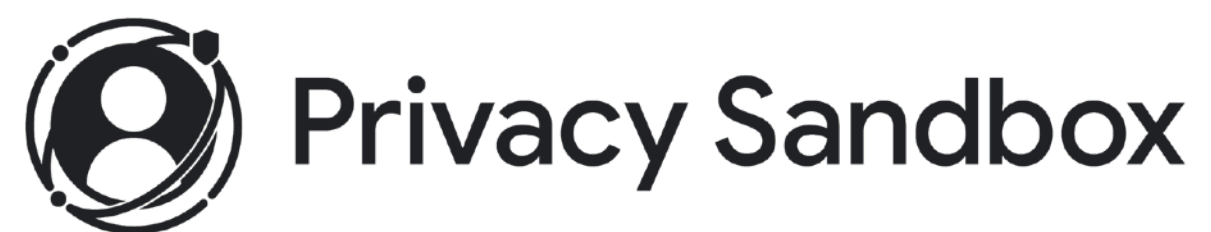


Privacy Game Changers

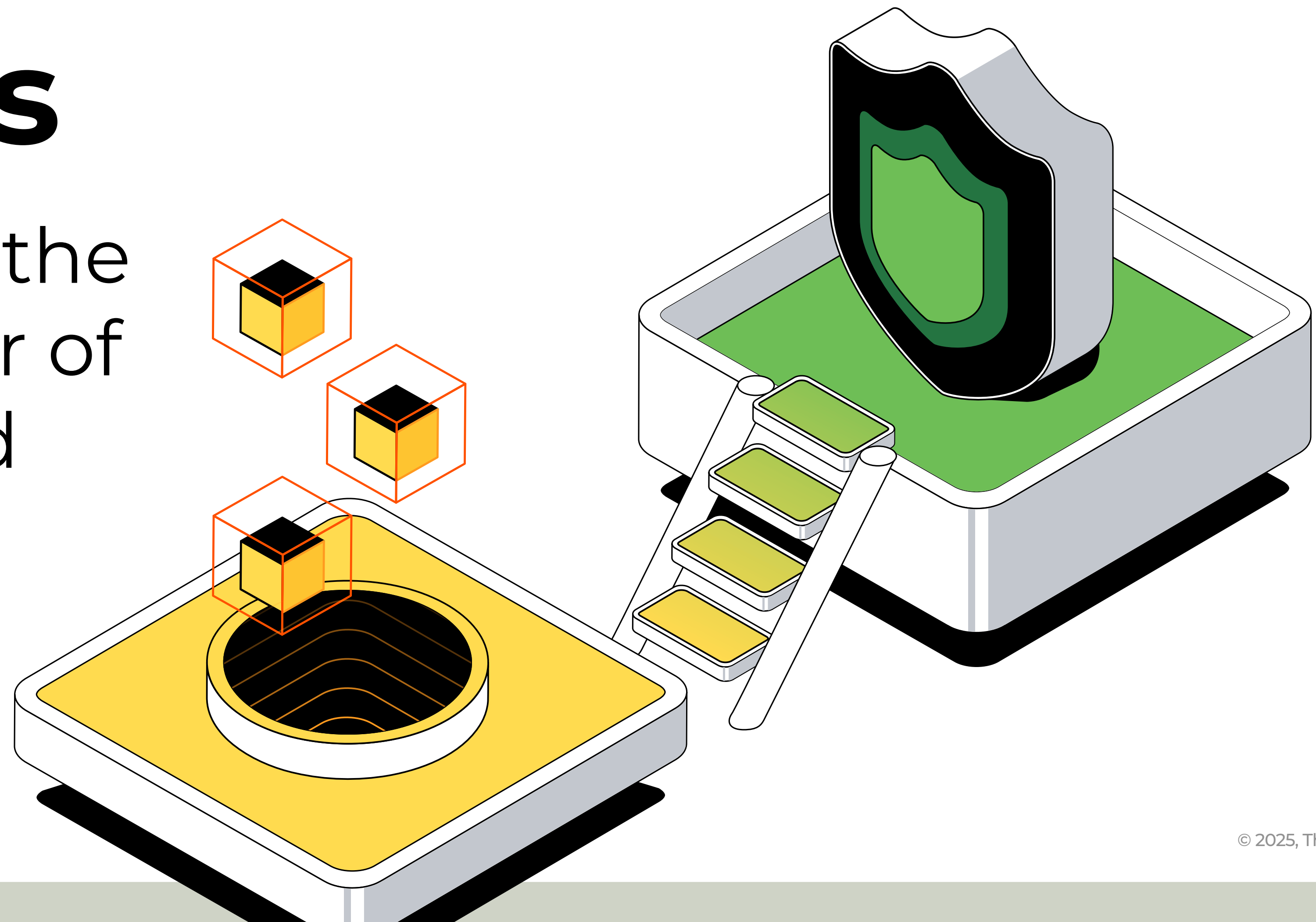
Understanding the
Before and After of
Privacy-Forward
Solutions

with support from



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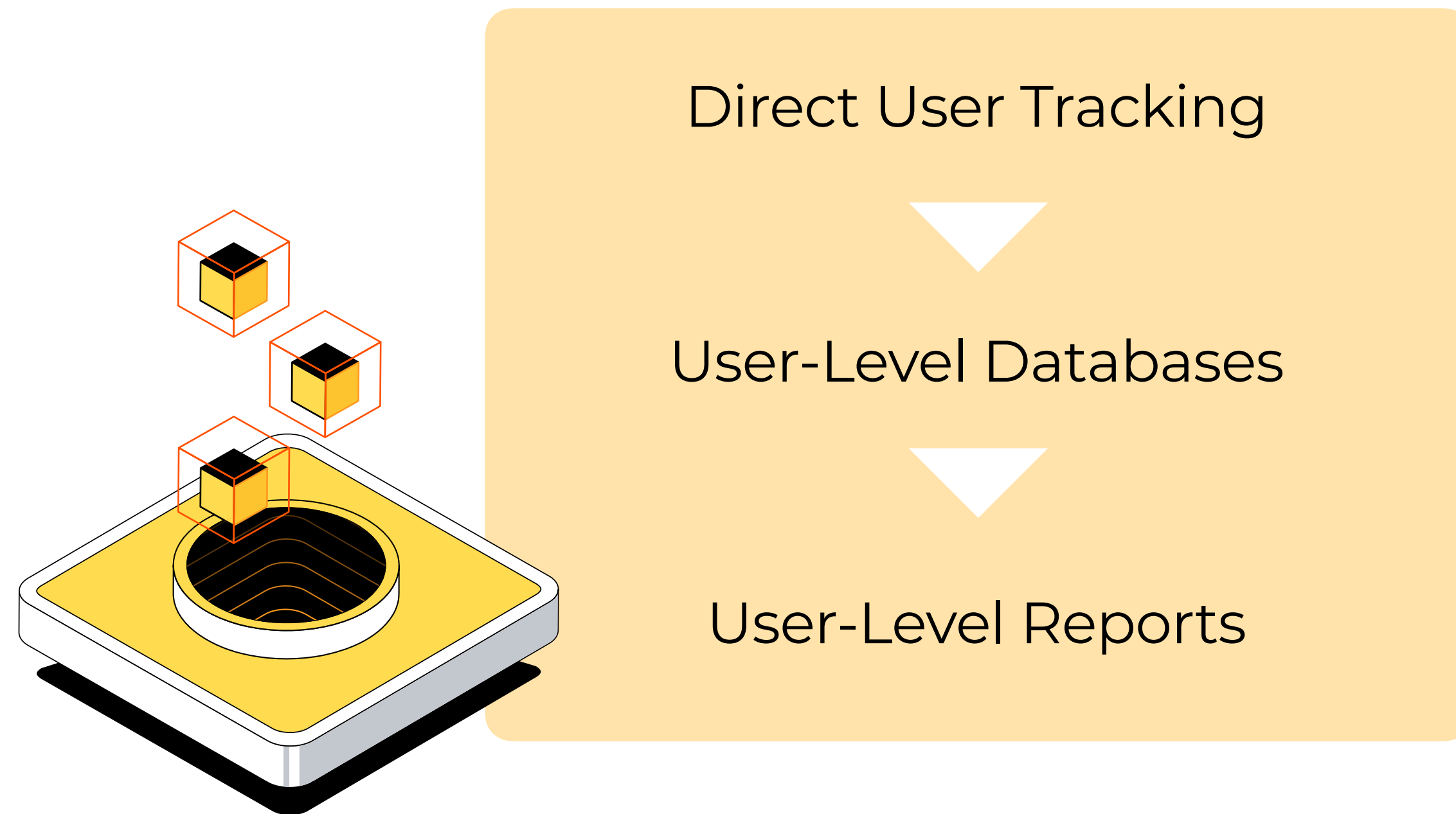
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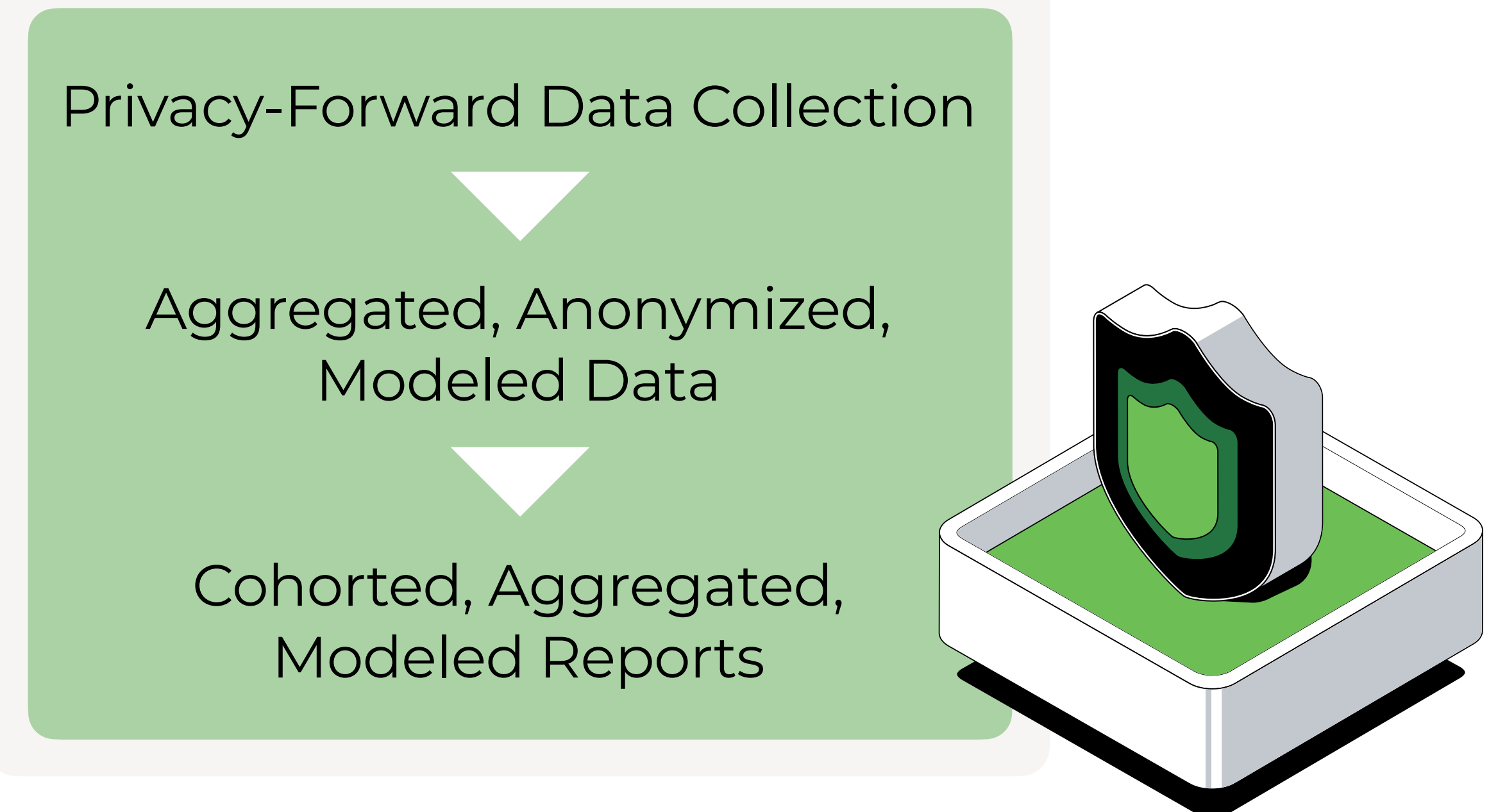
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Advertising with Less Personal Data and More Data Protections Has Become Imperative

Historical Approach



Privacy-Forward Approach



Publishers and Marketers Can Address Advertising Use Cases with a Range of New Solutions, Many of which Use PETs

Publisher Use Cases

Audience Packaging

Yield Optimization

Attribution & Reporting

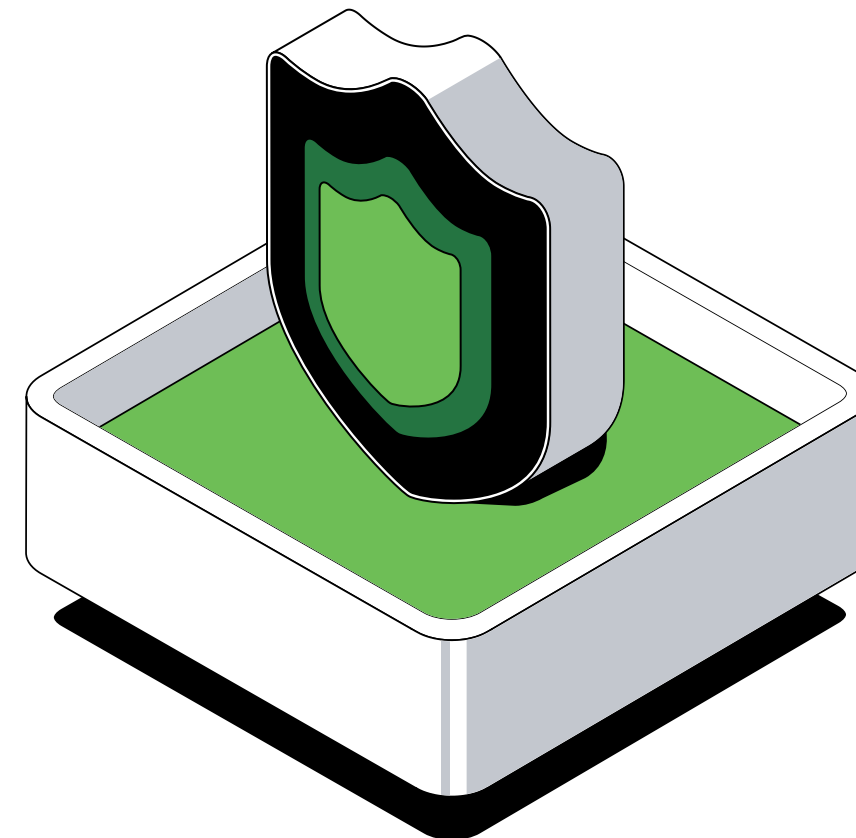
Marketer Use Cases

Planning

Activation

Measurement & Attribution

Privacy-Enhancing Technologies (PETs) and other enablers



Selected Solutions

1st-Party Data Activation

Alternative IDs

Cohort-Based Reporting

Aggregated Measurement

Data Clean Rooms

AI / Machine Learning-based Modeling

Curated Audiences

Contextual Advertising

These Solutions and Technologies Support Delivering Useful Ads, More Responsibly

1st-Party Data Activation

Targeted advertising enabled via directly-collected, consented (as needed) user information

Alternative IDs

Hashed or pseudonymous identifiers allowing targeted ads without exposing personal data

Cohort-Based Reporting

Grouping users into anonymized clusters for analysis and targeting

Aggregated Measurement

Aggregating and modeling campaign performance using anonymized data sets

Data Clean Rooms

Data collaboration solutions that allow matching without sharing user-level information

AI-Modeled Audiences

Audience segments derived and packaged from directly-collected seed user data

Curated Audiences

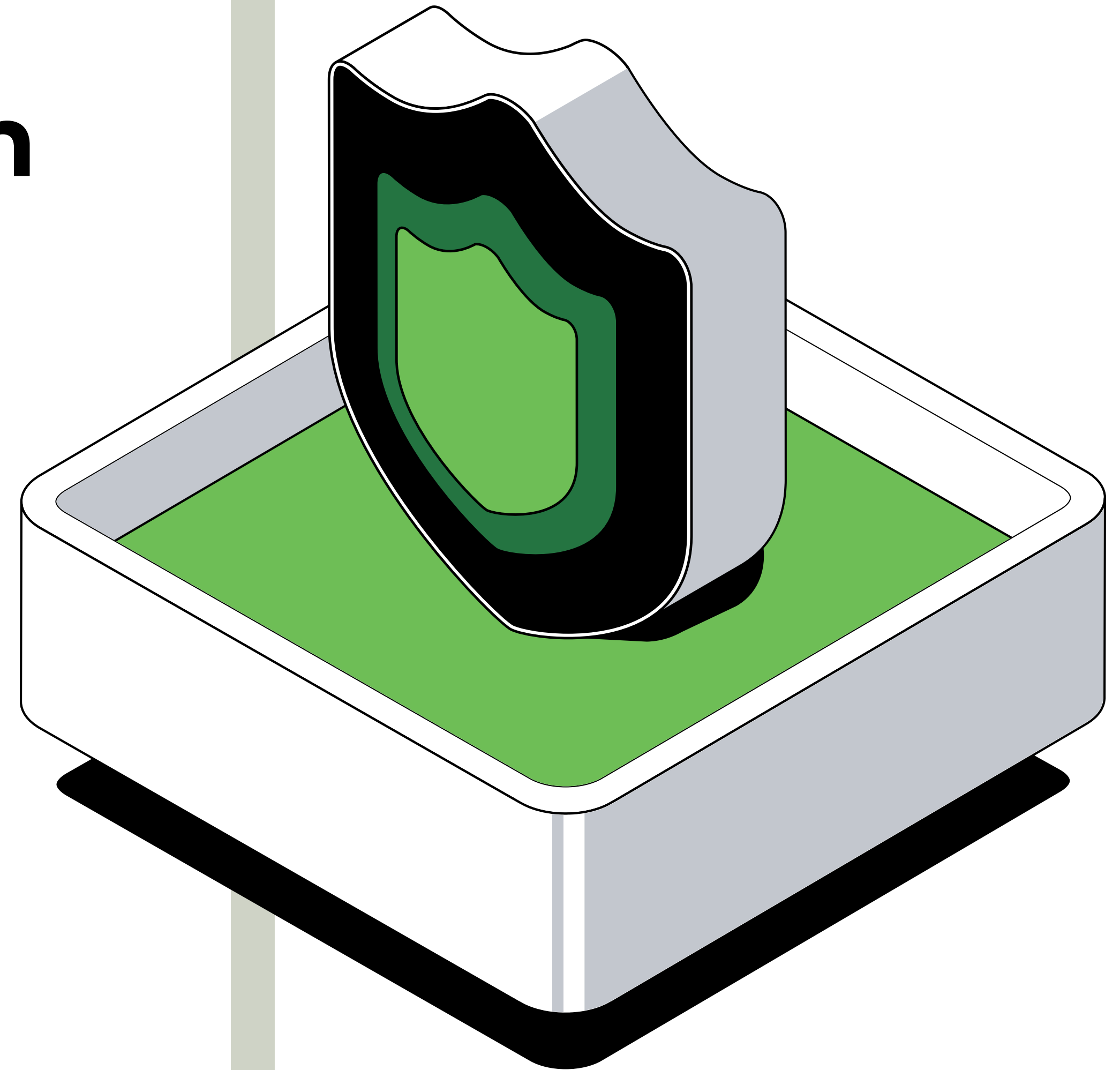
Delivering ads based on content of webpage or app rather than personal identifiers

Contextual Advertising

Packaging and optimizing ad targeting and delivery based on content and other non-user-level signals

While availability varies across media channels, browsers, and operating systems, these solutions can cover a majority of the ad-supported internet.

Understanding how privacy-forward approaches to these solutions work, and which best suit your advertising business, is critical to sustained success.



Solving Advertising Use Cases with Less Personal Data Requires a Different Approach

Historical Approach

Tracking User Behavior Using 3rd-Party Cookies and Device IDs

May Lack User Transparency

Storing User-Level Personal Information in Server-Side Databases

Limited User Control

Producing User-Level Reports with Outcomes Data Directly Linked to Identity

Relies on Degrading Identity Signals

Privacy-Forward Approach

Obtaining User Consent and/or Storing Interest Data on the User's Browser or Device

Provides Greater User Anonymity

Processing Data with Privacy-Enhancing Technologies (PETs) that Hide Individual Identities

Improves Data Security

Using Aggregation and Modeling to Measure Outcomes Without Revealing Individual Users

Does Not Rely on Personal Data

Now, Some Examples of How Privacy-Forward Approaches Can Solve Common Advertising Use Cases...

Marketer Use Cases

Remarketing

Re-engage known customers/prospects through ads

Attribution & Incrementality

Assign credit to correct sources and gauge incremental value

Audience Segmentation

Ensure ads reach intended target personas

Historically, These Use Cases Have Relied on User-Level Data

Marketer Use Cases

Remarketing

Re-engage known customers/prospects through ads

Attribution & Incrementality

Assign credit to correct sources and gauge incremental value

Audience Segmentation

Ensure ads reach intended target personas

Historical Approach

Track consumer interactions across websites and apps using 3rd-party cookies and device IDs

Use 3rd-party cookies and device IDs to attribute conversions at a user-level

Record consumer behaviors across sites and apps through individual identifiers to build audience segments

...But Similar Results Can Be Achieved with More Privacy-Forward Approaches

Marketer Use Cases

Historical Approach

Privacy-Forward Approach

Remarketing

Re-engage known customers/prospects through ads

Track consumer interactions across websites and apps using 3rd-party cookies and device IDs

Store user interests and execute ad targeting and delivery decisions privately (in-browser, on-device, on a trusted server)

Attribution & Incrementality

Assign credit to correct sources and gauge incremental value

Use 3rd-party cookies and device IDs to attribute conversions at a user-level

Store user interaction data privately and share via aggregated and delayed reports to prevent identifying users

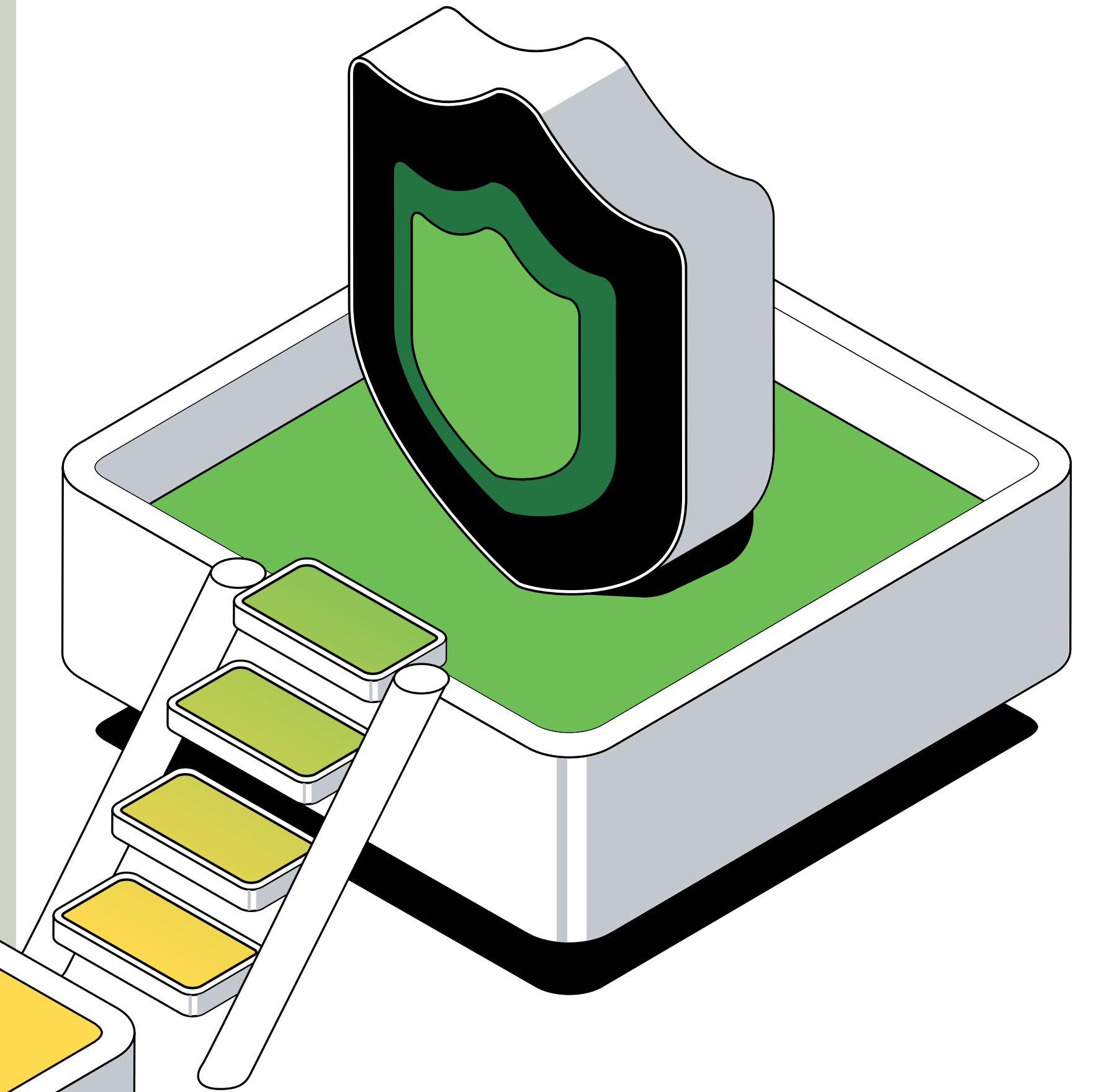
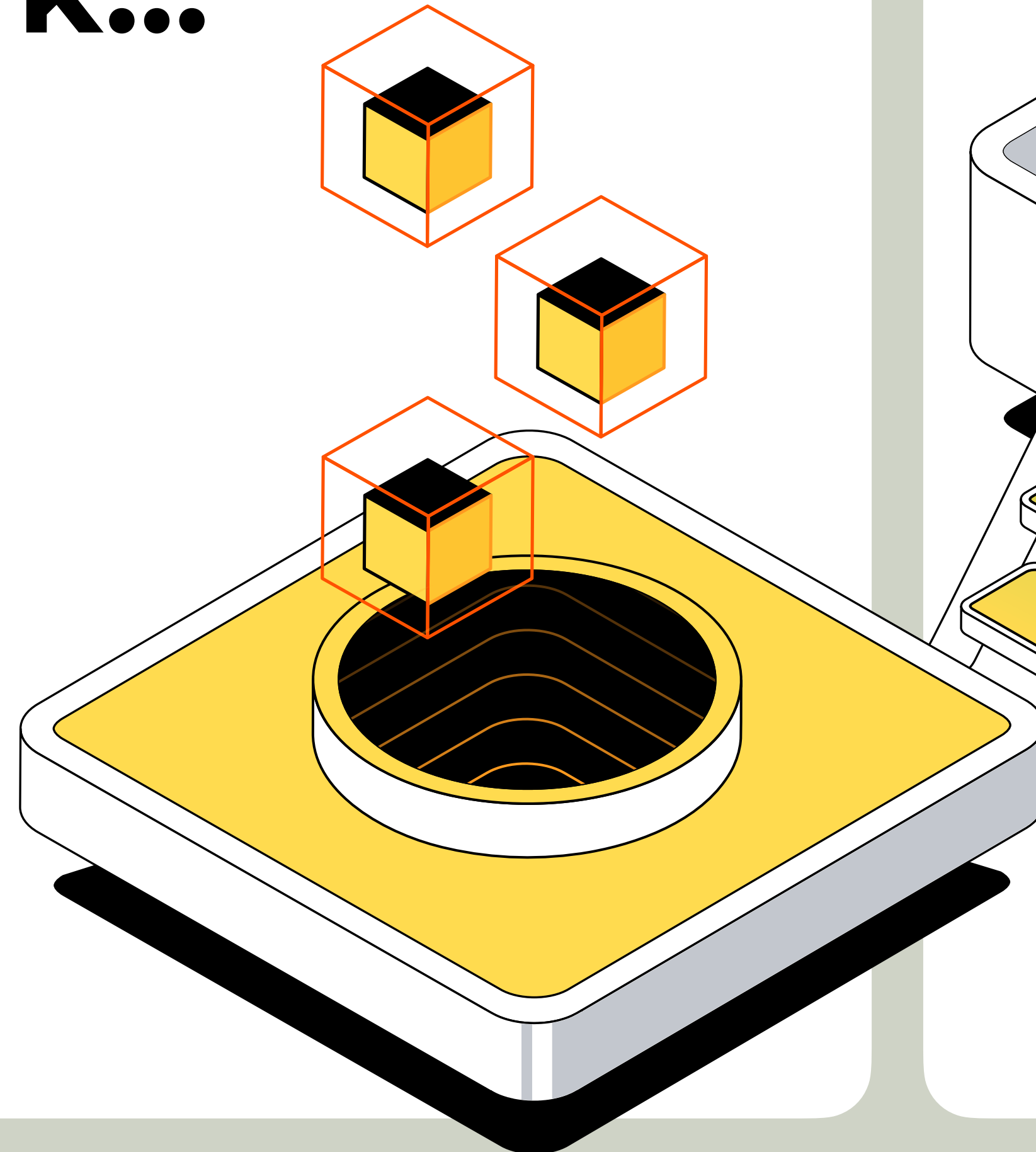
Audience Segmentation

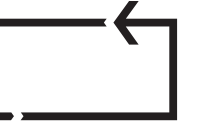
Ensure ads reach intended target personas

Record consumer behaviors across sites and apps through individual identifiers to build audience segments

Assign users privately to interest groups based on activity, and allow access without sharing IDs

Let's dive deeper into each use case to understand how it can work...





1 Remarketing

Goal: Re-Engage Known Customers/Prospects With Ads

Remarketing has historically recorded *user actions* with *cookies*. In a privacy-forward approach, *user interests* can instead be stored *privately* (e.g., in the browser or on a trusted server), **enabling recording user data without exposing it to outside parties.**

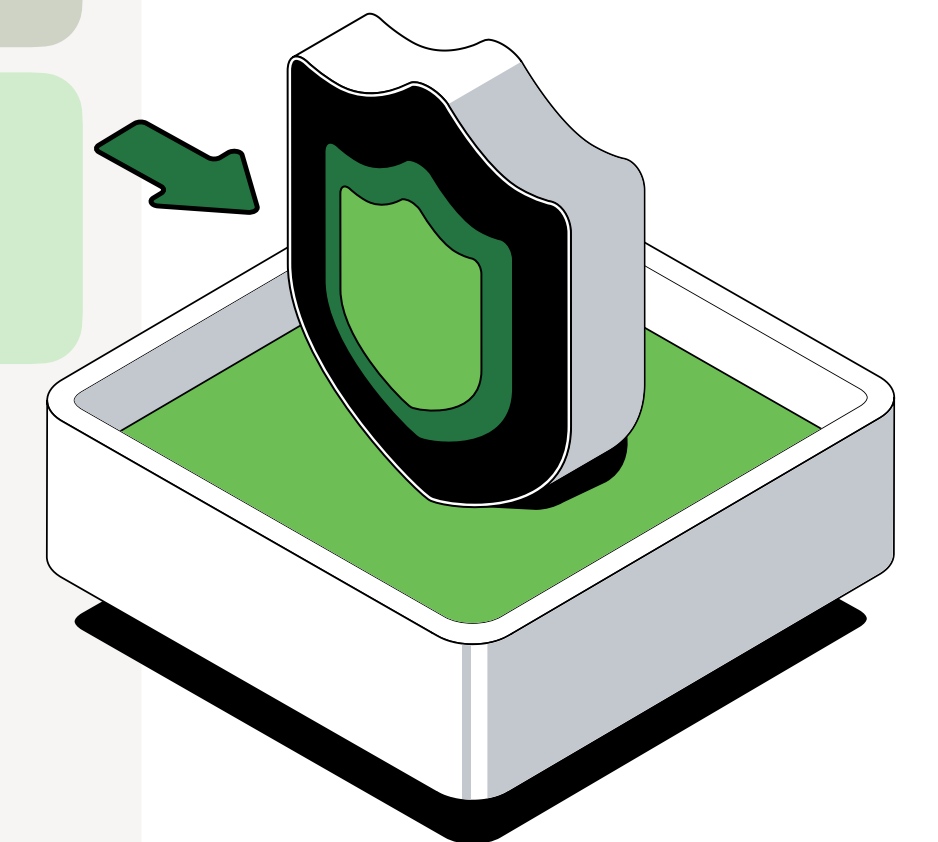
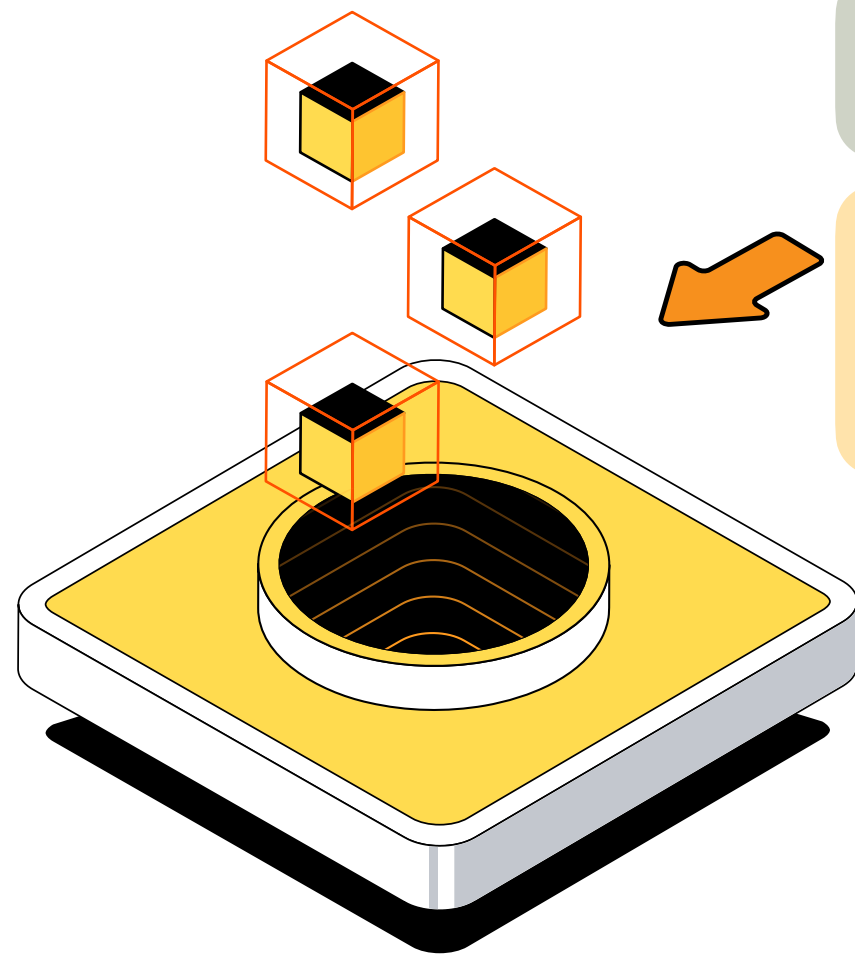
Historical Approach

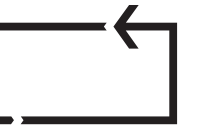
Privacy-Forward Approach

When a User Visits an Advertiser Website...

Cookies Record a User's Actions across Websites and Apps

A User's Interests Are Stored Privately





1 Remarketing

Goal: Re-Engage Known Customers/Prospects With Ads

Later, when the same user visits an ad-supported Publisher website, remarketing ad decisioning can be achieved **via privately-stored interest signals**.

Historical Approach

Privacy-Forward Approach

When a User Visits an Advertiser Website...

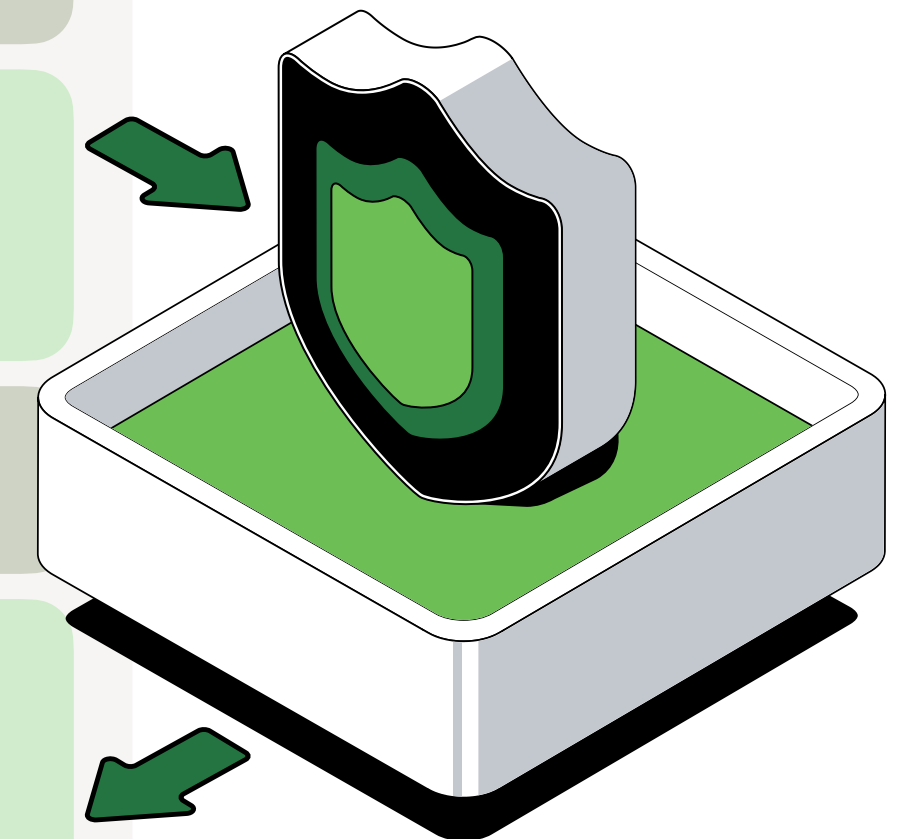
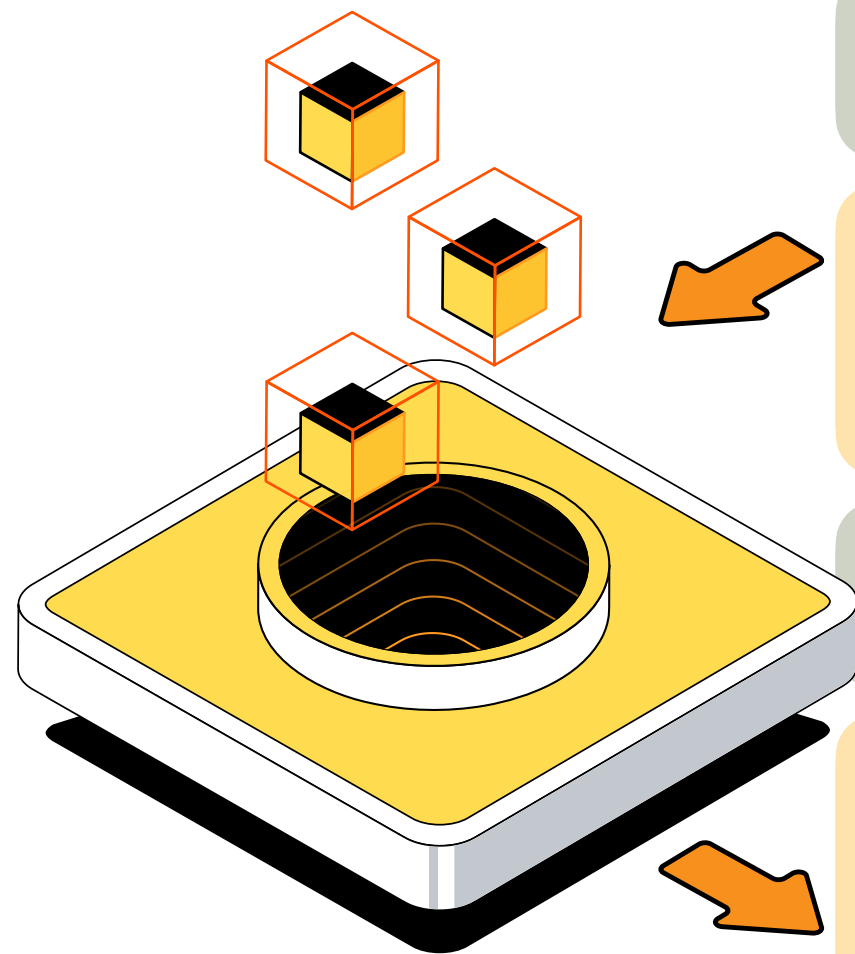
Cookies Record a User's Actions across Websites and Apps

A User's Interests Are Stored Privately

When a User Later Visits an Publisher's Ad-Supported Website...

3rd-Party Cookie Accessed to Target Ad to a User

On-Device Auction Decision Based on User's Interests Stored Privately

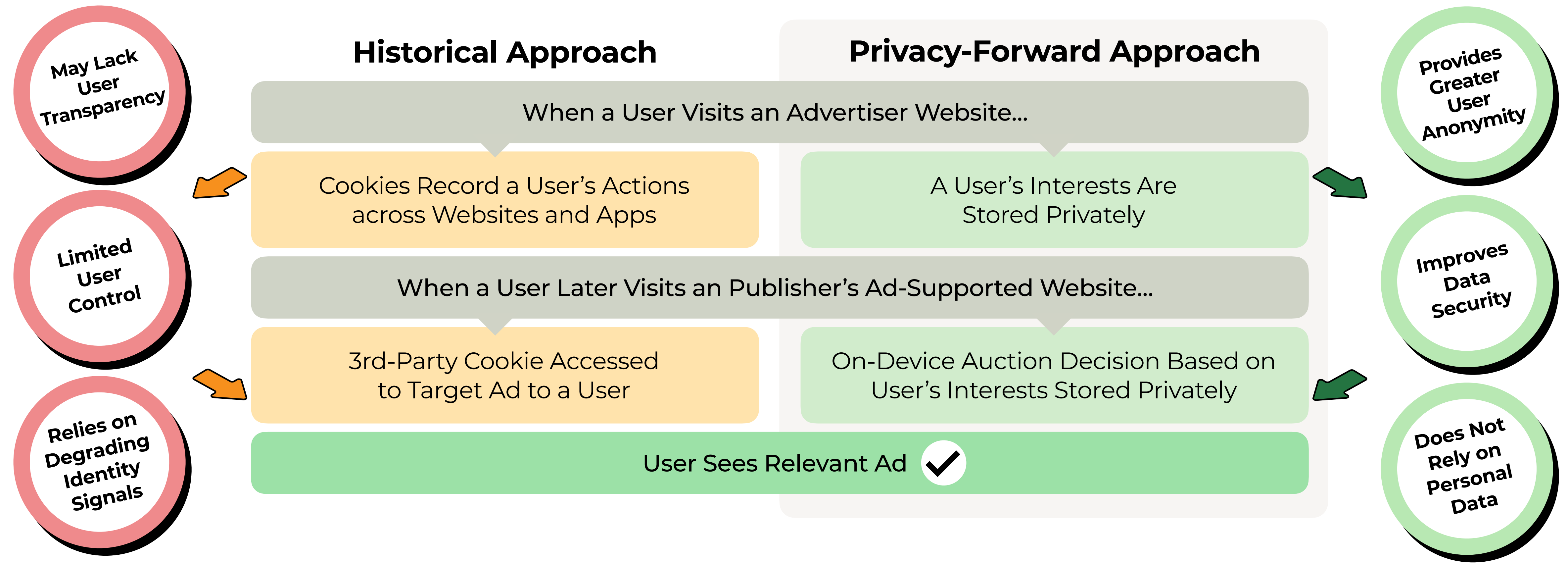


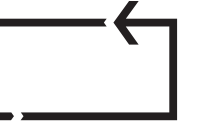


1 Remarketing

Goal: Re-Engage Known Customers/Prospects With Ads

In summary: The advertiser can deliver relevant ads to in-market users who visited their site, without user-level data being exposed to any other party.





2 Attribution & Incrementality

Goal: Assign credit to the correct source and gauge incremental value

Traditional approaches to attribution & incrementality rely on *user-level signals* recorded via cookie to match ad interactions with outcomes. Privacy-forward methods instead **record ad views privately via a user's browser or a trusted server.**

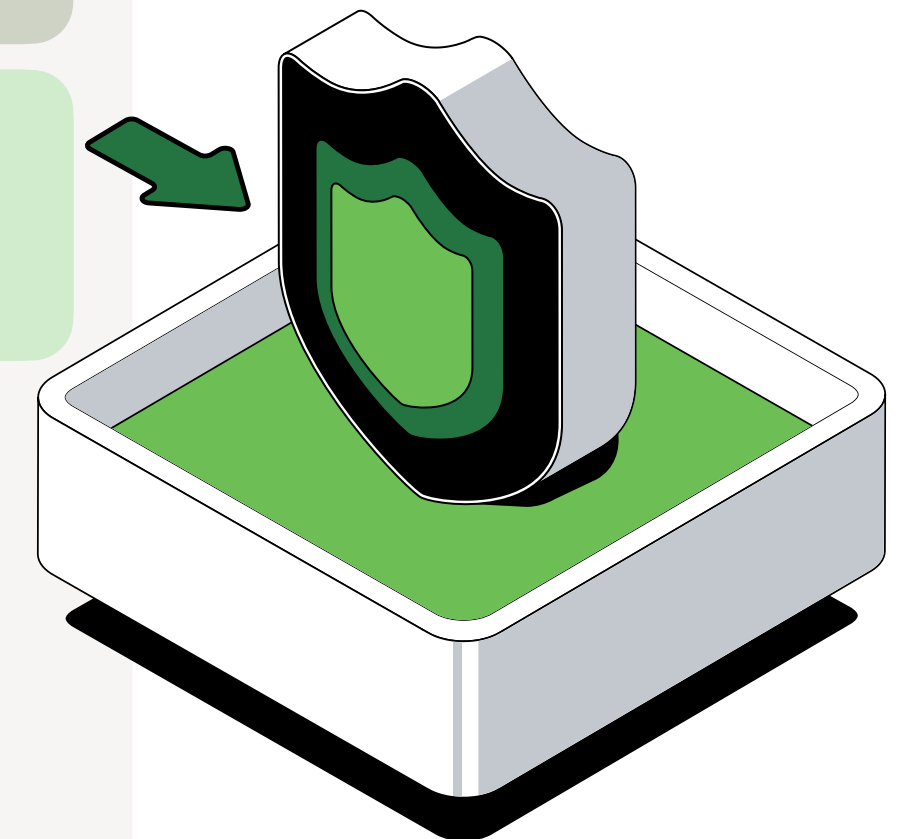
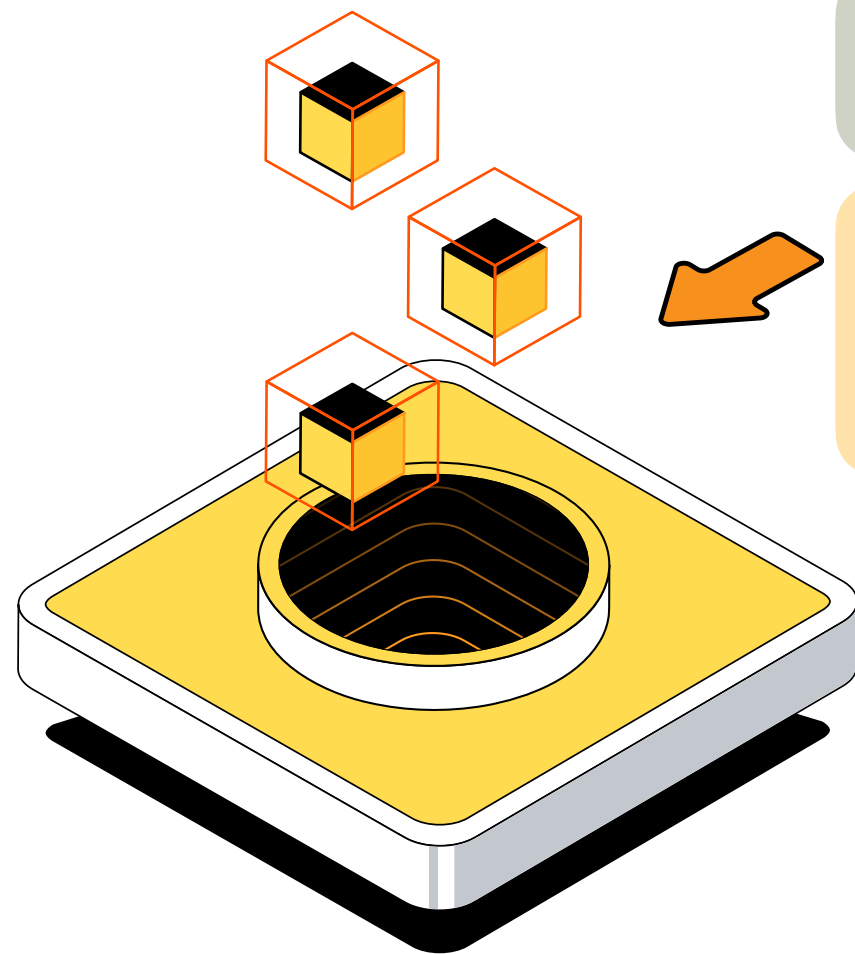
Historical Approach

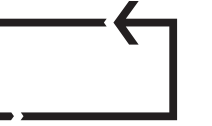
Privacy-Forward Approach

When a User Sees an Ad on a Publisher's Website...

Cookies Record User Profiles Tied to an Ad Impression

Ad Impressions Are Recorded Privately





2 Attribution & Incrementality

Goal: Assign credit to the correct source and gauge incremental value

When a user clicks an ad, new approaches *temporarily store click information*. Later, if an item is purchased, ad impressions, clicks, and conversions can be mapped, **without accessing or revealing personal identifiers**.

Historical Approach

Privacy-Forward Approach

When a User Sees an Ad on a Publisher's Website...

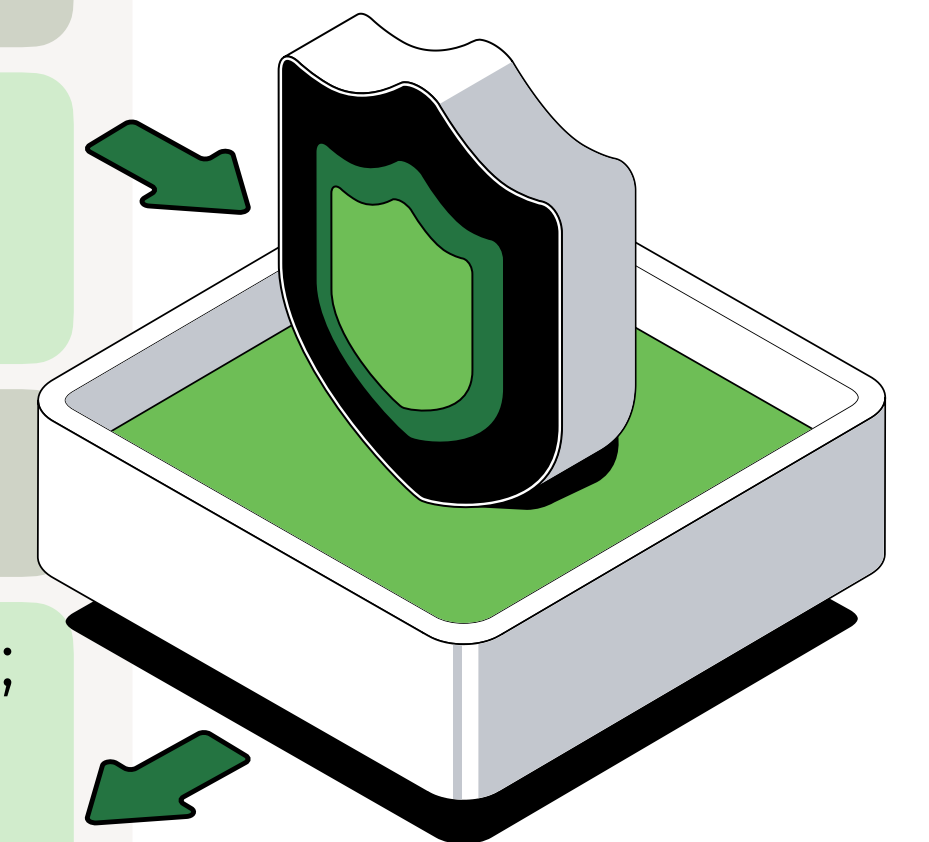
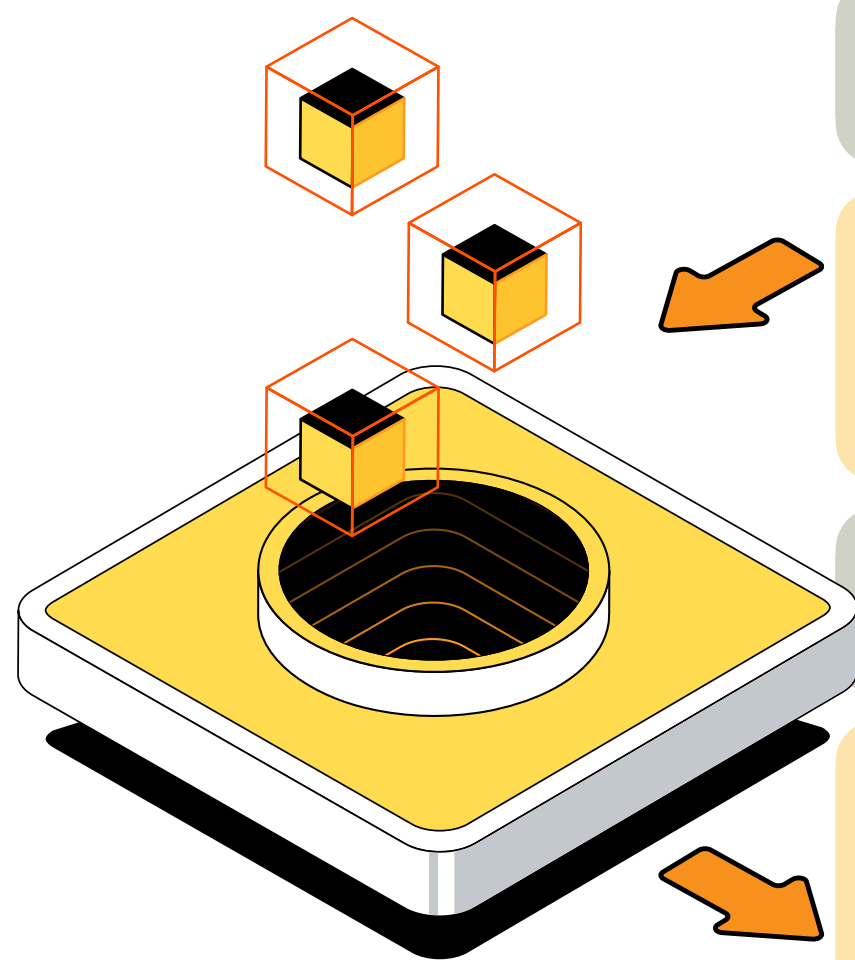
Cookies Record User Profiles Tied to an Ad Impression

Ad Impressions Are Recorded Privately

When a User Later Clicks the Ad and Buys on the Advertiser's Website...

3rd-Party Cookie Accessed, Conversion Is Logged and Tied to a Specific User in Report

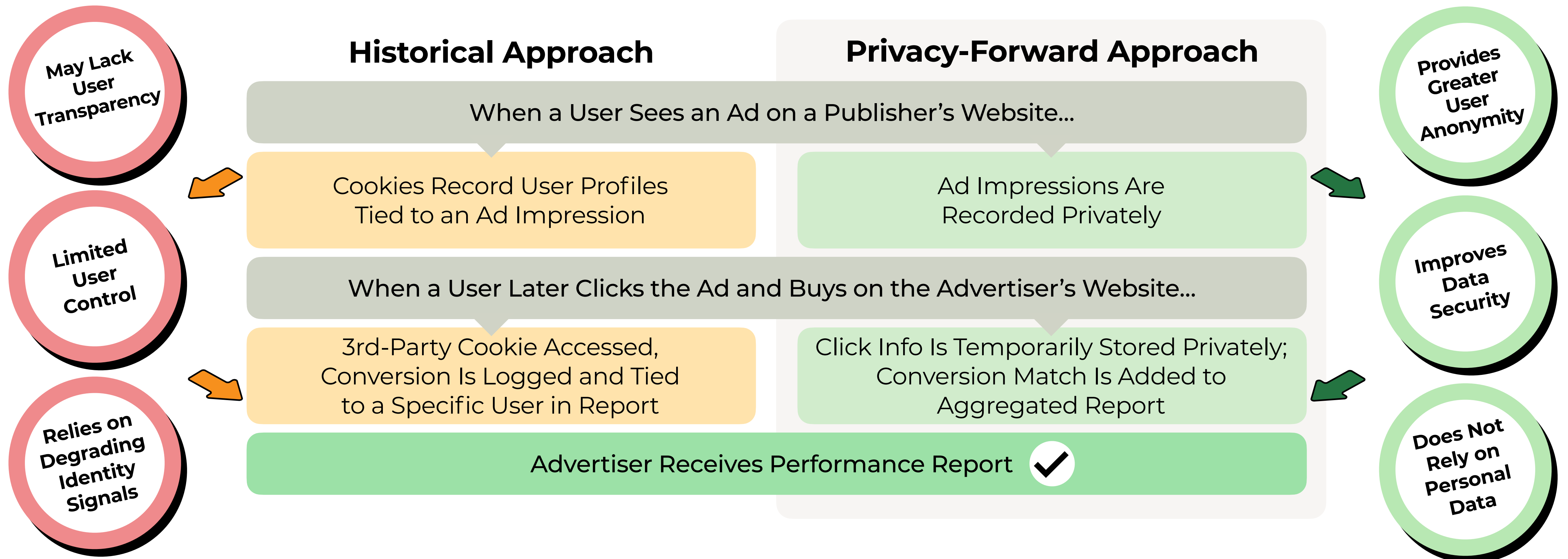
Click Info Is Temporarily Stored Privately; Conversion Match Is Added to Aggregated Report

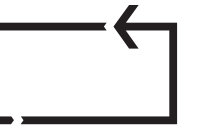


2 Attribution & Incrementality

Goal: Assign credit to the correct source and gauge incremental value

In summary: The advertiser's ultimate goal is to understand holistic campaign performance. Aggregated reports provide this understanding without revealing underlying users.





3 Audience Segmentation

Goal: Ensure ads reach their intended target personas

Audience segmentation historically leveraged cookies to build addressable interest segments across online environments. Privacy-forward methods can **build a record of user interests, stored privately by the browser or on a trusted server.**

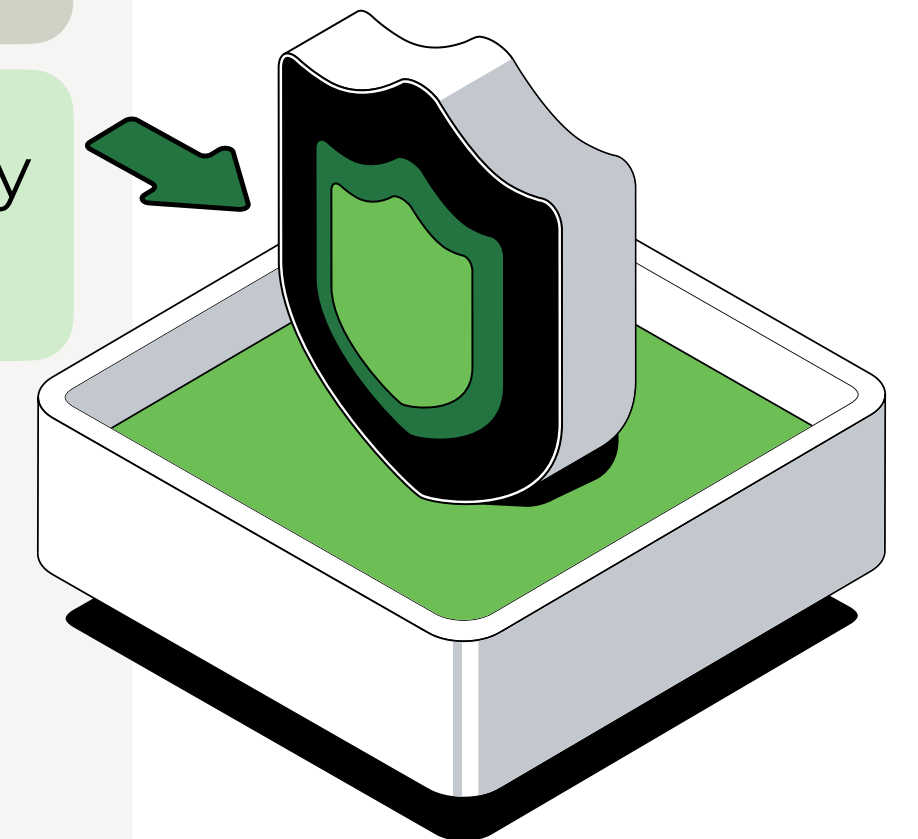
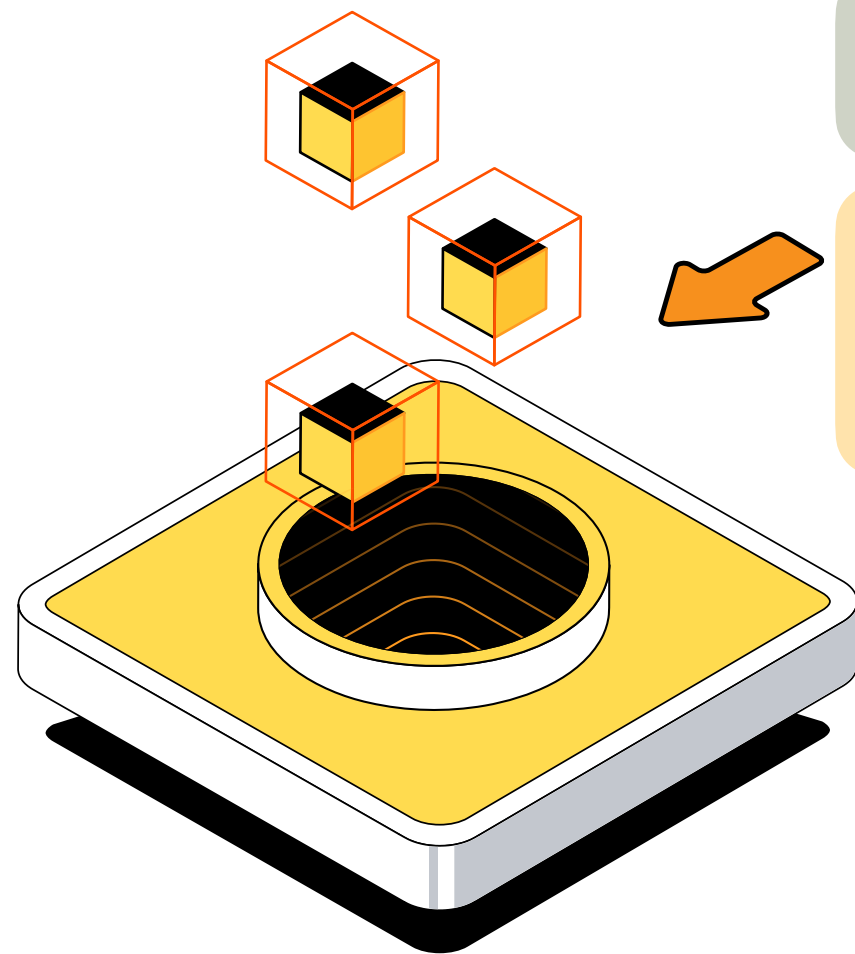
Historical Approach

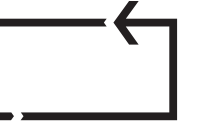
Privacy-Forward Approach

When a User Visits Multiple Websites...

Cookies Track User Behavior, Data Is Shared with 3rd-Parties to Inform Interest Segments

Interests are Logged and Stored Privately to Inform Segment Membership





3 Audience Segmentation

Goal: Ensure ads reach their intended target personas

Instead of many parties having access to user data, ***user interests smay stay within the browser and an on-device auction may select an ad with advertiser inputs***. Publishers can access segment membership to enrich the auction, without exposing user data.

Historical Approach

Privacy-Forward Approach

When a User Visits Multiple Websites...

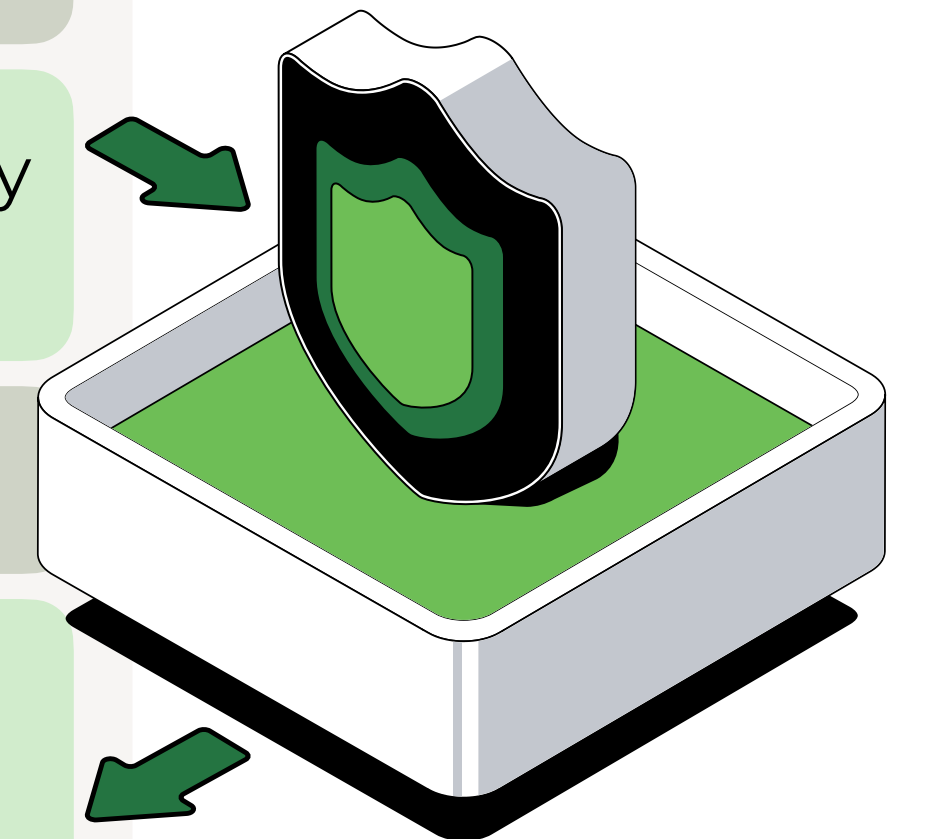
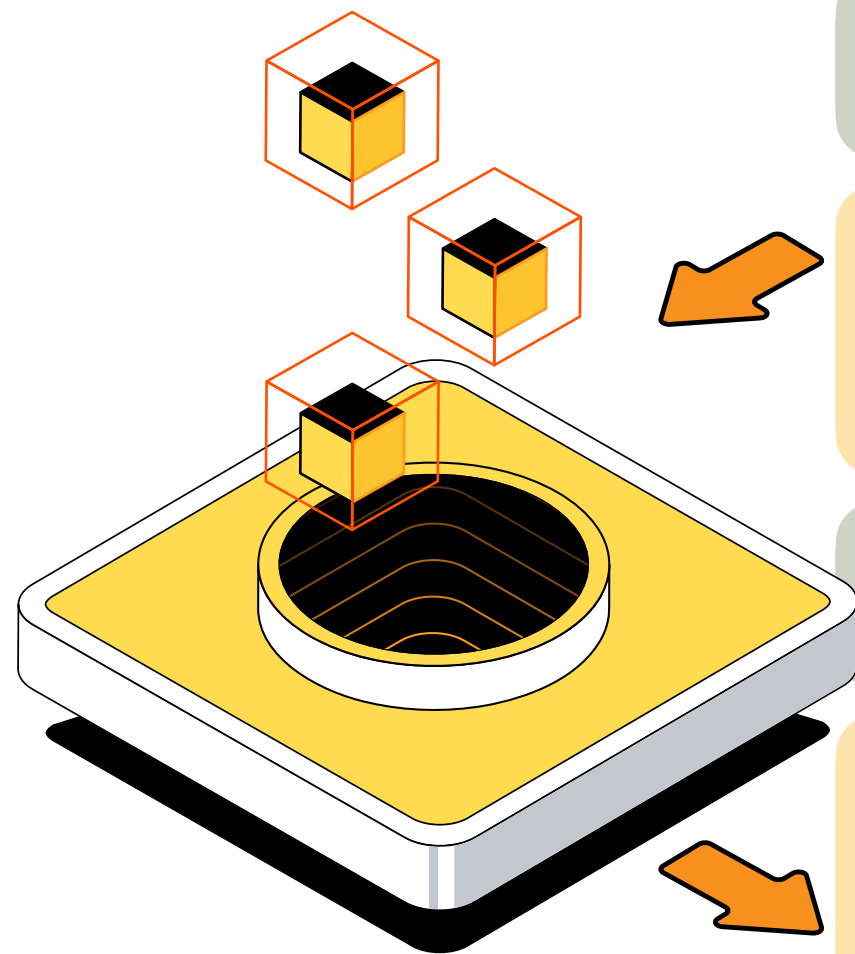
Cookies Track User Behavior, Data Is Shared with 3rd-Parties to Inform Interest Segments

Interests are Logged and Stored Privately to Inform Segment Membership

When a User User Visits a Publisher's Site with Ads...

Ad Requests Include Cookie Information; Ad Platforms Match the User to Interest Segments for Ad Delivery

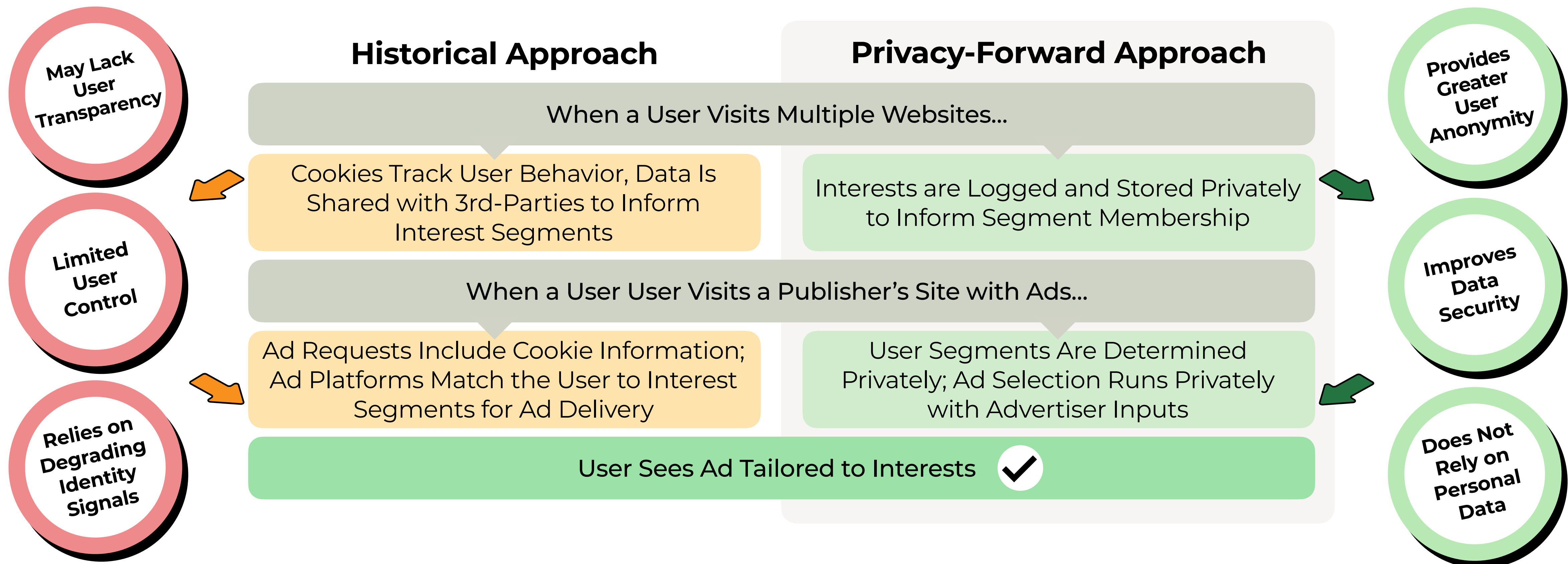
User Segments Are Determined Privately; Ad Selection Runs Privately with Advertiser Inputs



3 Audience Segmentation

Goal: Ensure ads reach their intended target personas

In summary: The advertiser reaches relevant users with the right message, without individual user data being shared or stored.



What's the Next Move?

Whether You're a Marketer or a Publisher,
Start Evaluating Privacy-Forward Solutions Today

Publisher Use Cases

Audience Packaging

Yield Optimization

Performance Reporting

Marketer Use Cases

Planning

Activation

Measurement & Attribution



Solution Evaluation

First-Party Data Activation

Alternative IDs

Cohort-Based Reporting

Aggregated Measurement

Data Clean Rooms

AI/ML-based Modeling

Curated Audiences

Contextual Advertising

More...

