# Halo CMM

## Community Town Hall

Halo Townhall Starting Soon…

April 3 2024


Halo
project in Origin and in the ANA project
to come here in the US.

# Today's Agenda

**Intro**
Matt Green (WFA) to update on progress with Halo.

**Progress to Launch**
Chloe Dennis (Origin) and Martin Lawson (Origin) to provide an update on UK progress towards now imminent Beta trials of Origin (based on the Halo Framework).

**'Hello Halo' - Chat with Sorin Patillinet (MARS)**
Sorin (MARS) talks about this journey with Halo and his outlook for cross media measurement and the importance of Halo for advertisers

**'Get the Tech' - Virtual Persons Framework**
Craig Wright (Google) to provide a focused explanation of how the Virtual Persons Framework (also known Virtual ID or VID) works.


Atin Kulkarni


Bill Tucker


David Spencer


Kanishka Das


Matt Green


Phil Smith


Prasad Ghag


Sam Deutsch


Sarah Mansfield


Sorin Patilinet


Zee Bhunnoo


Homer Gonzalez

Jorge Ruiz


Maggie Burke

Nicole Gileadi

WFA

# Halo on Stage (March)

egta
**Market Intel Meeting (MIM)**
March 12 2024. Madrid


POR (Poland)
**JIC Meeting**
March 19 2024. Warsaw

Polska Organizacja Reklamodawców

Union des Marques (FR) / CESP
**Groupe de réflexion cross-media**
March 21 2024. Paris

union des marques

IAB TechLab
**Privacy & Addressability Conf**
March 29 2024. New York


ANA ISBA WFA

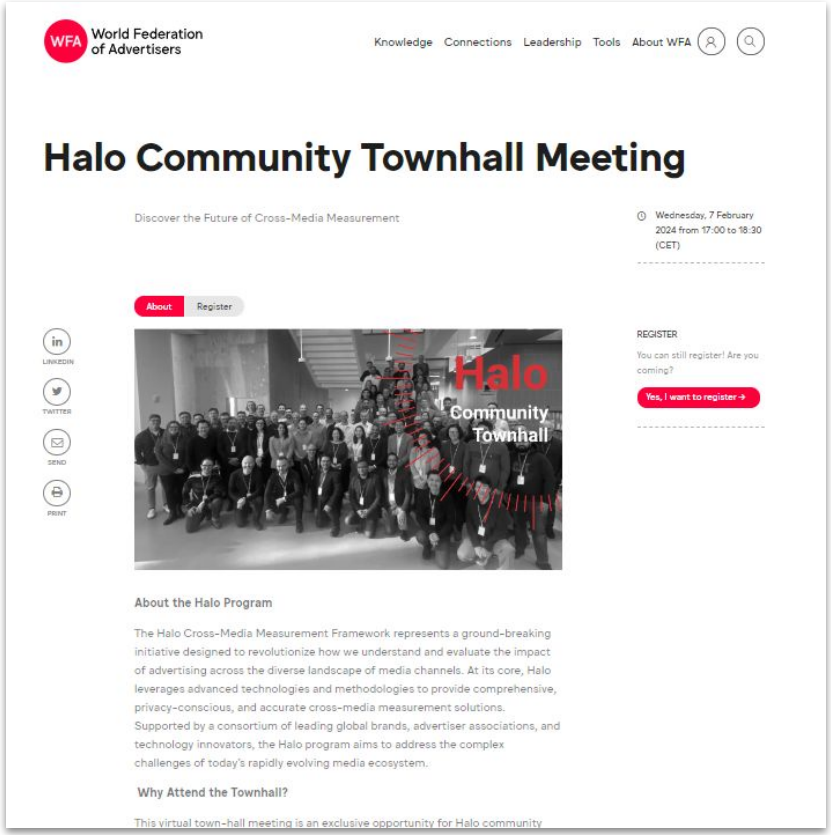
WFA

**Global Marketer Week 2024**

May 14-17 2024. Toronto

# Register for the next Townhall - 5 June 2024

Register here:
https://wfanet.org/events/item/3986/halo-community-townhall-meeting



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# “Progress to Launch”

Origin

ISBA

# Beta Trials – Update

April 2024

# Agenda:

1. Beta Trials approach and plan
2. Approach to testing
3. Help and Support

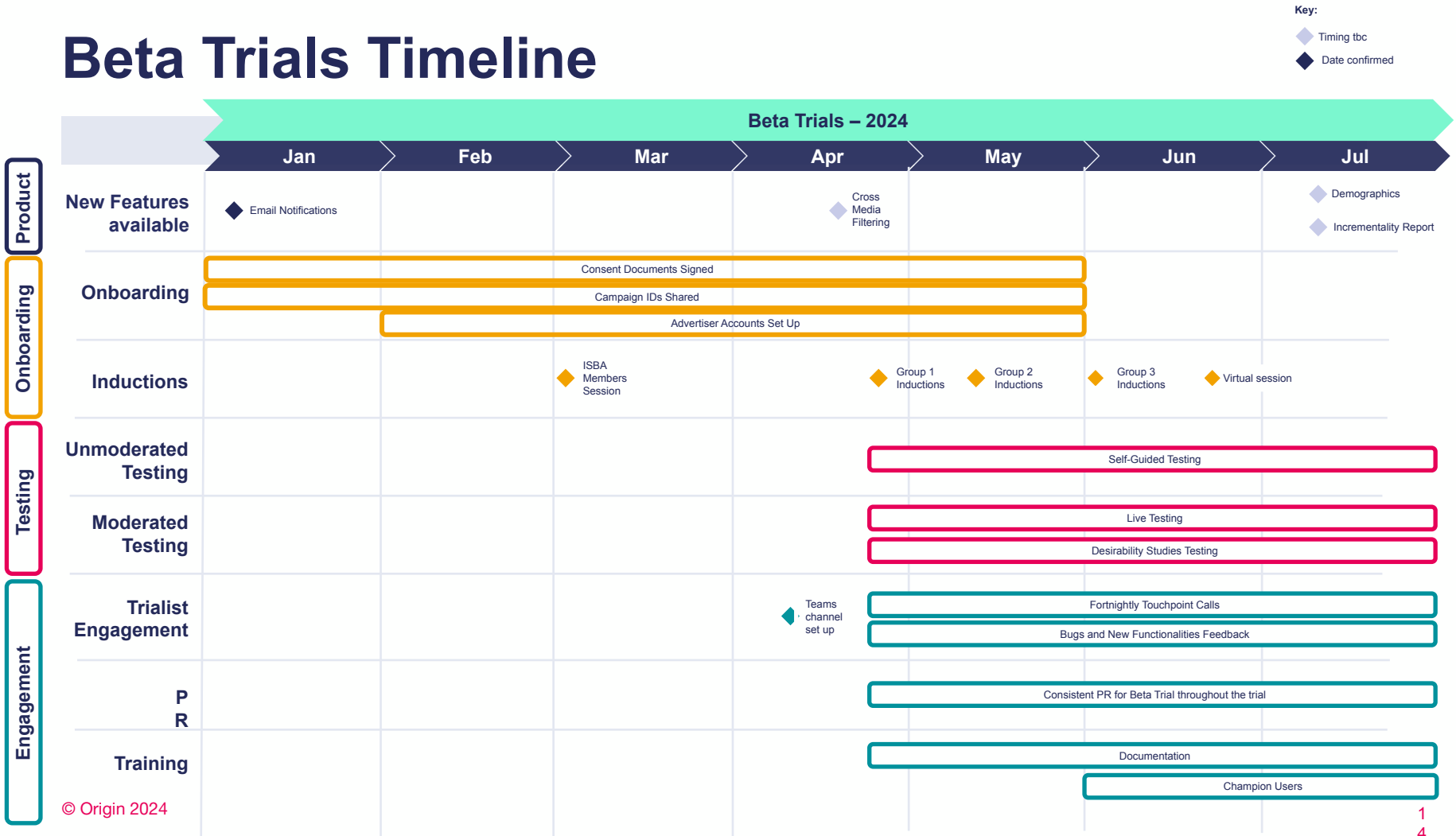
# The Beta Trial will give access to real data for the first time

| | |
|---|---|
| **When** | Q2-Q4 2024 |
| **Who** | 30+ Advertisers and agencies<br>Linear TV<br>YouTube, Meta and TikTok |
| **Scope** | Real campaign data<br>Expanded feature set of Demographics<br>Incrementality reporting,<br>Email notifications, etc. |
| **Process** | Initial onboarding starts 2024<br>Induction in waves |
| **Why join?** | Access to live campaign data up to 12 months ahead of the market<br>Feed into future product scope |

# Over 50 funding stakeholders involved in building Origin

# Beta Trials: Approach & Plan

# Beta Trials Timeline



# Approach to Testing

# 3 types of test will take place during the trial

The Beta Trial will consist of three types of test

Most tests will be **self-guided**. Trialists will be alerted via email that a new test is available for them

**1. Self-Guided Tests**

Most of the Beta testing will be self-guided

**2. Live Tests**

Only a select number of trialists will take part in this type of test

**3. Desirability Studies**

Ad hoc approximate every 6 weeks

# Key Research Questions

## 1. Current Ways Of Working

**Example Question:**

Please spend 1-2 minutes talking through how you would currently analyse a campaign's performance. You can make reference to the tools you use, what data is most relevant to you, etc. [Verbal response]

## 2. Specific UI or Feature

**Example Question:**

How satisfied are you with the options and layout of the "Select media types" page. Please explain your response out loud and, if applicable, how you would improve the page. [5-point Rating scale: Not at all satisfied to Very

## 3. End to End Experience

**Example Question:**

How would you rate your experience of creating a report through Origin? Please explain out loud. [5-point Rating scale: Poor to Excellent]

# Help & Support

# Product Feedback Lifecycle

1. Improvement Area for Existing Feature

2. New Feature Request

3. Bug

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# “Hello Halo”

# Hello Halo!

**Sorin Patilinet**

**Senior Director Global Marketing Effectiveness**

MARS

Leader of Mars's Global Marketing Effectiveness team, I play at the intersection of famous global brands and cutting-edge market insights solutions.

His team's mission is to mix sciences with new tech, uncovering the drivers of human and pet behaviors for brand growth.

He has been pivotal in building Mars's marketing effectiveness culture, earning industry-wide acclaim. As an internal advisor to the C-Suite, he thrives on building insight systems to enable better brand decisions.

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# “Get the Tech”

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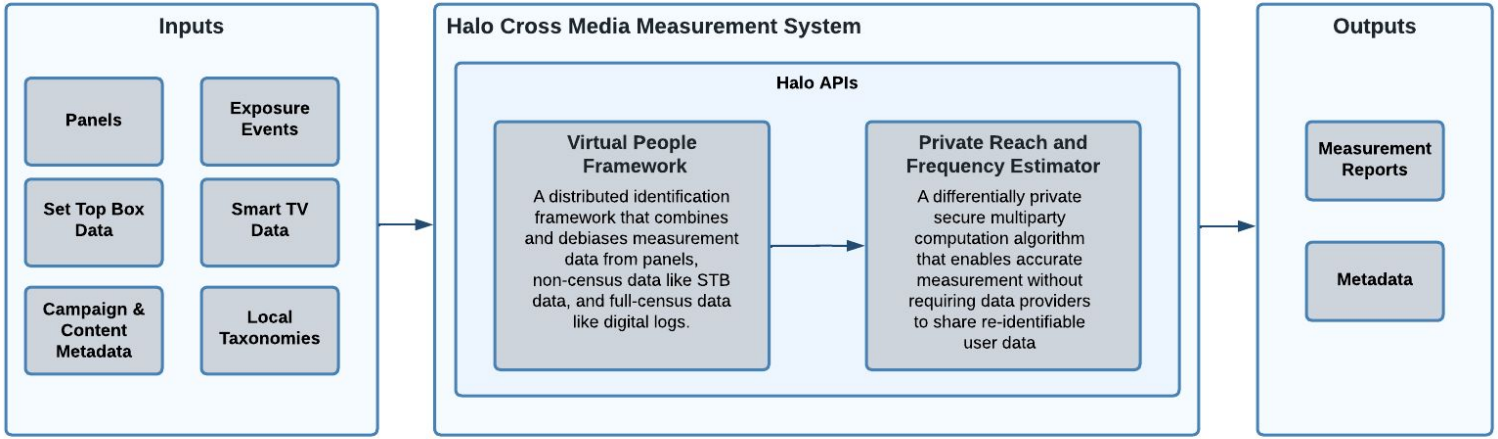
# Halo Virtual People Overview

April 3rd, 2024

# Agenda

- Halo at a Glance
- Virtual People Framework
- Q & A

# Halo at a Glance



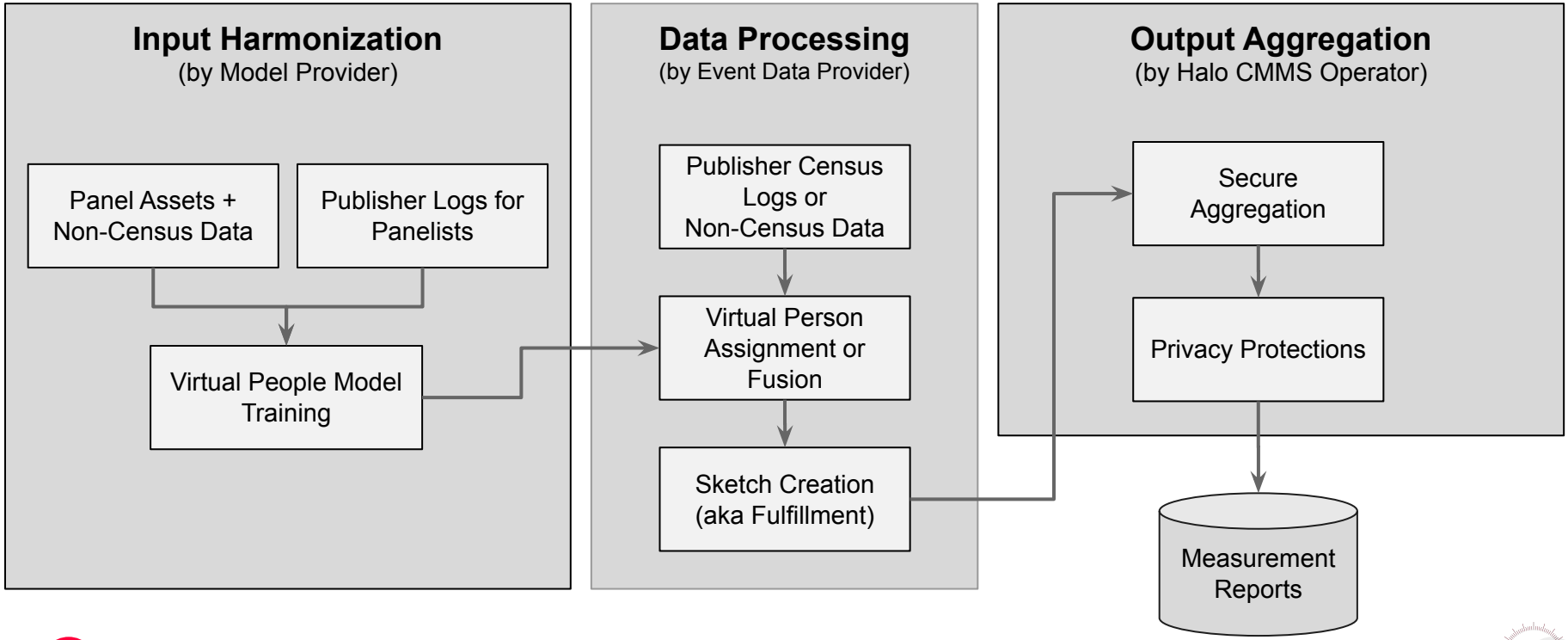

Supported by **two technological pillars** - the Virtual People Framework; and the Private Reach and Frequency Estimator

Halo **collects and transforms local inputs** and configuration to **produce outputs that meet local measurement guidelines** via a suite of APIs

WFA

Halo

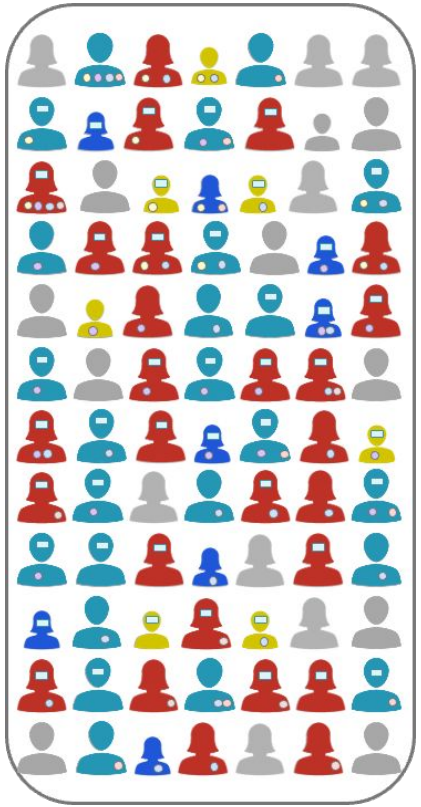
# Another way of looking at it…



# Virtual People Framework

# Virtual Population

- Based on census data and enumeration survey of the country / market
- Consists of Virtual Persons (VIDs)
  - One VID per person in the universe under measurement
    - Each VID has demographic attributes, e.g., gender, age-group, geographic area, …
    - Attributes are in the right proportions matching the enumeration data
  - For example in Italy the Virtual Population might consist of 50 million Virtual Persons
- All measured activity is assigned to Virtual Persons
  - Campaign exposure (and content consumption) at different publishers/broadcasters/platforms
  - Mobile, desktop, CTV, TV, Print, Radio, Out-of-home Advertising
- Is the basis for all reporting



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# Assignment of Activity to Virtual Persons

Two main ways to do it:

1. Using VID Models

2. Data Fusion

# Assignment Using VID Models

## Demographic Correction

- Publisher-provided demographic attributes per digital ID/event provided through the panelist data exchange are corrected using a correction method trained using the panel as the ground truth
- If the publisher doesn't have (complete) demographics, missing information is filled in using information from the panel

| | M 18-24 | M 25-34 | M 35-44 | M 45-54 | M 55-64 | M 65+ | F 18-24 | F 25-34 | F 35-44 | F 45-54 | F 55-64 | F 65+ | 18-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | M | F | Unknown |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M 18-24 | 0,539 | 0,026 | 0,001 | 0,000 | 0,000 | 0,000 | 0,093 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,322 | 0,015 | 0,000 | 0,000 | 0,000 | 0,000 | 0,121 | 0,015 | 0,064 |
| M 25-34 | 0,236 | 0,545 | 0,014 | 0,000 | 0,000 | 0,000 | 0,000 | 0,111 | 0,000 | 0,000 | 0,000 | 0,000 | 0,107 | 0,312 | 0,008 | 0,000 | 0,000 | 0,000 | 0,177 | 0,023 | 0,097 |
| M 35-44 | 0,105 | 0,237 | 0,578 | 0,016 | 0,001 | 0,000 | 0,000 | 0,000 | 0,135 | 0,000 | 0,000 | 0,000 | 0,040 | 0,105 | 0,322 | 0,007 | 0,000 | 0,000 | 0,169 | 0,021 | 0,090 |
| M 45-54 | 0,050 | 0,112 | 0,280 | 0,711 | 0,029 | 0,000 | 0,000 | 0,000 | 0,000 | 0,160 | 0,000 | 0,000 | 0,018 | 0,045 | 0,120 | 0,365 | 0,012 | 0,000 | 0,147 | 0,019 | 0,080 |
| M 55-64 | 0,013 | 0,030 | 0,074 | 0,191 | 0,762 | 0,004 | 0,000 | 0,000 | 0,000 | 0,000 | 0,139 | 0,000 | 0,006 | 0,016 | 0,043 | 0,110 | 0,430 | 0,002 | 0,175 | 0,022 | 0,094 |
| M 65+ | 0,003 | 0,006 | 0,015 | 0,039 | 0,147 | 0,903 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,137 | 0,001 | 0,003 | 0,009 | 0,023 | 0,079 | 0,492 | 0,157 | 0,020 | 0,083 |
| F 18-24 | 0,055 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,577 | 0,032 | 0,001 | 0,000 | 0,000 | 0,000 | 0,329 | 0,015 | 0,000 | 0,000 | 0,000 | 0,000 | 0,007 | 0,109 | 0,062 |
| F 25-34 | 0,000 | 0,044 | 0,000 | 0,000 | 0,000 | 0,000 | 0,212 | 0,544 | 0,016 | 0,000 | 0,000 | 0,000 | 0,114 | 0,320 | 0,008 | 0,000 | 0,000 | 0,000 | 0,011 | 0,184 | 0,103 |
| F 35-44 | 0,000 | 0,000 | 0,038 | 0,000 | 0,000 | 0,000 | 0,074 | 0,193 | 0,522 | 0,014 | 0,000 | 0,000 | 0,040 | 0,103 | 0,319 | 0,007 | 0,000 | 0,000 | 0,009 | 0,157 | 0,088 |
| F 45-54 | 0,000 | 0,000 | 0,000 | 0,043 | 0,000 | 0,000 | 0,030 | 0,083 | 0,223 | 0,567 | 0,021 | 0,000 | 0,018 | 0,047 | 0,125 | 0,374 | 0,012 | 0,000 | 0,008 | 0,140 | 0,078 |
| F 55-64 | 0,000 | 0,000 | 0,000 | 0,000 | 0,060 | 0,000 | 0,011 | 0,029 | 0,082 | 0,206 | 0,667 | 0,003 | 0,005 | 0,014 | 0,037 | 0,091 | 0,383 | 0,002 | 0,009 | 0,139 | 0,078 |
| F 65+ | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,092 | 0,003 | 0,007 | 0,021 | 0,052 | 0,174 | 0,860 | 0,001 | 0,004 | 0,009 | 0,024 | 0,083 | 0,504 | 0,009 | 0,150 | 0,084 |

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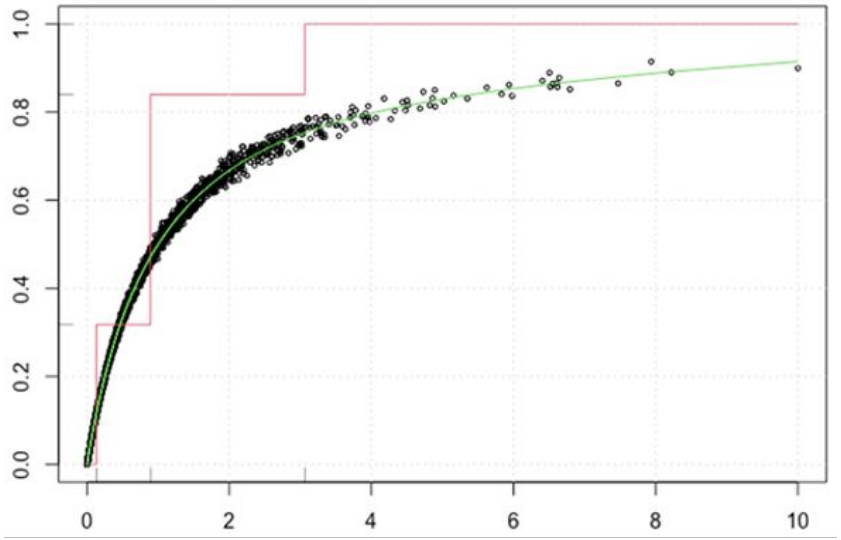
# Assignment Using VID Models

Reach Modelling

- We train a model based on the digital ID-generating behavior of panelists
- Assignment of digital IDs and their associated events (campaign exposure and content consumption) to VIDs reproduces the reach curve (#IDs → #Virtual Persons)




$$r = \sum_i \alpha_i \left(1 - e^{-\delta_i c}\right)$$

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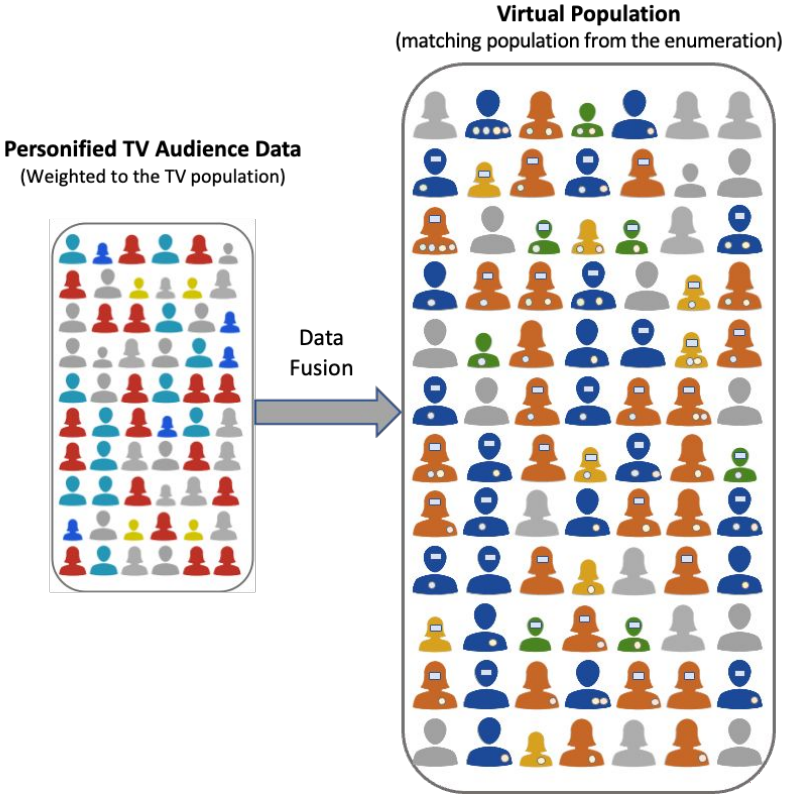
# Assignment using Data Fusion (Example)

- Household-level viewing from set-top-box households
- Personified viewing using household demographic information and surveys
- Large sample weighted to the Virtual Population
- Viewing of people in the weighted sample fused with VIDs in the Virtual Population respecting demo-/geographic attributes and weights and other fusion clues.

- Similar method can be applied to any weighted respondent-level dataset, e.g., print, radio, and out-of-home advertising data



# Q&A

For a complete introduction see: The Halo Cross-Media Measurement Framework

# Halo CMM

## Community Town Hall

April 3 2024