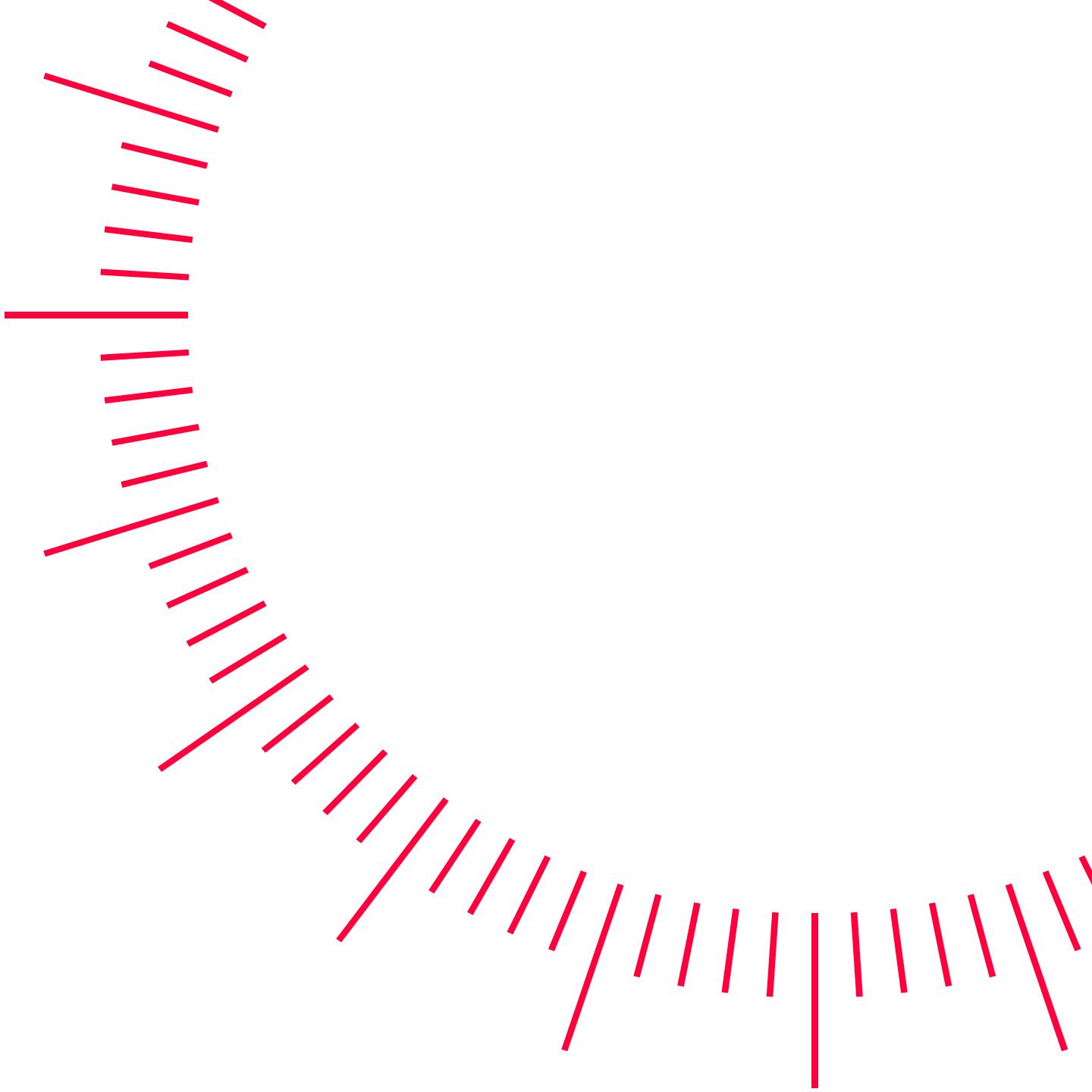




World Federation  
of Advertisers

Advertisers driving change

# Global Cross-Media Measurement



# In pursuit of the advertiser North Star...

Advertisers think that cross-media measurement solutions should be:

- » **Consistent & continuous:** Solutions should be designed as ‘always-on’ data collection (not tag-based).
- » **Full-lifecycle:** Covering multiple campaign management use-cases, including planning, optimisation and post-campaign reporting.
- » **Comprehensive:** Covering all channels and formats with accuracy and scale (measuring all impressions, not just a sub-set).
- » **Full-funnel:** Measuring Reach & Frequency as a priority but also other, more advanced measurements (i.e. outcomes not just outputs).
- » **Fair & objective:** Metrics should employ qualifiers such as viewability and direction and solutions should be thoroughly audited.
- » **Private:** Solutions should be highly privacy-preserving and should invasive techniques such as finger-printing.
- » **Trusted & transparent:** Solutions should be industry-owned, employ representative panels and should be comprehensively audited.
- Advertising & Content:** Solutions should measure ads and the content/context that ads appear within.



**“P&G is proud to be at the forefront of this breakthrough initiative. We need complete, open, transparent and future-proofed cross media measurement to enable consumers to have a better viewing experience with less annoying repetition. And advertisers need to be confident that their media budgets are being invested effectively and efficiently, while media companies need to be rewarded for delivering high levels of reach and engagement.”**

**Kanishka Das**

Senior Director,  
Global Media  
Analytics & Insights



## **WFA's 'Halo' technical committee was formed to address this...**



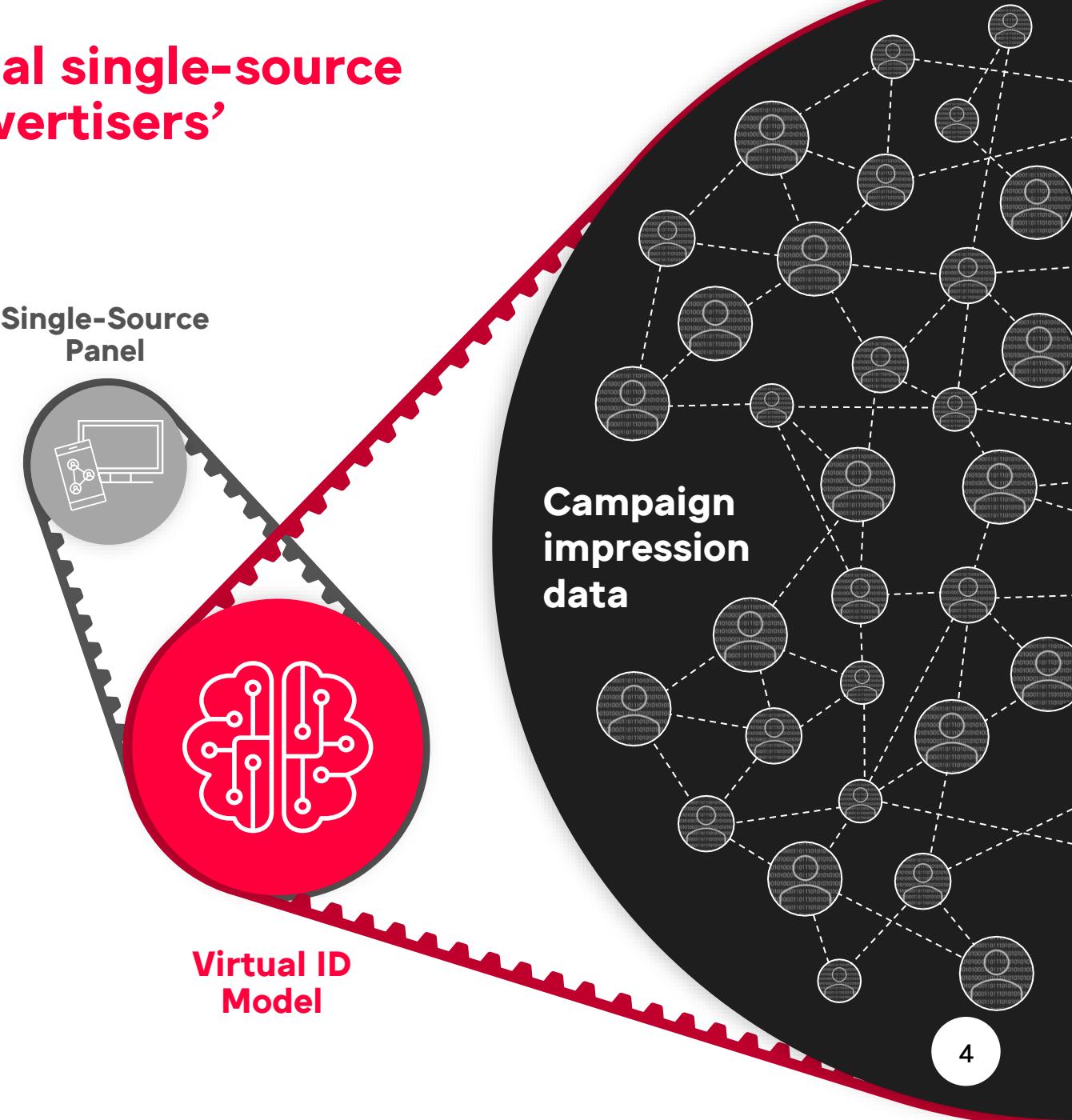
# The Halo framework uses traditional single-source panel data to calibrate all of an advertisers' campaign impression data

In the framework a Single-Source Panel is used (i.e. the aggregation of multiple media consumption behaviours in one place), to calibrate a much larger dataset.

Practically, this means using a Virtual ID (VID) model, 'trained' upon the panel, to calibrate the census log file data (i.e. impression data) associated with an advertisers' campaign.

This means that the universe of campaign impressions are used, not a sample.

**This hybrid approach ensures that the panel is the independent 'source of truth' for establishing demographics and overlap behaviour, while being complemented by scaled data provided by census logs, to get a complete view of campaign impact.**



# Applying Virtual IDs to count and de-duplicate

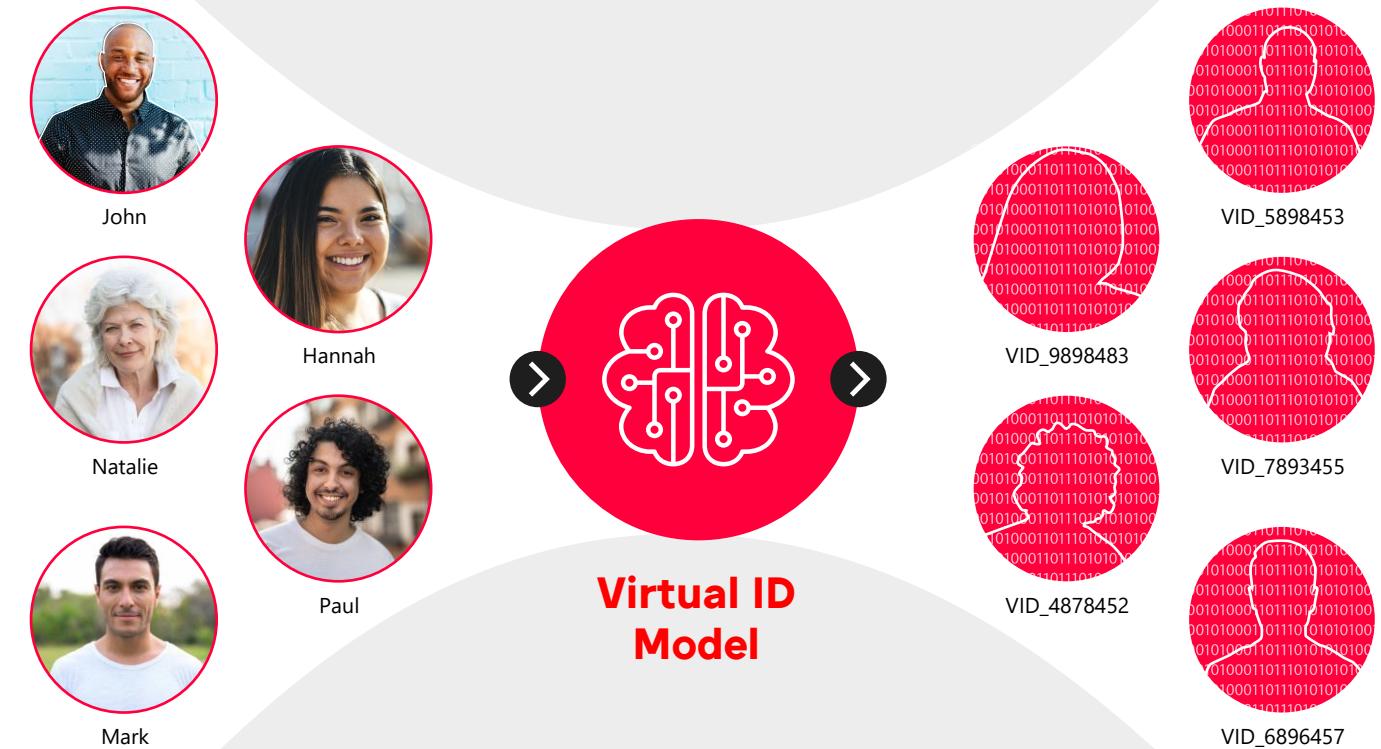
A VID Model maps existing user identifiers, profiles, and other impression data to a new, common Virtual Person ID. This is done through a probabilistic modeling process learned from observing the Single Source Panel.

Media owners assign VIDs to their impressions independently, but using a specific assignment model.

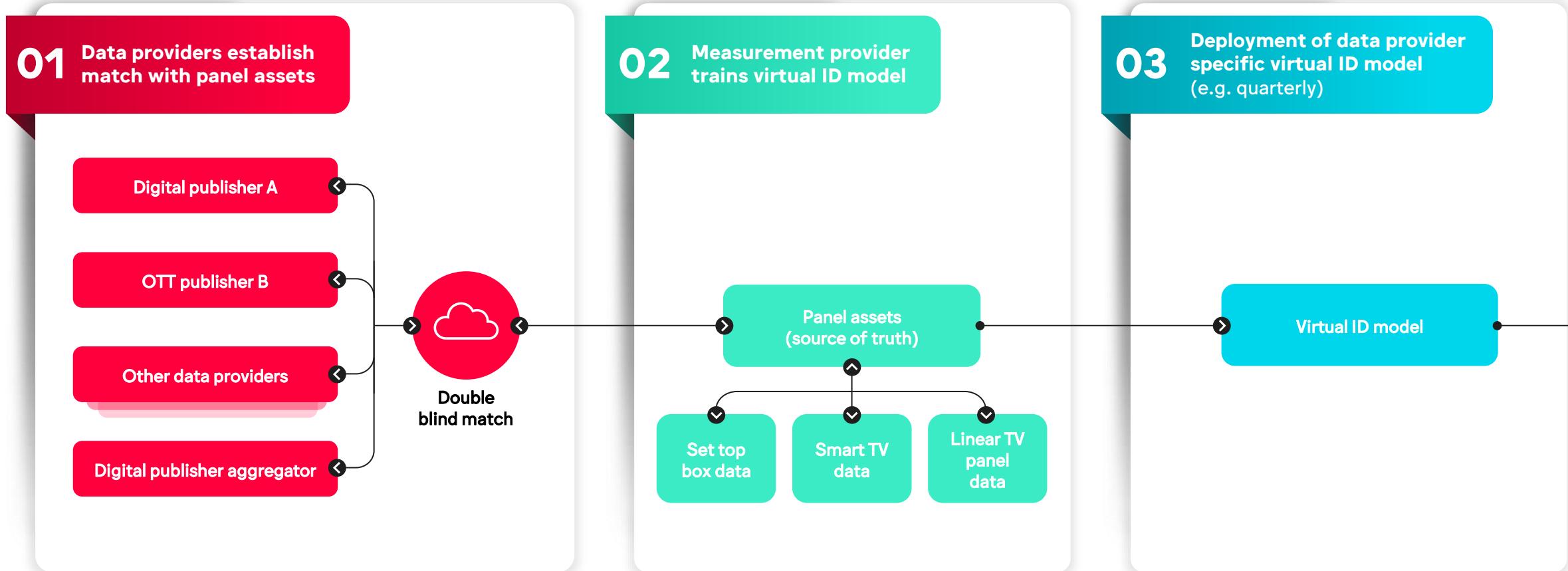
Practically speaking, VIDs are random numbers generated to correspond to a target population and, as such, are carefully mapped to the demographic make-up of a given country. VIDs do not correspond to any particular individual.

This means that there should be no more VIDs than there are people, with the same attention applied to gender, age and other audience characteristics.

In summary, the VID model uses all data at its disposal to accurately assign TV and digital impressions to a lookalike. VIDs can be unduplicated and counted to provide a representation of campaign Reach and Frequency, but not before using privacy-preserving counting techniques, such as Multi-Party Computation (MPC).

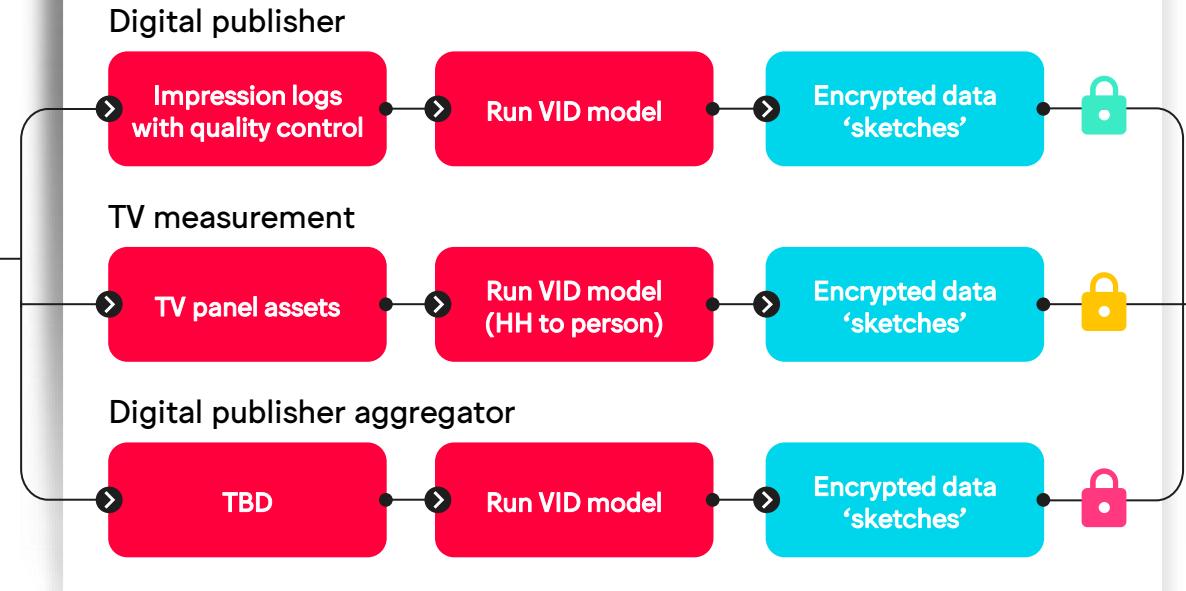


**Practically, this is a staged process with a VID model being ‘trained’ by the panel in the set-up phase...**

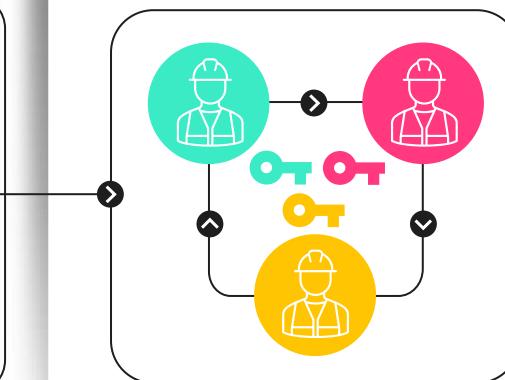


# During the live, measurement phase, the Virtual ID model is applied to all campaign impressions...

## 04 Data Providers run Virtual ID model over event data



## 05 Multi-Party Computation (MPC) 'workers' used to decrypt data and compute private Reach & Frequency



## 06 Reporting APIs provide campaign metrics and forecasts

Reach and frequency (plan and report)

## Why global advertisers advocate for this approach

Delivers highly accurate and actionable measurement in a way which is future-focused and privacy-safe;

Has the blessing of many global players (platforms and measurement companies);

Platforms are prepared to input their data and will be held to highest standards enshrined through audits;

It's a global framework and set of tools but would be locally owned and governed;

It's a flexible system which can support the metrics chosen by local stakeholders;

It's entirely transparent tech with no 'black boxes'.

**"We need global, common components, which can then be lifted and dropped across markets. That's the key 'unlock' for how global and local can work together, to avoid replicating the same thing multiple times on cross-media measurement."**

**Sarah Mansfield**

VP Global Media,  
Unilever



## Platforms are prepared to input their data into solutions based on the WFA's technological approach...

“

The WFA has brought some of our industry's brightest minds together to solve advertiser challenges. This collaboration is a force for change that is prioritizing the development of a transparent, open system that preserves user privacy.”

**Nicola Mendelsohn**

VP, Global Business Group



“

We are committed to supporting measurement solutions that meet Marketer needs. The approach being led by the WFA, which is being piloted by Origin in the UK and ANA in the US, is a promising path to neutral, accurate and fair cross-media measurement, and we look forward to our ongoing collaboration with the industry as part of Halo.”

**Karen Sauder**

President, Global Clients & Agency Solutions



# Open source software code has been written for the common components

Designed to support local markets seeking to deploy this framework

01 Global engineering team



02 Open-source software code for framework common components

```
17 - import com.google.protobuf.ByteString  
18 - import io.grpc.Status  
19 - import java.security.cert.CertificateException  
20 - import java.security.cert.X509Certificate  
21 17 import org.wfanet.measurement.api.Version  
22 18 import org.wfanet.measurement.api.v2alpha.CreateData  
23 19 import org.wfanet.measurement.api.v2alpha.Data  
24 @@ -25,11 +26,11 @@ class DataProvidersService(pr  
25 import org.wfanet.measurement.common.crypto.read  
26 import org.wfanet.measurement.common.grpc.Cert  
27 import org.wfanet.measurement.common.grpc.Request  
28 import org.wfanet.measurement.common.grpc.Response  
29 import org.wfanet.measurement.common.grpc.StatusCode  
30 import org.wfanet.measurement.common.grpc.StatusCode  
31 25 import org.wfanet.measurement.common.grpc.Cert  
32 26 import org.wfanet.measurement.common.grpc.Request  
33 27 import org.wfanet.measurement.common.grpc.Response  
34 28 import org.wfanet.measurement.common.grpc.StatusCode  
35 - import org.wfanet.measurement.common.toProtoTime  
36 29 import org.wfanet.measurement.internal.kingdom.Cert  
37 30 import org.wfanet.measurement.internal.kingdom.Data  
38 31 import org.wfanet.measurement.internal.kingdom.Data  
39 @@ -47,33 +40,11 @@ class DataProvidersService(pr
```

03 Local stakeholder implementation programmes



I S B A



“We've always known that for accountable UK cross media measurement to succeed, it will need to be as part of a global solution. Halo's drive for common components has turbocharged our local effort and, alongside the advertiser imperative, is the key to the progress we have made.”

**Phil Smith**  
Director General,  
ISBA



# What advertisers & national associations can expect from the Halo tech

**'Always-on'** (tagless) reports on reach and frequency, unduplicated between TV and digital;

**A read across your whole campaign** - all publishers and formats (video and display);

**Opportunities to identify** where frequency is excessive and to reallocate ad budgets;

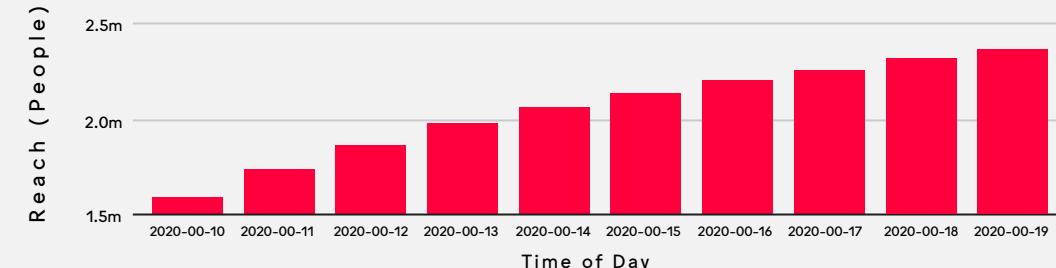
**Improved media planning**, with a full understanding of cross-media consumption;

**Comparable reports** across markets (where Halo is deployed);

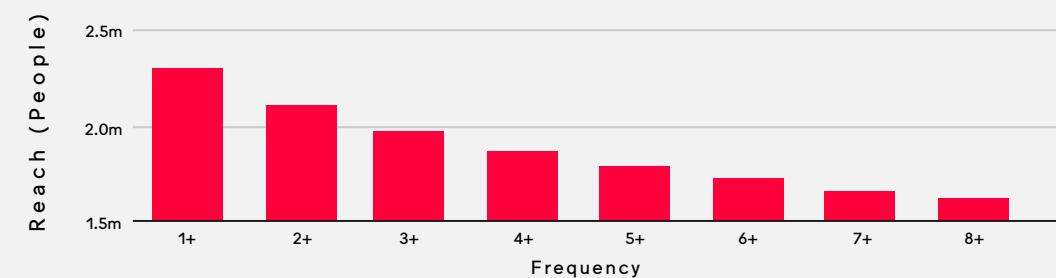
**Improved MMMs** through unduplicated cross-media impression data;

And in future, **measure cross-media outcomes** too (e.g. brand lift, sales lift, etc).

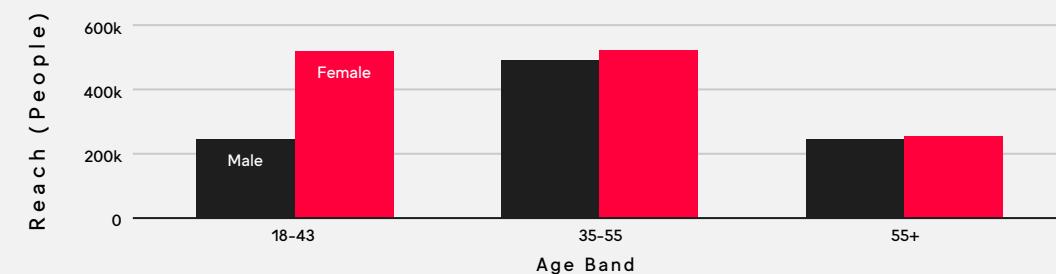
**Cumulative Reach Over Time**



**Frequency Distribution**



**Demo Distribution**



# Next steps for WFA & Halo, and how to get involved



I S B A

ANA (US) and ISBA/[Origin](#) (UK)  
the first organisations to pilot the Halo tech.



ACA (Canada) and OWM (Germany) seek to  
implement the same framework.

## WFA will play an on-going role to:

- facilitate the Halo collaboration;
- maintain and update the open-source codebase;
- develop ‘playbooks’ for local groups, including legal and contractual frameworks;
- provide tech support to local markets;
- Conduct research into how the Halo tech can support other measurements (beyond Reach and Frequency).

Any and all clients are welcome to get involved. And as an industry utility, any player with an interest in measurement should get in touch.

Contact [Matt Green](#) for further information.

WFA

“The key to unlocking progress on cross-media measurement is to come up with a reliable means of combining traditional, sampled panel data with scaled campaign impression data. The Virtual ID model is a now-proven concept that helps us solve this problem. PepsiCo is proud to be a driving force behind this industry solution, which will benefit large and small markets alike.”

Atin Kulkarni

VP Global Media &  
Commercial Capabilities



# Global/local Development Roadmap

Stage	Description	Timeline
<b>Halo workstream set-up</b>	Formation of ‘common component’ programme (now ‘Halo’), governed by advertisers and advertiser associations, with objective of writing open-source software code as foundation of local Proofs Of Concept	Feb 2021
<b>Initial software code releases</b>	Halo team collaboration begins to yield fruit, with a number of releases for system components made available	H2 2021 onwards
<b>Local ANA &amp; Origin build/test phase</b>	Beginning of UK/US code integration, development and testing of Halo code components	From early 2022 onwards
<b>Halo ‘Minimum Viable Product’ (MVP)</b>	Core components and code libraries of the measurement system released. Components include VID Model, Panellist Data Exchange and others needed to start integration with the local markets	Due to complete in March 2023
<b>Halo global codebase maintenance</b>	Maintenance, upgrades and development of global codebase to serve needs of local stakeholders	On-going
<b>Halo legal &amp; contractual frameworks</b>	Legal, commercial, governance and contractual frameworks to serve needs of local stakeholders	Kicking-off Q2 2023 onwards
<b>Halo R&amp;D</b>	Research and Development into how existing Halo technology can be evolved to measure other outputs (e.g. attention), and outcomes (e.g. brand lift, sales lift, attribution, etc), to satisfy advertiser needs.	Kicking-off H2 2023 onwards
<b>International expansion</b>	Local implementation playbook and tech support to other markets seeking to adopt Halo tech (e.g. ACA, Canada / OWM, Germany and others)	From 2024 onwards

# Further resources

[Industry Principles](#) for Cross-Media Measurement

Original [Technical Framework](#) for Cross-Media Measurement

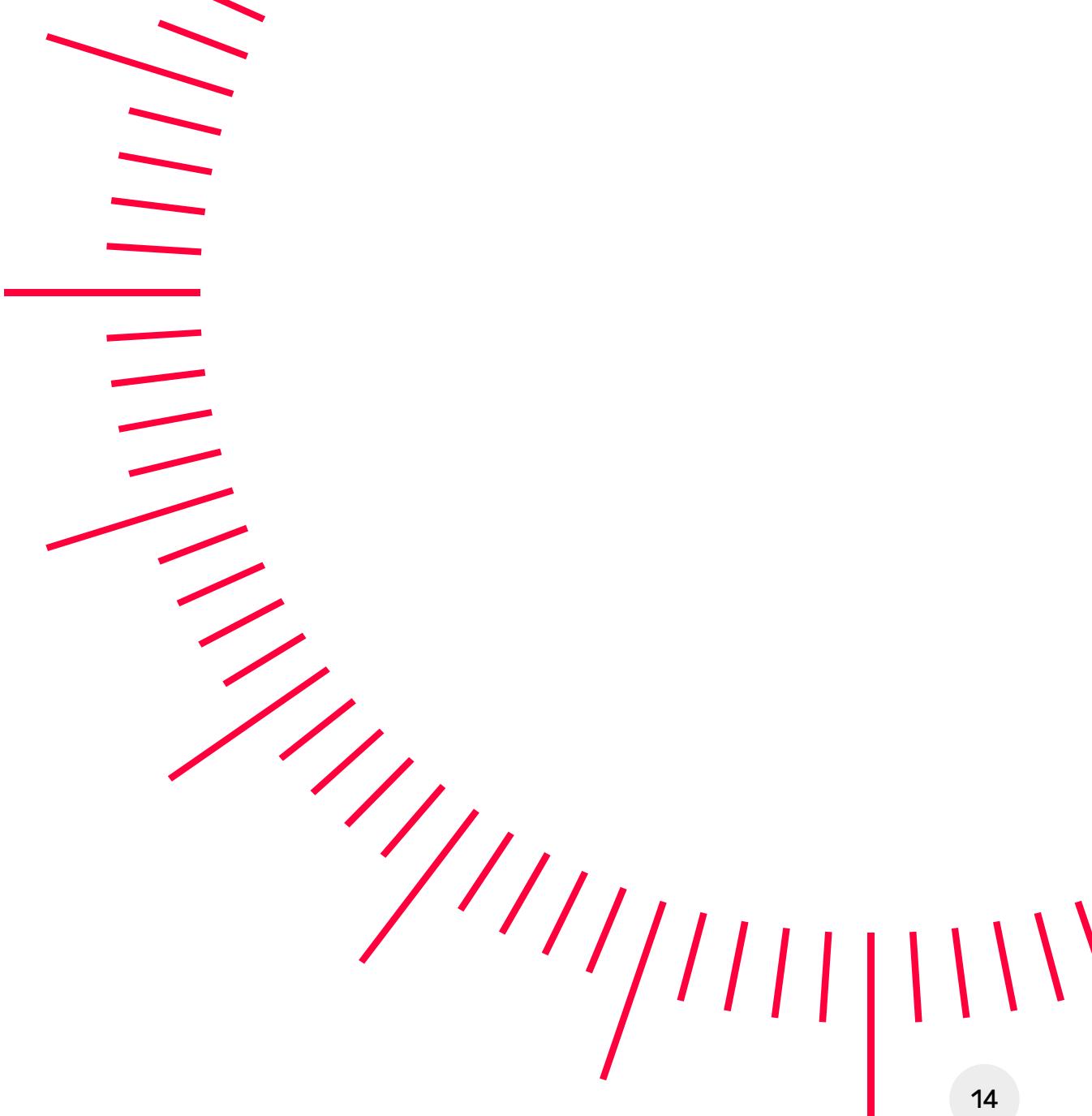
[Open-source software code](#) repository for WFA  
Measurement System

Origin (ISBA, UK) [background and principles](#) UK pilot  
cross-media measurement programme

['Progress Towards the Advertiser North Star'](#)  
– Origin panel at Cannes Lions 2022

Origin consultation on a [funding model](#) for local  
cross-media measurement

ANA [background](#) on US pilot cross-media  
measurement programme



WFA

World Federation  
of Advertisers

**World Federation of Advertisers**  
London, Brussels, New York, Singapore

[wfanet.org](http://wfanet.org)  
[info@wfanet.org](mailto:info@wfanet.org)  
+32 2 502 57 40

twitter @wfamarketers  
[youtube.com/wfamarketers](https://youtube.com/wfamarketers)  
[linkedin.com/company/wfa](https://linkedin.com/company/wfa)