opt-in)• Define net metrics (uplift, ROAS, CAC...)• Budget reallocation <p> <i>Incremental analysis helps you make the right marketing decisions</i></p>



Our teams can help you define your attribution strategy

[Get in touch!](#)

