AM AGENDA

Slide Numbers	Session Name	Speakers
4-21	**Opening Remarks: The New Normal and the Need to Rearchitect ourselves**	• Dennis Buchheim, EVP & GM, IAB Tech Lab • Neal Richter, Chief Data Scientist, SpotX
22-32	**The Gathering Storm on Privacy: GDPR, CCPA, and Federal Regulation (Privacy for America)**	• Dave Grimaldi, EVP, Public Policy & General Counsel, IAB • Danny Sepulveda, SVP, Policy and Advocacy, MediaMath • Ari Levenfeld, Chief Privacy Officer, Quantcast
33-55	**Unpacking the new TCF 2.0**	• Grant Nelson, Product Manager, Privacy, Xandr
56-80	**The European Perspective on Navigating Privacy Regulation**	• Daniel Green, Commercial Director, SVP Sales, Adform
81	**CCPA – How to Think About Requirements on January 1**	• **Moderator:** Jennifer Derke, Director of Product, Automation, IAB Tech Lab • Jill Wittkopp, Senior Product Manager, Rakuten Marketing • Daniel Spring, Director of Product, Verizon Media
82	**Data, Power, Competition, and the Future of the Digital Economy**	• Avery Gardiner, Senior Fellow, Center for Democracy and Technology
83-92	**Data Transparency: Unpacking the New Cross-industry Standard for Audience Data Labeling**	• Moderator: Benjamin Dick, Director of Product, Data, IAB Tech Lab • Gillian MacPherson, VP, Digital Strategy & Product, Epsilon • Randy Antin, Head of Product Marketing, LiveRamp • Dave Smith, SVP, Monetization & Yield, Pandora • Steve Silvers, GM, VP of Product and Customer Experience, Neustar
93-109	**Data Quality: Emerging Techniques to Validate Attribute Density + Accuracy**	• Ted McConnell, SVP, Business Development, Luc.id • Paul Donato, Chief Research Officer, ARF
110-122	**Edge Computing vs Cloud Computing in a Privacy-first World**	• Joe Root, Co-Founder, Permutive
123-147	**Transforming Mobile Personalization With Edge Computing**	• Abhishek Sen, Co-Founder and CEO, NumberEight

Slide Numbers	Session Name	Speakers
147-162	**Tech Lab's Proposal for Enhanced Consumer Privacy & Accountability**	• Jordan Mitchell, SVP, Membership & Operations, IAB Tech Lab
163-173	**Google Ads Proposal + Q&A: How to Give Users Transparency, Choice, and Control Over Their Data**	• Chetna Bindra, Senior Manager of Product, Privacy, Google
174-183	**Competing Browser Worldviews: A Technical Discussion on Privacy Positions + Q&A**	• Sam Tingleff, Chief Technology Officer, IAB Tech Lab • Neal Richter, Chief Data Scientist, SpotX
184	**The Crumbling Cookie: Can Universal IDs Help or Will We need More?**	• **Opening Remarks:** Will Doherty, EVP, Global Marketplace Development, Index Exchange • **Moderator:** Ronan Shields, Programmatic Editor, AdWeek • Jordan Mitchell, SVP, Membership & Operations, IAB Tech lab • Gruia Pitigoi-Aron, Vice President, product, The Trade Desk • Scott Menzer, Co-Founder & VP, Product & Operations, ID5 • John Slocum, Vice President, Data Management Platform, MediaMath • Will Doherty, EVP, Global Marketplace Development, Index Exchange
185-196	**Decentralized Solutions for AdTech and DATA – Ethereum and Beyond**	• Alanna Gombert, Head of Advertising Technology, ConsenSys
197-210	**Update on PrivacyChain: Operating Plan + Limited Partner Release**	• Wendell Baker, Distinguished Architect, Targeting & Identity, Verizon Media
211-224	**The Evolution of CTV: Protocols, Audience and Content Data**	• Jessica Berman, Senior Product Manager, Audience, Data and Privacy SpotX
225-259	**Perspectives on Cross-Device & The Evolution of Targeting and Measurement**	• Ajit Thupil, Senior Vice President, Identity, Tapad • Travis Clinger, Vice President, Strategic Partnerships, LiveRamp • Tamara Greasby, Director, Data Science, The Trade Desk
260-269	**Return on Marketing Investment – New Study on Incrementality**	• Neal Bailey Rich, Partner and Director, Marketing, The Boston Consulting Group • Angela Venus, Head of Retail Measurement, Facebook
270-271	**Closing Notes**	• Dennis Buchheim, EVP & GM, IAB Tech Lab

Growth & evolution of automation…

US Display Ad Spending Share, by Type, 2011-2017
% of total

Non-Programmatic

Programmatic

Year	Nonprogrammatic	Non-RTB programmatic	RTB
2011	76%	13%	11%
2012	62%	18%	19%
2013		29%	28%
2014		29%	34%
2015	27%	32%	41%
2016	21%	32%	47%
2017	17%	31%	52%

■ RTB ■ Non-RTB programmatic ■ Nonprogrammatic

…has fueled challenges:

- Consumer backlash
- Privacy regulation
- Brand safety
- Fraud
- Measurement challenges
- Lack of transparency
- Infrastructure costs
- More…

Source: eMarketer. And while this chart shows US growth, the pattern globally has been similar if not more dramatic.

Welcome to the New Normal: A Confluence of Trends

CONSUMER SENTIMENT

- Anti-establishment sentiment → distrust of consolidated corporate, economic, political power & institutions

- Increasing awareness & cynicism of "tracking economy", fueled by:
  - Publicized data breaches
  - Election scandals
  - Experiences with "creepy" / intrusive ads

LEGISLATIVE & POLITICAL ENVIRONMENT

- Sweeping privacy laws (GDPR, CCPA, etc.) and proposals for additional taxation of Silicon Valley (France)

- 2020 US campaign (Warren: anti-trust?, Sanders: anti-corporate?)

FOUNDATIONAL TECH CHANGES

- Cookies are old tech & have been vilified for facilitating:
  - Redundant, expensive, inefficient ID ecosystem
  - Poor consumer privacy controls & user experiences
  - Browser vs. ad tech arms race

- Browsers now competing primarily on privacy features

Governments Are Taking Action – Globally…

Many countries/regions are moving towards privacy laws and have "GDPR-like" features…notably, consumer consent or, as with CCPA, an opt-out requirement.

REGULATION & ENFORCEMENT

HEAVY
ROBUST
MODERATE
LIMITED

Source: www.dlapiperdataprotection.com

...and across the U.S.

California
- CCPA provides right to access data, delete data, opt-out of data "sales"
- Goes into effect in January 2020
- Requires sites to display button for users to opt-out of selling/sharing data
- CA Attorney General may amend this Fall (IAB informed)

Washington
- Followed GDPR-like model
- Was modified to be more workable for media (IAB informed)
- Bill collapsed before session expired

New York
- Data-fiduciary obligation, with duties of care & loyalty
- NYC bill prohibiting use of location data in 5 boroughs
- Broad definition of personal information that includes unique identifiers
- Mandatory disclosures anytime data is shared with a "3rd party"

Nevada
- More limited definitions of PI & "sale" than CCPA
- IAB working to prevent overly-restrictive standards that would significantly inhibit online ads

Texas
- New data privacy bill moved to be 2-year study

CALIFORNIA CONSUMER PRIVACY ACT

Cookie-based

OR

iOS vs. Android

Provided by Device OS

OR

Inferred (probabilistic)

- **There are 3 types of identifiers … for ANY audience recognition purposes:**

  - Data collection, segmentation, targeting

  - Measurement, analytics, attribution

  - *Privacy*

  - Single device or cross-device
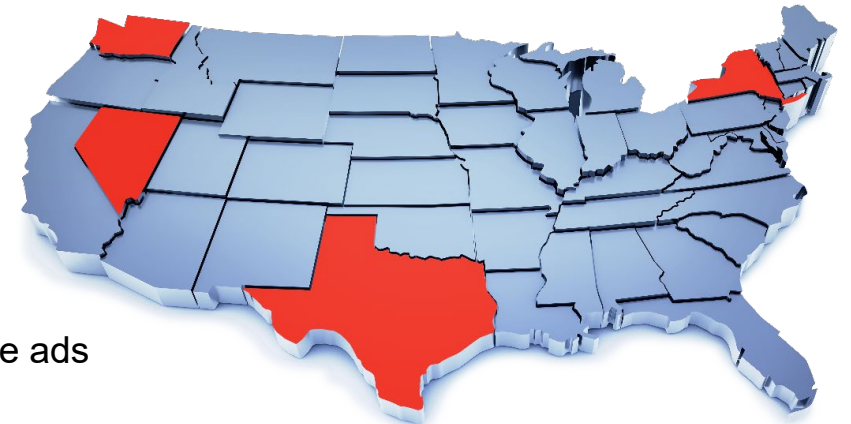
Importance of Identifiers Has Driven Proprietary IDs and Competition

"Open Ecosystem" – Major publishers & ad tech providers have invested to develop competitive, proprietary solutions to offer clients:

| ADDRESSABILITY & TARGETING | MEASUREMENT & ATTRIBUTION |

Result: Identity fragmentation, extensive synching, inconsistent privacy

---

"Walled Gardens" – Consumer engagement & value exchange at scale:
- Build virtuous cycle of consumer preference + identity resolution
- Use complementary network effects to aggregate, retain, grow advertising budgets by consistently *demonstrating ROI via targeting, measurement*
- Play gatekeeping role for publisher content

Result: Continued accumulation of market share

While Cookies Crumble with Browser Changes

How We Address These Challenges

Market Development
(supporting sales/marketing)

- Education & certification
- Research
- Best practices & guidelines
- Public Policy
- Events & networking

PROPRIETARY

- Product/Service development
- Operational innovation

INNOVATION

- Packaging & pricing
- Competition

Technical Standards
(supporting product development)

- Standardized protocols & specifications
- Software & tools
- Compliance programs
- Supporting education & events

Sharing the cost, sharing the benefits

Member-driven, member-developed

Engage a member community globally to develop foundational technology and standards that enable growth and trust in the digital media ecosystem.

Broad availability & utility, by design

We live this – as a neutral, transparent, open-source, non-profit org

Tech Lab's Work – Overview

THEME (Prioritized)	❶ IDENTITY, DATA, & CONSUMER PRIVACY	❷ BRAND SAFETY & AD FRAUD	❸ AD EXPERIENCES & MEASUREMENT	❹ PROGRAMMATIC EFFECTIVENESS
Portfolio	• DigiTrust ID • OTT IFA • Identity Validation • Data Label • Audience Taxonomy • Transparency & Consent Framework • CCPA solution • PrivacyChain	• ads.txt / app-ads.txt • sellers.json • SupplyChain object • ads.cert • Content Taxonomy • Ad Product Taxonomy • TAG engagement	• VAST • SIMID (VPAID vNext) • MRAID • New Ad Portfolio • Dynamic Content Ads • SafeFrames • Open Measurement • Podcast Measurement	• OpenRTB • OpenDirect • Ad Management API • Blockchain education
Value Prop	*Provide consumer ID standards, advocate with browsers/platforms for technology solutions, develop technical frameworks for privacy compliance, provide standards for responsible data exchange and use.*	*Provide specifications that facilitate transparency and support identifying fraudulent transactions, a pair of taxonomies that can be used in tandem, and software/API for streamlining verification.*	*Develop standards and guidelines for video and mobile ad experiences and measurement. Open Measurement is a key investment, supporting scaled verification and more through a range of vendors.*	*Provide the core standards that enable efficient integration of systems across programmatic partners, supporting transactions, creative approval, and more.*

Tech Lab's Work – Most Relevant to Today

THEME (Prioritized)	❶ IDENTITY, DATA, & CONSUMER PRIVACY	❷ BRAND SAFETY & AD FRAUD	❸ AD EXPERIENCES & MEASUREMENT	❹ PROGRAMMATIC EFFECTIVENESS
Portfolio	• **DigiTrust ID** • **OTT IFA Guidelines** • **Identity Validation** • **Data Label** • **Audience Taxonomy** • **Transparency & Consent Framework** • **CCPA solution** • **PrivacyChain**	• ads.txt / app-ads.txt • sellers.json • SupplyChain object • **ads.cert** • **Content Taxonomy** • Ad Product Taxonomy • TAG engagement	• VAST • SIMID (VPAID vNext) • MRAID • New Ad Portfolio • Dynamic Content Ads • SafeFrames • **Open Measurement** • Podcast Measurement	• **OpenRTB** • **OpenDirect** • Ad Management API • **Blockchain education**

INFLUENCE PROJECTS

- **Browser engagement to de-escalate arms race:**
  - Preserve content+services for consumers
  - Establish mutual commitment to effective privacy controls
  - Collaborate on accountability approach to enforce respect of privacy preferences

- **Strengthen DigiTrust ID** to work within browser restrictions

- **Find technical solutions for privacy legislation**: GDPR, CCPA WG, Privacy for America

1. **100% audience recognition**
   - Honor consumer privacy settings
   - Improve industry privacy compliance
   - Support measurement, attribution, etc.

2. **75% fewer third-party requests on pages**
   - Eliminate need for ID synch
   - Reduce data leakage concerns for publishers
   - Improve consumer experience (page load)

3. **Reduced regulatory risk (GDPR, CCPA, etc.) by coupling consumer privacy settings to a persistent ID/token**

4. **End browser vs. ad-tech arms race**

1. Status quo is not realistic.

2. Browsers will **NOT** simply provide an IFA.

3. Mobile device IDs are next to go.

4. True first-party relationships WILL continue to be respected… but **NOT** third-party relationships.

5. Browsers will **NOT** accept "a handful of cookies".

6. Consumers & first parties will have full control over data.

And finally…

7. An update in privacy standards &
a **standardized ID token** is needed.

Tech Lab today released a
Proposal for Enhanced Accountability:

- **Global, neutral, single device (not cross-device)**

- **Simple to understand consumer privacy settings,**
consistent with any locally applicable privacy law

- **Controlled distribution & use of a <u>revocable</u> ID token**
  o Privacy preferences directly coupled
  o Access tied to compliance
  o Revocation is penalty for non-compliance

- **Industry accountability & governance**
  o Technology mechanisms to surface non-compliance
  o Annual compliance reviews?

A Proposal for Enhanced Accountability
to Consumer Privacy within the Digital
Marketing Industry

Request for Collaboration to Improve Consumer Trust and Experience
with Technology Standards for Consumer Privacy

Draft dated August 6, 2019 -- for private consumption among participants.

Executive Summary

The Digital Marketing industry recognizes that improved consumer experience and trust is
essential to the growth of our industry, growth of the Web as a public benefit, and to assuring a
vibrant, inclusive, open, global and healthy Internet. We recognize our responsibility to
contribute towards a more secure, trusted user experience that respects consumer privacy (as a
fundamental consumer right). We also recognize the challenge of doing so while supporting the
economic viability of a diverse publisher landscape, with consumption models that support
quality content and open access for consumers.

The current operational and political environments, combined with the constraints inherent
within established Internet protocols, implies that the digital marketing industry and browser
community must collaborate if we are to meaningfully improve the consumer experience and
consistently honor consumer privacy rights and preferences. Our industry's trade associations,
which lead standards and best practices for our industry, have discussed programs and support
for solving these issues responsibly that we would like to present for discussion, collaboration
and joint problem-solving.

With a better consumer experience and the preservation of the global open Internet as our joint
objective and common ground, we ask for browsers' cooperation in establishing and facilitating
the use of a common, standardized mechanism for shared storage and access to:
- a standardized, restricted user token ,
- regulatory settings (consent strings, timestamps, permissions flags, etc.), and
- consumer privacy preferences.

We understand that participants within the browser and privacy community may not trust our
industry to consistently respect consumers' privacy rights and preferences. However, we cannot
do so if there is no persistent mechanism to attach those preferences to, and we understand

Discussion: Where do we focus at this pivotal moment?

Dennis Buchheim
Executive Vice President & General Manager
IAB Tech Lab
@dbuchheim @IABTechLab

Neal Richter
Chief Data Scientist, SpotX
Chairman, Tech Lab
OpenRTB, ads.txt, more…
@nealrichter @SpotX

"The Gathering Storm on Privacy"
GDPR, CCPA, and Federal Regulation (Privacy for America)

Dave Grimaldi
Executive Vice President
Public Policy & General Counsel
IAB
@iab
@DSepDC

The Policy Landscape: Challenges and Opportunities

An Erosion of Trust

- 2008-2016: Technology industry enjoys love affair with Washington

- 2016: The use, sale, and "gaming" of data is thrust into spotlight

- 2018: Scrutiny grows amid breaches, confusion, conflation, and fear

- 2018/2019: CCPA becomes the new normal

An Evolving World of Oversight

- GDPR was implemented in mid-2018 and altered publishers' relationship with consumers, created massive compliance efforts and caused exiting from that market by a number of U.S. market participants

- CCPA will become effective in January 2020 and will also alter the relationship between publishers and consumers, as well as create significant compliance efforts

- Privacy bills are currently pending in numerous states

- Some states might look to the GDPR opt-in approach or the CCPA opt-out approach with the potential for numerous conflicting areas

- Federal legislation is likely to look different than California, with Democrats wanting CCPA as the "floor" and Republicans wanting Federal pre-emption over state privacy bills

- Takeaway: The digital advertising industry is becoming regulated, as has historically happened in other industries. IAB needs to make certain critical changes to position it to assist the industry with the challenges that are ahead

iab.TECH LAB
INNOVATION DAY

House and Senate Feedback on New Federal Framework

- Sen. Wicker (R): *A national framework does not mean a weaker framework, but a preemptive framework that ensures consumers will have the same level of protection across the United States.*

- Sen. Cantwell (D): *I find this effort somewhat disturbing, that as our country is grappling with all the privacy violations we've seen, the first thing people want to organize is a preemption effort.*

- Rep. Walden (R): *We can improve the security and privacy of consumers' data without adding to the confusion or harming small businesses and entrepreneurs – so Congress should thoughtfully consider what various states are proposing so we deliver that certainty with a national standard.*

- Sen. Schatz (D): *I understand that from the standpoint of some of the companies, the holy grail is preemption. And I want you to understand that you're only going to get there if this is meaningfully done.*

- Rep. Schakowsky (D): *Data collection industry had become an economic powerhouse "gobbling up every piece of consumer data it can.*

- Sen. Moran (R): *We need to provide clear-and-measurable requirements in statutory text for the FTC to utilize while also creating appropriate flexibility in narrow rulemaking authority*

- Sen. Blumenthal (D): *We have a trust gap that we need to bridge*

iab. TECH LAB
INNOVATION DAY

Busy in Washington, With a Big 2020 to Come

- IAB testimony
- Biggest fly-in
- Committee briefings
- Canvassing Hill

- Vetting new issues
- Leadership inquiries
- Making econ. case
- Connecting parties

CCPA: The Basics

CCPA covers for-profit entities wherever they are located if the entity collects and determines the purpose and means of processing personal information of CA residents and meets one or more of the following criteria:
- (1) has annual gross revenues of $25 million;
- (2) obtains, on an annual basis, personal information of 50,000 or more consumers/households/devices; and
- (3) derives 50% or more of its annual revenues from selling personal information

CCPA affords consumers:
- the right to know what personal information a company has collected about them;
- where the information originated;
- the use of the information;
- whether and to whom the information is being disclosed or sold; and
- the rights they have been afforded under the CCPA

Congress to the Rescue?? Hopefully.

Privacy for America ("P4A"): the push for a national bill

- Consumers, content providers, and innovators should not have to navigate 20-50 individual state privacy bills

- Members of the U.S. House of Representatives and Senate are expressing bipartisan support for a national privacy law (but, of course, there are politics around it)

- P4A legislation purports to:
  - prohibit data practices that are "unreasonable" while allowing beneficial ones;
  - create a new Federal Trade Commission ("FTC") Data Protection Bureau to enhance the FTC's longstanding expertise in overseeing privacy matters;
  - grant strengthened rulemaking authority to the FTC, and authorize strict penalties for companies that engage in prohibited data practices;
  - require strong data security protections to guard against data breaches.

IAB Covering the Landscape: A Triple-play Across Policy, Legal, and Tech Lab

IAB Public Policy Council: State Privacy Working Group

- Drafting legislative amendments
- Providing member updates on key legislative developments
- Testifying before state legislature and AG
- Hosting member company fly-ins in Sacramento
- Submitting letters of support and opposition
- Organizing PR campaigns

IAB Tech Lab: CCPA Technical Working Group

- Developing technical solutions for CCPA compliance
- Determining signals to be sent through ad tech ecosystem
- Updating IAB standards to support compliance
- https://iabtechlab.com/working-groups/ccpa-us-privacy-technical-working-group/

IAB Legal Affairs Council: CCPA Taskforce

- Developing the *CCPA Roadmap* – a structured framework of digital advertising compliance obligations
- Developing industry compliance framework in partnership with the Tech Lab
- Drafting CCPA Data Processing Addendum
- Filing amicus briefs in key CCPA cases

iab. TECH LAB
INNOVATION DAY

Unpacking the New TCF 2.0

**Grant Nelson
Product Manager, Privacy
Xandr
@Grantimus9 @xandr76**

GDPR in 10 Seconds

Can process personal data

Purpose

Company

Legal Basis

GDPR in 10 Seconds

Purposes
- Select Basic Ads
- Select Personalized Ads

Purpose

Company

Legal Basis

Company
- Advertising Inc
- Content Recommendations Inc

Legal Basis (~2)
- Consent
- Legitimate Interest

iab.TECH LAB INNOVATION DAY

Road to 2.0

- April 2018: Version 1.0 Released
- May 2018: GDPR Enforcement Begins
- June 2018: TCF v2.0 Work Begins
- … Still Working …
- April 25, 2019: TCF v2.0 Goes into Public Comment
- May 25, 2019: TCF v2.0 Comment Period Ends
- August 21, 2019: TCF v2.0 Officially Released

iab.TECH LAB
INNOVATION DAY

New in 2.0: New Purposes

Purposes define <u>why</u> data will be collected

- Expanded & Subdivided 1.0 Purposes
- Not Backwards Compatible
- Includes Legal Text & **User Friendly Text**
- Includes Vendor Guidance to clarify activities each purpose covers

Purposes
Select Basic Ads
Select Personalized Ads

New in 2.0: New Purposes

- Purpose 1 - Store and/or access information on a device (ePrivacy)
  - Cookies, device identifiers, or other information can be stored or accessed on your device for the purposes presented to you.

- Purpose 2 - Select basic ads
  - Ads can be shown to you based on the content you're viewing, the app you're using, your approximate location, or your device type.

- Purpose 3 - Create a personalized ads profile
  - A profile can be built about you and your interests to show you personalized ads that are relevant to you.

- Purpose 4 - Select personalized ads
  - Personalized ads can be shown to you based on a profile about you.

iab.TECH LAB
INNOVATION DAY

New in 2.0: New Purposes

- Purpose 5 - Create a personalized content profile
  - A profile can be built about you and your interests to show you personalized content that is relevant to you.

- Purpose 6 - Select personalized content
  - Personalized content can be shown to you based on a profile about you.

- Purpose 7 - Measure ad performance
  - The performance and effectiveness of ads that you see or interact with can be measured.

- Purpose 8 - Measure content performance
  - The performance and effectiveness of content that you see or interact with can be measured.

New in 2.0: New Purposes

- Purpose 9 - Apply market research to generate audience insights
  - Market research can be used to learn more about the audiences who visit sites/apps and view ads.

- Purpose 10 - Develop and improve products
  - Your data can be used to improve existing systems and software, and to develop new products.

New in 2.0: Features

Features cut across purposes

- Feature 1 - Match and combine offline data sources
  - Data from offline data sources can be combined with your online activity in support of one or more purposes.

- Feature 2 - Link different devices
  - Different devices can be determined as belonging to you or your household in support of one or more of purposes.

- Feature 3 - Receive and use automatically-sent device characteristics for identification
  - Your device might be distinguished from other devices based on information it automatically sends, such as IP address or browser type.

iab. TECH LAB
INNOVATION DAY

New in 2.0: Special Purposes

**The user is not permitted to decline <u>Special</u> Purposes –
e.g. you cannot opt out of HTTP, cannot opt out of anti-fraud measures**

- Special Purpose 1 - Ensure security, prevent fraud, and debug
  - Your data can be used to monitor for and prevent fraudulent activity, and ensure systems and processes work properly and securely.

- Special Purpose 2 - Technically deliver ads or content
  - Your device can receive and send information that allows you to see and interact with ads and content.

New in 2.0: Special Features

Special Features are cross-cutting and require user opt-in

- Special Feature 1 - Use precise geolocation data
  - Your precise geolocation data can be used in support of one or more purposes. This means your location can be accurate to within several meters.

- Special Feature 2 - Actively scan device characteristics for identification
  - Your device can be identified based on a scan of your device's unique combination of characteristics.

New in 2.0: Legitimate Interest

Legal Basis (~2)
Consent
Legitimate Interest

- Poorly supported in 1.0, now explicit

New in 2.0: Legitimate Interest

- Example: You are Vendor #21 and receive a signal

TCF 1.0

Signal Says:
Purposes: [1, 2, 4]
Vendor21: True

Lacks precision

TCF 2.0

Signal Says:
ConsentPurposes: [1, 4]
Vendor21Consent: True
LIEstablishedPurposes: [2]
Vendor21LI: True

Clearly Indicates LI vs. Consent per vendor

Variable names are illustrative

New in 2.0: Publisher Restrictions

• Publishers can now pinpoint knockout purposes <u>Per Vendor</u>

Hypothetical Example #1:

I'm a publisher that wants to rely on consent for purposes 1, 2, & 3, and I want to work with both vendors A and B.

However, I do not want vendor B to be able to process data for purpose #3 (building ads profile); I only want them to be able to help me with data processing for purposes #1 and 2 (Select Basic Ads).

I'm fine with vendor A processing data for all 3 purposes.

I can now, using TCF 2.0, indicate in the string that Vendor B is *disallowed* from processing this information for purposes of building an ads profile.

New in 2.0: Publisher Restrictions

Hypothetical Example #1:
Publisher's preferences:

	Purpose 1 (cookies/app access)	2 (Select Ads)	3 (build ads profile)
Vendor A	☺	☺	☺
Vendor B	☺	☺	NO

New in 2.0: Publisher Restrictions

- Publishers can now require a specific legal basis <u>Per Vendor</u>

Hypothetical Example #2:

I'm a publisher that wants to rely on consent for all purposes, and I only want to work with vendors that want to operate on the basis of consent.

I can now use a publisher restriction to indicate to all downstream vendors that if they want to process data, they must do so on the basis of consent.

I recognize that this may mean some vendors simply do not participate because they operate on the basis of Legitimate Interest for a specific purpose, but that's ok.

Key Note: This does not permit a vendor to ask for Consent and "fall back" to Legitimate Interest.

- Corollary: Vendors can easier support multiple jurisdictions' interpretation of legal basis

New in 2.0: Out Of Band (Still in TCF)

- For vendors that are using the TCF only

- Enables TCF vendors to establish legal basis without the intermediary of another company by working with consumer directly.

- Useful for web services that also advertise

New in 2.0: Out Of Band (Still in TCF)

Example:

I'm a web service with authenticated users. I ask them when they visit my site for their valid consent to show them customized ads across the web, which they grant. Now that I have the user's consent, I can show them customized ads on other sites, regardless of what another vendor thinks, because I have a direct relationship with my users.

This does not override instances where the TCF signal says the user was asked and specifically rejected my company for that instance. The specific overrides the general.

iab. TECH LAB
INNOVATION DAY

New in 2.0: Out Of Band (Still in TCF)

- This only works for vendors that are on the Global Vendor List & Participants in TCF. There is no "non-TCF" option.

CMP Validator Program

- Re-registering & testing every CMP

What to Expect Next

- JavaScript & Server-Side Example Libraries

- Deprecation of v1.0 in early 2020

Resources

- TCF Policies: https://iabeurope.eu/tcf-2-0/

- TCF Tech Spec: IAB Tech Lab GitHub: https://iabtechlab.com/gdpr-tech

The European Perspective on Navigating Privacy Regulation

Daniel Green
Commercial Director, SVP Sales
Adform
@adform

PERSPECTIVES

- The regulatory situation
- The current reality
- What is next
- A tribute

adform

Regulatory, Legislative and Industry Landscape in Europe

1. Regulatory Landscape

- ICO Adtech report
- CNIL Cookie Guidelines
- ICO Cookie Guidelines

2. Industry Landscape

- IAB Europe and Regional engagement
- Dialog with DPAs
- TCF V2
- Jonny Ryan Complaints
- German Complaints

3. Legislative Landscape

- ePrivacy Regulation
- GDPR Enforcement

adform

iab.TECH LAB
INNOVATION DAY

ICO Adtech Report

Main concerns that were called out:

- Data supply chain - transparency in downstream data sharing

- Legal basis for processing: Consent vs Legitimate Interest (LI)

- Special categories of data

- Security and confidentiality within the sharing network

- Data protection impact assessment

ICO and CNIL Cookie Guidelines
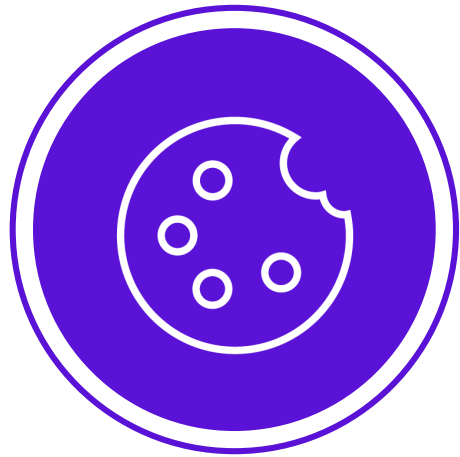
Main takeaways:

- Consent: No implied consent, Granular consent
- Transparency: Listing all parties that place cookies
- Relying on browser settings is not sufficient
- Cookie walls are prohibited
- Legal basis for subsequent processing: Consent vs LI
- Cookie lifespan and retention period (13 months, 25 months)
- Reject ALL, accept All option in the first layer of the consent UI
- Analytical cookies do not require consent (CNIL)

EU ePrivacy Regulation

🔒 Background

- Replacing the old cookie law (ePrivacy Directive 2002) and will be directly applicable to all of EU

- Applicable to cookies, electronic marketing, behavioural advertising, online tracking and similar

- Unlikely to come into effect before 2022 due to a 24 months grace period

- **A lot of industry fear was placed on ePrivacy in the past**

EU ePrivacy Regulation

Latest draft (July) brings positive news

- **Cookie consent:** Acknowledgement that cookies can be a legitimate and useful tool e.g. for **website advertising (**Rec.21a). It's helpful to adtech to have explicit statements that another party may be requested to obtain consent for ad network providers, and that consent may cover "subsequent readings".

- **Conditional consent** (Rec. 20) and the monetary payment conditional to the consent Who must obtain consent (rec 20) The end-user's consent to storage of a cookie or similar identifier may also entail consent for the subsequent readings of the cookie in the context of a revisit to the same website domain initially visited by the end user." – Rec.20.

- **Direct marketing:** to include behavioural advertising (Rec. 32)

GDPR Fines Has Not Yet Impacted Adtech

GDPR Enforcement Examples

Fine in EUR	Country	Reason
5.000	Austria	Unlawful video surveillance
220.000	Poland	Failure to inform individuals that their data was being processed
225.000	Spain	Lack of transparency in the design of its smartphone application
50.000.000	France	Conditions for obtaining consent from users.

Learnings: Transparency and Trust

adform

Things Didn't Change That Much After GDPR

GDPR

Life got a bit more annoying – online and offline

- Still on a journey from opt-out, to soft opt-in, to hard opt-in

Spend in Europe didn't really change – on the advertiser side

- We mainly noticed a dip from outside Europe

The landscape is very nuanced

- Across adtech, publishers and brand but also countries

Adtech Companies Are Pretty Uniform

Running TCF – with some exception

With transfer agreements between them – few outliers

Similar consumer rights offerings – although in many flavors

adform

iab. TECH LAB
INNOVATION DAY

The Publisher Landscape Is More Diverse

✓ Reasonably high uptake
of CMPs

✓ Significant differences between
countries and publisher sizes

✓ Significantly different
CMPs and UI choices

% Bid Requests with IAB TCF signals in EEA
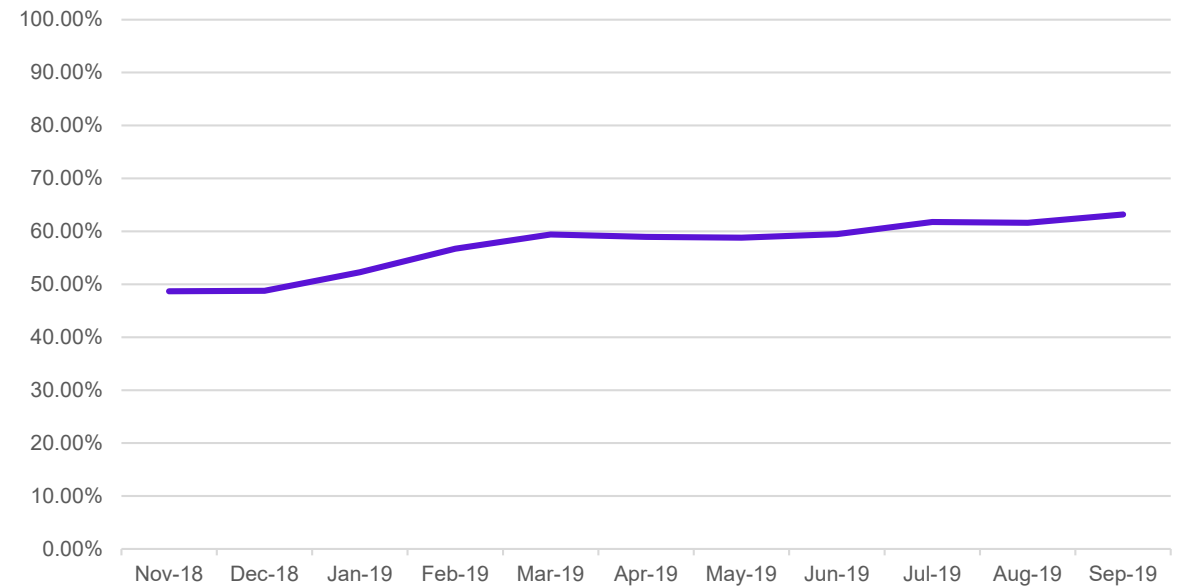
Advertiser Websites Seem Least Compliant

✓ Generally quite limited focus …but gradually changing

✓ ~86% of consent notices [OK] style

✓ Impact on advertising if/when DPAs trigger a change

Examples from a German DPA

Do the websites fulfill the requirements for a valid consent?

- ● YES
- ● NO

Category	YES	NO
Prior	8	32
Informed	4	36
Freely	8	32

(axis: 0, 10, 20, 30, 40)
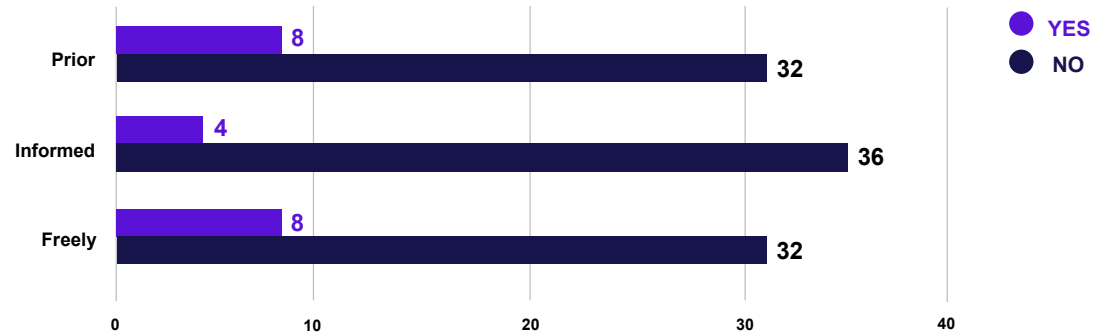
Example from UK

About Cookies On This Site
We use cookies to personalize and enhance your experience on our site.
Visit our Privacy Policy for more information on our data collection practices.
By clicking Accept, you agree to our use of cookies for the purposes listed in
our Cookie Consent Tool.

Decline

Accept

▶ ▤ IndexedDB
▤ Web SQL
▼ 🍪 Cookies
  🍪 https://www.dell.com
  🍪 https://servedby.flashtalkin
  🍪 https://secure.img-cdn.mec
  🍪 https://dell.demdex.net

adform

iab. TECH LAB
INNOVATION DAY

The Big Changes Are Probably Still to Come

All websites will switch to explicit cookie consent

I am over 16 years old and I agree that Usercentrics GmbH uses tracking technologies from 3rd parties to process personal data in order to create a user profile and display interest-related advertising to me. I can withdraw my content at any time with effect for the future. For more info you can click here.

| Deny | Accept | More info |

Powered by Usercentrics Consent Management

- Publisher adoption will break 90% by end 2020
- RTB data and recipients will be scrutinized and potentially reduced.
- **Going from contractual undertaking to compliance auditing**
- **ePrivacy will delay regulators but unlikely to be disruptive**
  - **Advertiser CMPs will have some impact**
    - **Moving from 3rd to 1st party IDs**

adform

iab. TECH LAB
INNOVATION DAY

What We Must Do as an Industry
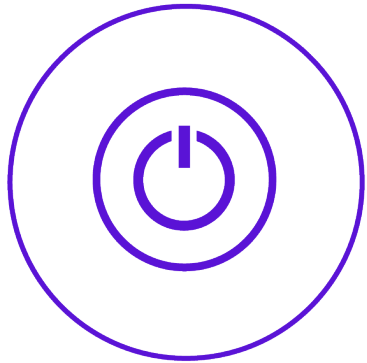
Many Obvious Actions

- TCF2.0
- support the dialogue with DPAs – directly and indirectly
- facilitate compliance monitoring/auditing
- ...

We must solve
the 3rd party cookie/ID conundrum!

Solving The 3rd Party Cookie/ID Conundrum

- The scope of 3rd party cookies decreasing albeit substituted by privacy-friendly ad measurement
  - In turn, publishers likely to support 1st party industry-wide initiatives offering consumers strong privacy and opt-out options
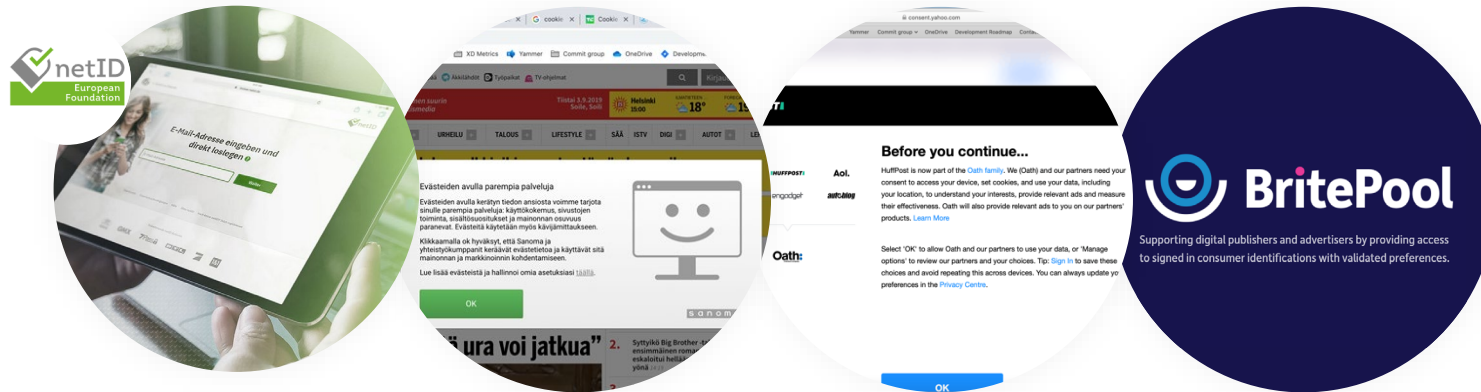
We believe the future should be based on
IAB Techlab's Digitrust

THANK YOU! – to the many TCF heroes
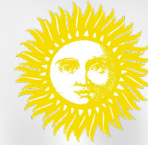
THANK YOU! – to the many TCF heroes

Towney Feehan, IAB Europe

Matthias Matthiesen, IAB Europe, Quantcast

Jennifer Derke, IAB Tech Lab   Dennis Buchheim, IAB Tech Lab

Ghita Harris-Newton, Quantcast   Ari Levenfeld, Quantcast

Julia Shullman, Xandr   Alice Lincoln, MediaMath

Stevan Randjelovic, GroupM   Wil Shobeiri, MediaMath

David Savage, AOL, Oath, Verizon Media   Shane Wiley, Yahoo   Brad Kulick, Yahoo

Colin O'Malley, Lucid Privacy Group   David Wainberg, The Trade Desk   Dan Shore, Conversant Media

Noga Rosenthal, Epsilon   Andrew Sweeney, Xandr   Steve Truxal, Xandr   Somer Simpson, Quantcast

Heinz Baumann, Quantcast   Andrew Allen, Quantcast   David Dabbs, Conversant Media

Chris Paterson, Conversant Media   Dominik Rabiej, Google   Xiaoyong Liu Wang, Google

Robert Blanck, Axel Springer   Christoph Zippel, RTL Group

Ingvild Naess, Schibsted   Kat The, Telegraph   Alex Abrams, MailOnline

AND MANY MORE!

CCPA - How to Think About Requirements on January 1

Moderator

Jennifer Derke
Director of Product, Programmatic/Automation
IAB Tech Lab
@iabtechlab @Jennifer_Kyla

Panelists

Jill Wittkopp
Senior Product Manager
Rakuten Marketing
@RakutenMKTG

Daniel Spring
Director of Product
Verizon Media
@verizonmedia

Data, Power, Competition, and the Future of the Digital Economy

Avery Gardiner
Senior Fellow
Center for Democracy & Technology
@CenDemTech
@AveryWGardiner

Data Transparency: Unpacking The New Cross-industry Standard for Audience Data Labeling

Moderator

Benjamin Dick
Director of Product, Data
IAB Tech Lab
@iabtechlab

Panelists

Gillian MacPherson
VP, Digital Strategy & Product
Epsilon
@EpsilonMktg
@GillianMacPher

Randy Antin
Head of Product Marketing
LiveRamp
@LiveRamp

Steve Silvers
GM, VP of Product
and Customer Service
Neustar
@neustar
@stevesilvers

David Smith
SVP Monetization & Yield
Pandora
@pandorabrands

New Data Transparency Standards Released on 6/26

- **75 companies** defined Data Transparency Standard 1.0 and released on 6/26

- Release elements:
  - **Minimum disclosure requirements** for data providers (Up to 20 fields)
  - New **Audience Taxonomy 1.0** that will be incorporated into the new standard
  - Associated **compliance program** to validate those sellers who meet requirements

- 10 First Round of Adopters

MediaPost — News Events Awards Members More

PublishersDAILY

Meredith, Hearst Adopt IAB Tech Lab Data Transparency Label

by M

ad NEWS | OPINION | RESOURCES | EVENTS | PODCAST | SEARCH

IAB Tech Lab Unveils Transparency Framework For Assessing Data

MediaPost — News Events Awards Members More

Data&ProgrammaticINSIDER

COMMENTARY

IAB Tech Lab To Strengthen Data's Worth

by L

The
wa
ind

MARTECH TODAY — ADS MARKETING CONTENT SOCIAL SALES ANALYTICS MGMT MORE EVENTS

IAB Tech Lab releases a Data Transparency Framework

The proposed standards would establish a kind of 'ingredients label' for audience segments.

The Solution – a "Nutrition" Label

Scope of Standard

① WHO provided the data segment

② WHAT audience segment the label describes

③ HOW the segment was constructed

④ WHERE the original data components were sourced

Data Transparency Facts

Data Distributor Name: **Data Company**
Data Distributor Contact: DataSolutionTeam@data.com
Data Provider Name: **Leasing Company**
Data Provider Contact: DataAccounts@leasingco.com

Audience Snapshot	
Branded Name	Auto Intenders – Six Months
Standard Name	Auto Intenders
Audience Description Households likely in the market to purchase a new vehicle in the next six months	
Geographies	USA

Audience Construction	Attributes
Audience Count	6,500,000
Precision Level	Households
Activation ID(s)	Cookies
Audience Expansion	Yes
Cross-Device Expansion	Yes
Last Refresh Date	02-Jan-2018
Event Lookback Window	60 Days

Data Source	Attributes
Source ID Description Dealer-reported names and postal codes of individuals who requested test drives	
Source ID Contribution	1,130,000
Precision Level	Individual
ID Key	Name and Postal
Source Event	Transactions
Inclusion Method	Observed
Seed Size (if modeled)	-
Source Refresh Frequency	Quarterly
Event Lookback Window	180 Days

This Data Transparency Label has been developed by members of ANA's Council for Data Integrity and IAB Tech Lab's Data Transparency Working Group, with the support of CIMM, The ARF and IAB's Data Center of Excellence. For more information, please visit datalabel.org.

CAUTION AHEAD

1. Develop a POV on what "quality" means

2. Establish a way of vetting the extent to which segment descriptions reflect audience attributes of users

1. Establish a baseline expectation – for <u>any</u> seller of data – regarding the level of **transparency** necessary for a buyer to make an informed purchase decision
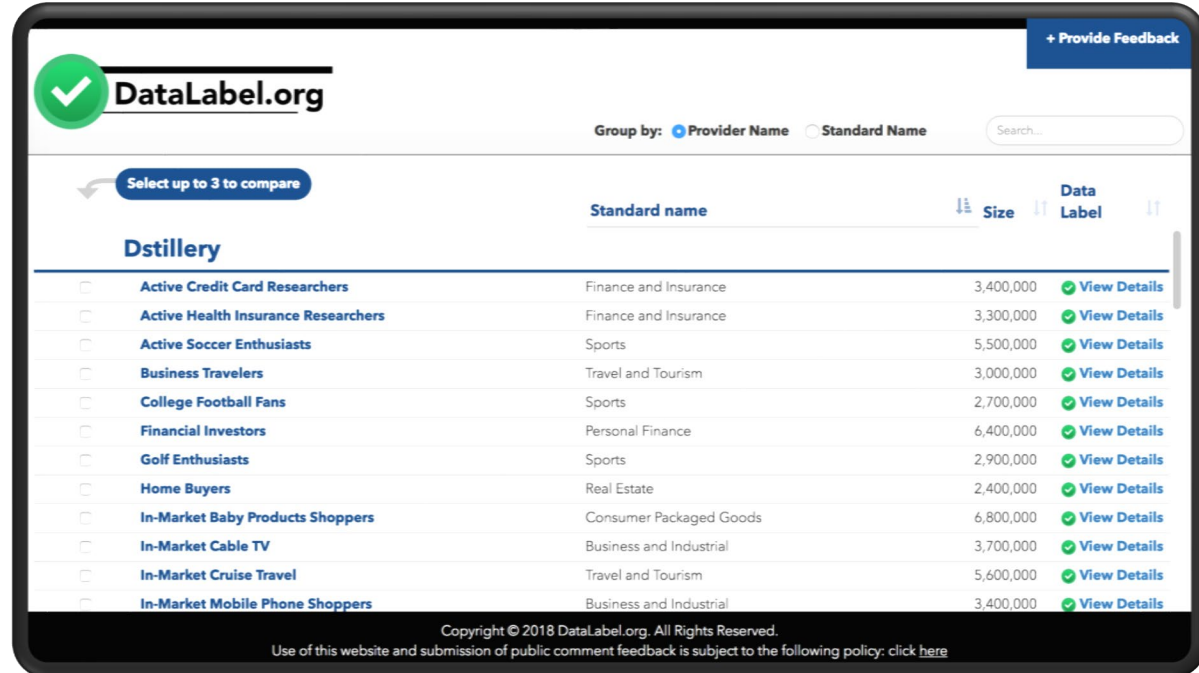
1. **The Label Itself:** is the company filling out the labels accurately, completely in a way that makes sense?

    - Formatting requirements met?
    - Do any fields contradict others?

2. **People / Process**: does the company have the correct people, processes in place to effectively process and deliver label information at scale?

3. **Technical Capabilities**: does the company have the requisite systems and technical capabilities in place to source the label information in question?

Data Transparency Standards

COMPLIANT

iab. TECH LAB

1. Complete Registration Form
2. Start updating your taxonomy!

3. If interested, sign up for the compliance audit to receive your **transparency seal**

Data Transparency: Unpacking The New Cross-industry Standard for Audience Data Labeling

Moderator

Benjamin Dick
Director of Product, Data
IAB Tech Lab
@iabtechlab

Panelists

Gillian MacPherson
VP, Digital Strategy & Product
Epsilon
@EpsilonMktg
@GillianMacPher

Randy Antin
Head of Product Marketing
LiveRamp
@LiveRamp

Steve Silvers
GM, VP of Product
and Customer Service
Neustar
@neustar
@stevesilvers

David Smith
SVP Monetization & Yield
Pandora
@pandorabrands

Data Label 1.0 - Summary

Field Name	Field Options	Description
Provider Name	Free text	**Name of the business entity selling the data.**
Provider Contact Info	Free text	**Email address where provider can field inquiries about segment**
Segment Name	Free Text	**Provider's descriptive name of audience attribute contained in segment**
Standardized Segment Name	*Tier 1, 2, and "final" Tier of Taxonomy naming convention is required to be displayed.*	**Declaration of the most accurate standardized name as selected from IAB Audience Taxonomy 1.0 [LINK].**
Segmentation Criteria	Free text	**Description of the rules applied by the seller that govern inclusion of data points into the online audience segment. Sellers may wish to include provenance, recency, and frequency logic, as well as core differentiating factors that a buyer may want to evaluate during purchase decision**
Audience Precision Level	Individual Household Business Device ID Browser Geography	**The level of granularity for audience composition**
ID Count	Free text	**The number of IDs contained in the segment.**
ID Type(s)	Cookie ID Mobile ID Platform ID	**The currency of activation IDs**
Geography	See ISO-3166-1-alpha-3	**Geographies associated with the coverage of the segment.**
Privacy Policy	Free text	**Link to the seller's privacy policy**

Data Label 1.0 – Audience Details

Field Name	Field Options	Description
Data Source(s)	App Behavior App Usage Web Usage Geo Location Email TV OTT or STB Device Online Ecommerce Credit Data Loyalty Card Transaction Online Survey Offline Survey** Public Record: Census, Voter File, Other Offline Transaction**	**Origin of the raw data used to compile the audience**
Data Inclusion Methodology	Observed/Known Declared Inferred Derived Modeled***	**Description of seller's relationship to the audience attribute / information being sold:** • **Observed / Known - The underlying audience attributes are directly observed** • **Declared - The underlying audience attributes are self-reported by the audience members** • **Derived - The underlying audience attributes are computed based on other known or declared fields on record** • **Inferred - The underlying audience attributes are determined from business rules or logic** • **Modeled - The underlying audience attributes are calculated using an algorithm, with a seed as the source**
Audience Expansion ***	Yes No	**Was look-a-like modeling used to include "similar" IDs?**
Cross-device Expansion	Yes No	**Was the segment expanded to include IDs thought to be associated with the devices of the same user, household, or business?**
Audience Refresh Cadence	Intra-day Daily Weekly Monthly Bi-Monthly Quarterly Bi-Annually Annually	**Cadence of audience refresh**
Source Lookback Window	Intra-day Daily Weekly Monthly Bi-Monthly Quarterly Bi-Annually Annually	**Period in the past that a qualifying event can occur for inclusion in audience**

Field Name	Field Options	Description
Input ID / Match Key	Name Address Email Postal / Geographic Code Lat / Long Email Mobile ID Cookie ID IP Address Customer ID Phone Number N/A	**Input ID/ Match Key used by the Onboarder for matching**
Audience Expansion	Yes No N/A	**Was look-a-like modeling used to include "similar" IDs before the data was matched to a digital identifier?**
Cross Device Expansion	Yes No N/A	**Was the audience expanded to include affiliated devices and IDs before the data was matched to a digital identifier?**
Audience Precision Level	Individual Household Geography N/A	**What is the precision level of the data before it was matched to a digital identifier?**

Why?

Audience is Advertisers' top priority when purchasing digital media – significantly more important than Content, Channel, or Placement

Ranked Importance When Buying Digital Media
(Sorted by Rank 1)

■ Rank 1 ■ Rank 2-3   Rank 1-3

	Rank 1	Rank 2-3	Rank 1-3
Audience	62%	26%	88%
Content	17%	58%	75%
Channel	13%	51%	64%
Placement	8%	65%	73%
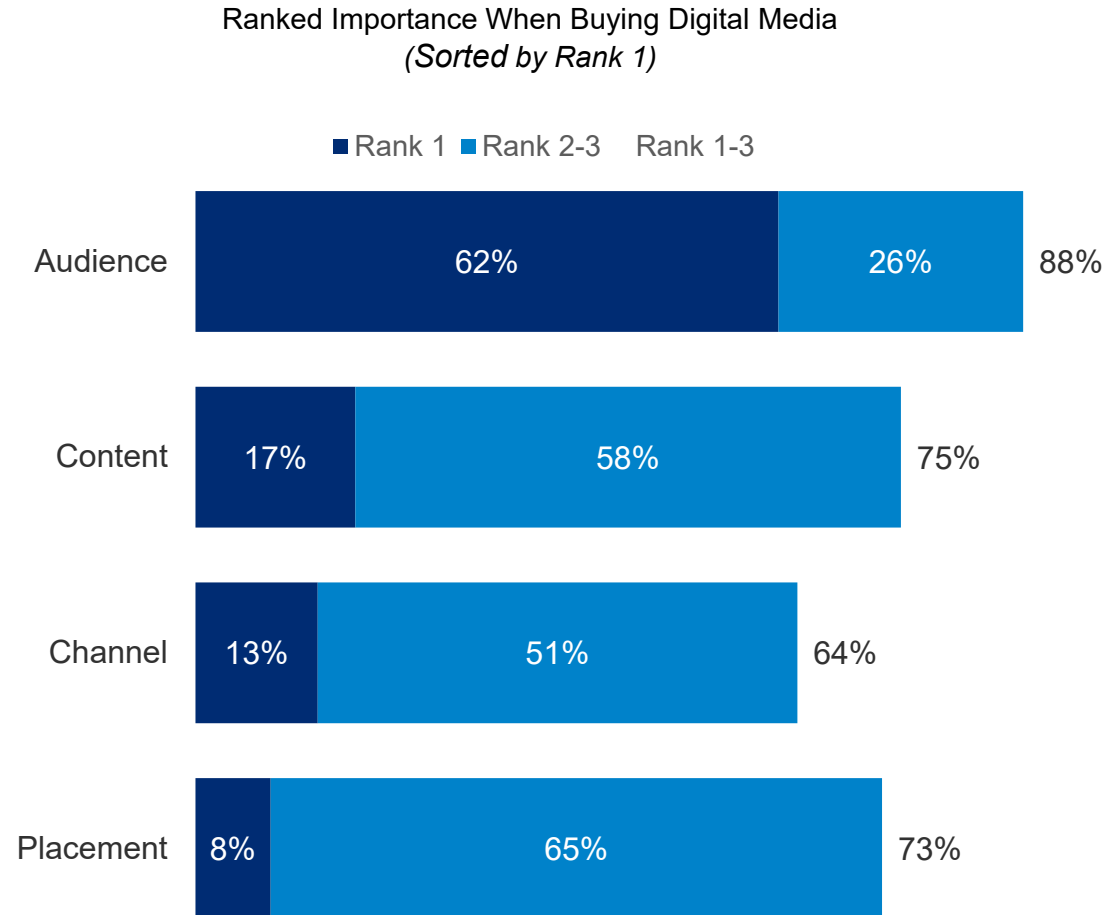
- Q. How do you prioritize the following factors when buying digital media?
- Base: Total Respondents

iab. TECH LAB
INNOVATION DAY

Why? The majority of digital campaigns use fee-based data, including 3rd and 2nd party sources, for targeting

Average Percent of Digital Advertising That Used Data Type for Targeting

69%

Contextual data
21%

First party data
31%

Second party data
22%
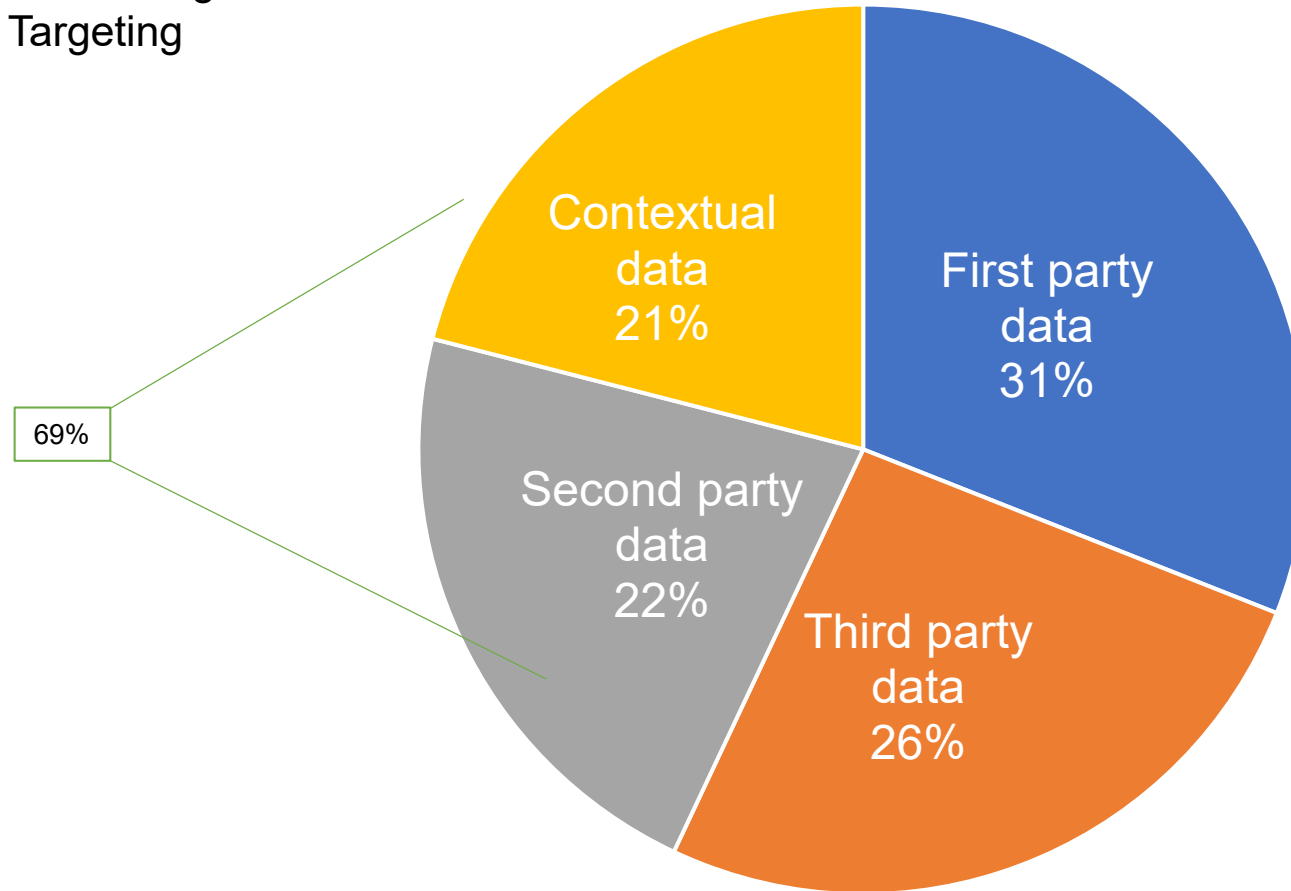
Third party data
26%

- What percent of your 2018 digital advertising used each data type for audience targeting?
- Base: Total Respondents

Why?

3rd party data is used throughout the media planning process from identifying target audiences, to evaluating media partners, developing media plans, and proving ROI

How 3rd Party Audience Data Is Used

Identify target audiences	72%
Evaluate/select media partners	57%
Develop media plans	54%
Evaluate performance of advertising campaigns/Prove ROI	54%
Anticipate consumer behavior with predictive analytics	50%
Develop or refine consumer decision journey models	45%
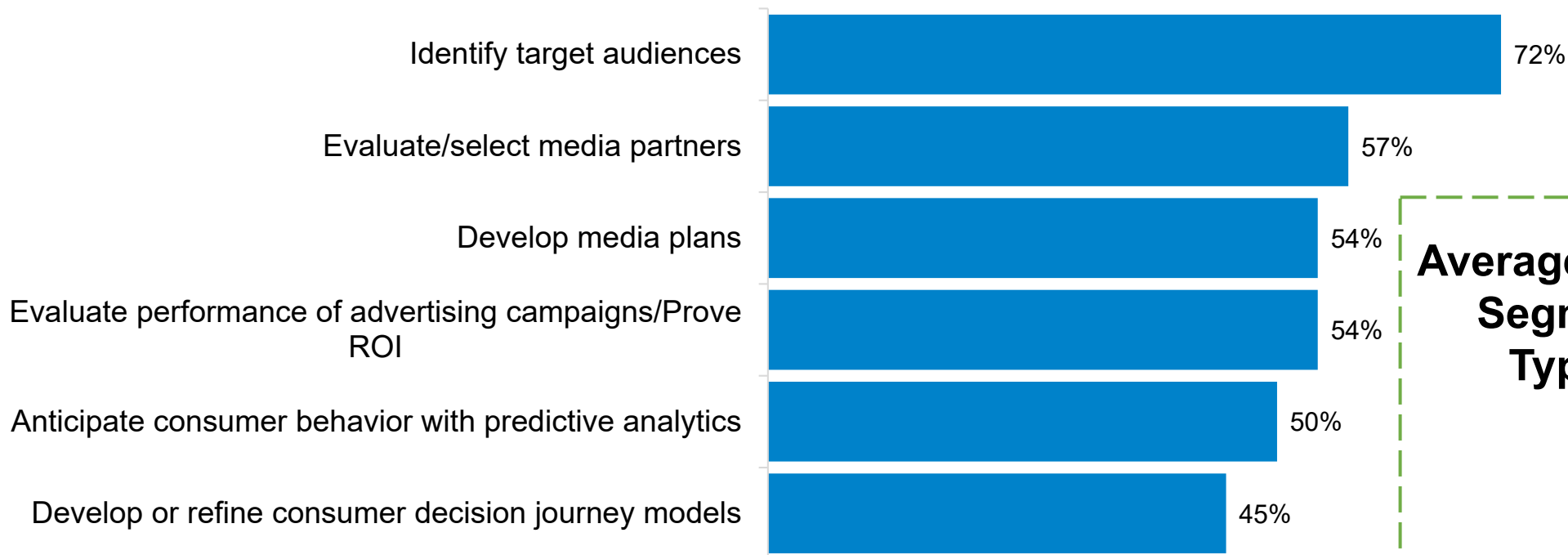
Average # of 3rd Party Data Segments Used for a Typical Campaign

5

- Q. In which of the following ways is [your company/your main or biggest client] using 3rd party audience data (fee based data provided by an outside company) to inform their advertising decisions?

- Q. When your [company/main or biggest client] purchases 3rd party data segments, how many data segments are used for a typical digital campaign?

- Base: Use 3rd Party Data Sources
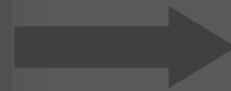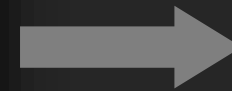
THE BUSINESS RISKS OF POOR AUDIENCE QUALITY

- **Wasted Media … huge impact.**

- **Incorrect attribution. Even worse. (Who was exposed?).**

- **Misleading "insights".**

- **When data is the Product, is it "good"? How to get better?**

- **Models upon Models might as well be random numbers. (Err*Err)**

- **The map from behavior to intention could be wrong.**

You Get To See The Outside Of The Box...

But What's In The Box?!

What Portion is actually Corn Flakes?

How To Measure:
ATTRIBUTE DENSITY

ARF the Advertising
Research Foundation

Can online surveys be used to measure the density of digital targets?

Tested multiple sample approaches and question structures.

Data Score

FILTER BY:

STATUS
- ☑ COMPLETE
- ☐ PENDING

DMP
Select... ▼

DATA PROVIDER
Select... ▼

CATEGORY
Select... ▼

KEYWORD

AUDIENCE NAME	STATUS ⌃	DATA PROVIDER	DMP	DENSITY	DATA SCORE
Jif Buyers	Complete	Oracle	Oracle	57%	97
Frozen breakfast food buyers	Complete	Oracle	Oracle	64%	103
Ben & Jerry's buyers	Complete	Oracle	Oracle	41%	100
Tropicana Buyers	Complete	Oracle	Oracle	52%	107
Cat food buyers	Complete	Oracle	Oracle	52%	135
Acxiom Automotive > Vehicle-Intend to purchase	Complete	Acxiom	LiveRamp	39%	107
Cuebiq > Mobile Audience > Entertainment > Movie Goers	Complete	Cuebiq	LiveRamp	40%	101
Acxiom Travel > Airlines > Likely Rewards Membership > Delta Sky Mile	Complete	Acxiom	LiveRamp	29%	169
V12 > CPG > Breakfast Cereal & Energy Bars	Complete	V12	LiveRamp	55%	93
Acxiom Investment > Likely Market Value > Total Securities > $50,000 to $149,999	Complete	Acxiom	LiveRamp	23%	93

LUCID

ARF the Advertising Research Foundation

More ubiquitous behaviors can not achieve a large index. Tighter targets can index higher.

The way your online panel is sampled impacts the results. It also impacts the base of the index.

Learnings

Indices against independent universe estimates are almost always higher. Why?
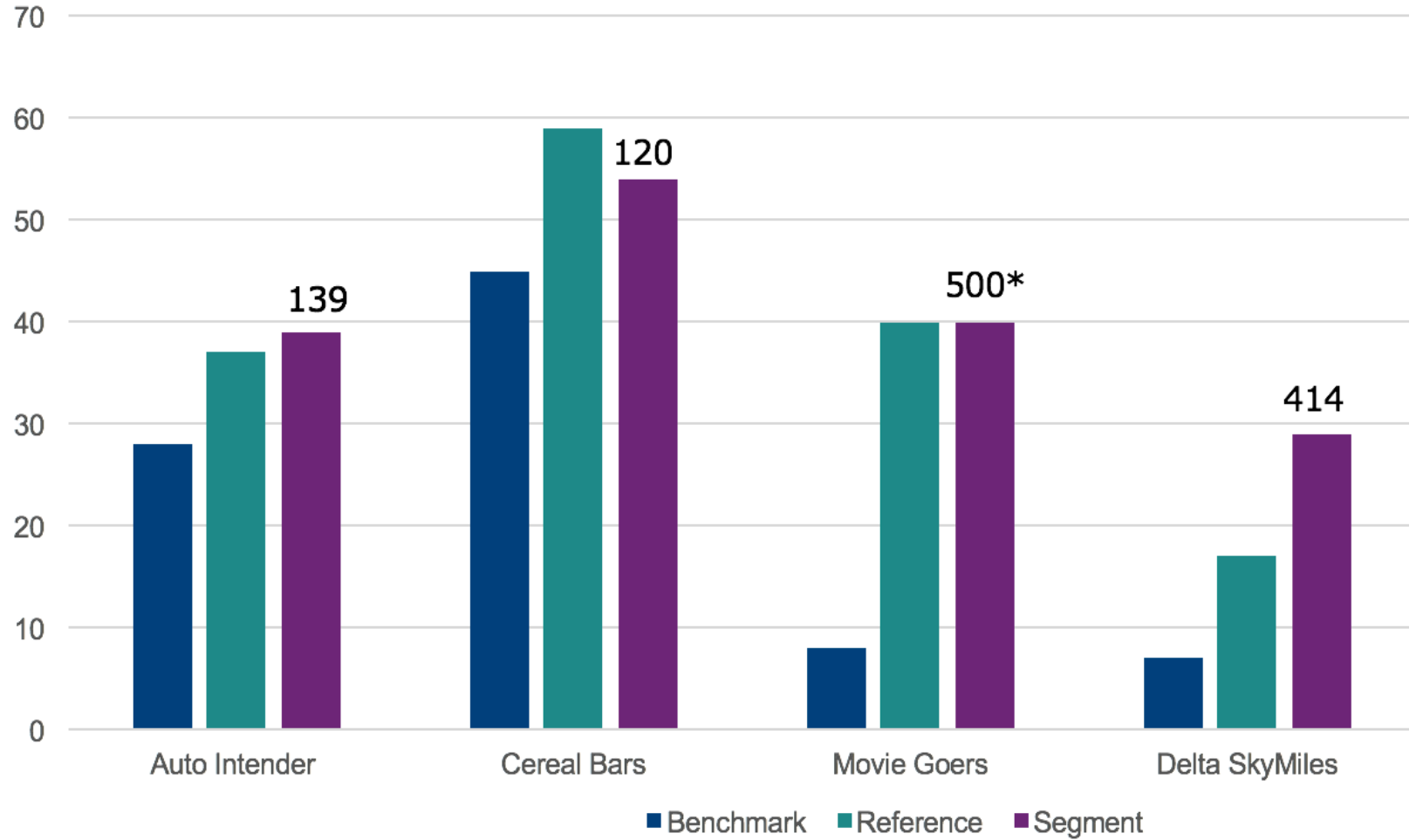
* Index Affected by Seasonality

Share data and interpretation across all parties working in this space: question structures and conclusions

Validate the performance of the survey as a method of measuring density by deterministic comparisons.

THANK YOU

LUCID
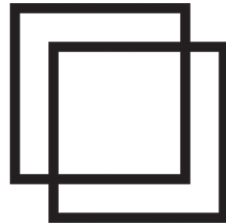
ORACLE
DATA CLOUD

ARF the Advertising Research Foundation

Edge Computing vs. Cloud Computing in a Privacy-first World

Joe Root
Chief Executive Officer
Permutive
@permutive
@joeroot

Permutive, the publisher-focused DMP

BUSINESS INSIDER

group nine

BuzzFeed

Daily Mail

leaf GROUP

CONDÉ NAST

Entrepreneur

FT

TimeOut

Vox

New Scientist
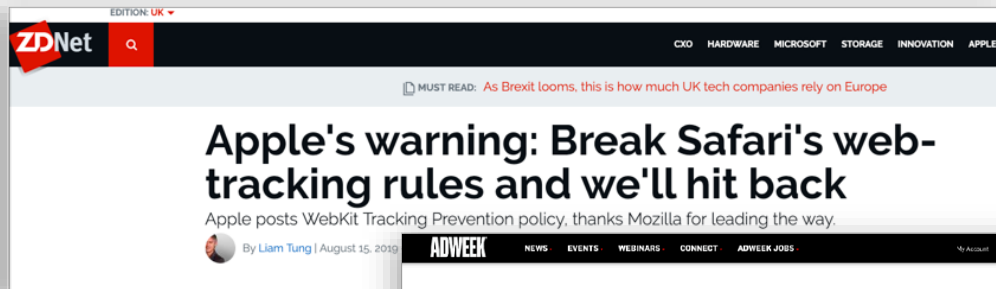
The Economist

Hubert Burda Media

IMMEDIATE MEDIA Co

ES MEDIA

Dennis

iab. TECH LAB
INNOVATION DAY

Privacy is constantly making headlines

And identity as we know it is broken

And identity as we know it is broken
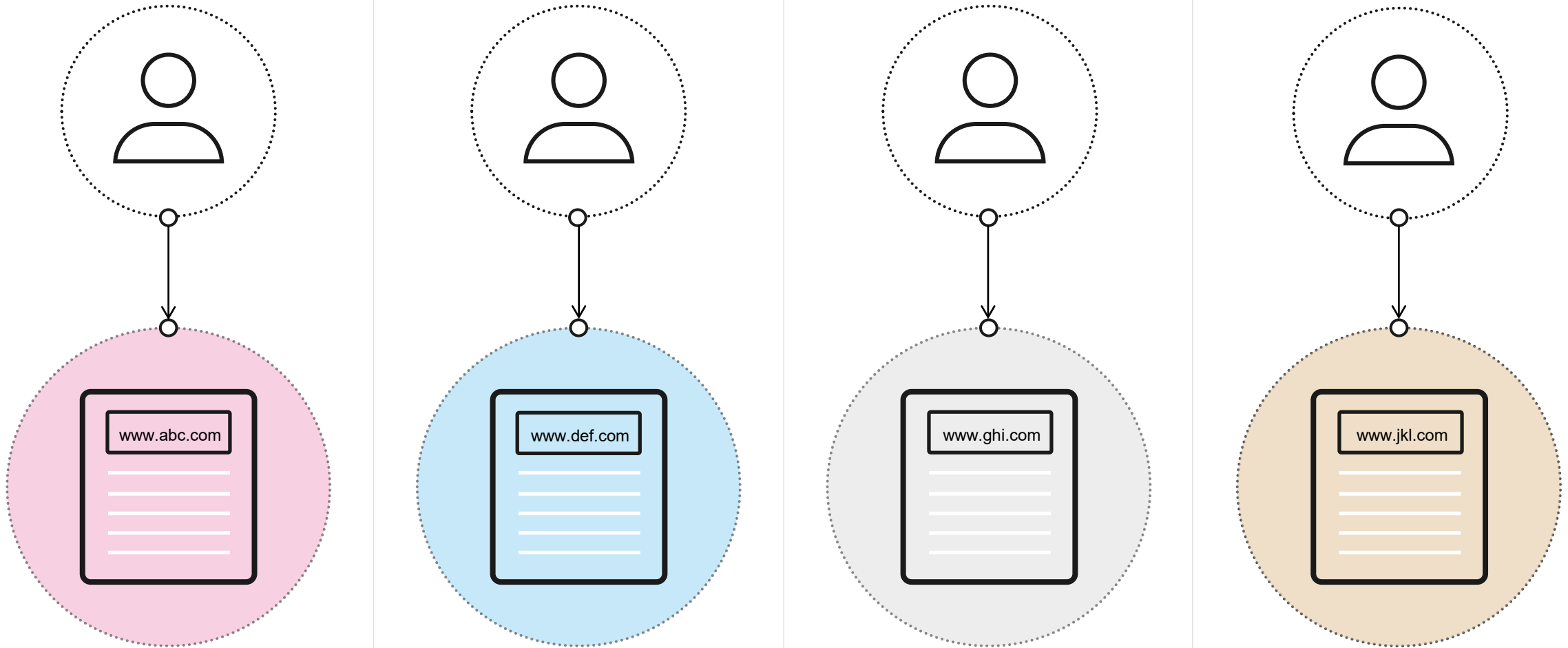
Users are becoming invisible

- Tracking no longer works

- Chrome keeps the lights on for DSPs

- 35% match rates to open IDs

- Attribution and frequency capping is becoming impossible

This is only set to get worse

DIGIDAY UK

NEWS ⌄   DIGIDAY +   PODCASTS   EVENTS   AWARDS   CAREERS

THE GDPR IMPACT

'Don't sit on the fence': UK regulator reiterates GDPR warning to ad tech companies

SEPTEMBER 10, 2019 *by* Jessica Davies

The clock is ticking for ad tech businesses that are still playing fast and loose with their compliance with the General Data Protection Regulation.

In June, the U.K.'s data protection authority, the Information Commissioner's Office, told the ad tech industry that the current way personal data is used within programmatic advertising transactions on the open exchange, via real-time bidding, is not compliant. The DPA gave a six-month grace period for them to address any gaping holes. That leaves four months to go.

iab. TECH LAB
INNOVATION DAY

This is only set to get worse

DIGIDAY UK

NEWS ⌄   DIGIDAY +   PODCASTS   EVENTS   AWARDS   CAREERS

THE GDPR IMPACT

'Don't sit on the fence': UK _____ warning to ad t___

SEPTEMBER 10, 201_

The clock is ticking for ad tech businesses that a___
compliance with the General Data Protection R___

In June, the U.K.'s data protection authority, th___
ad tech industry that the current way personal ___
transactions on the open exchange, via real-tim___
month grace period for them to address any ga___

ExchangeWire   Search ExchangeWire 🔍

HOME   NEWS   EVENTS   THE DIARY   PODCAST   TRADERTALK TV   AWARDS   RESEARCH   WIREDEX

POPULAR CATEGORIES   Transparency   Programmatic   OOH   DOOH   Media Spend   Ad Tech   Audio   Targeting

10 Wild Predictions for Europe's Big Ad Tech Week

by Ciaran O'Kane on 15th Aug 2019 in *News*

2. Google introduces open sourced Chrome ID; Apple removes IDFA from devices

While ad tech scraps to become the universal ID, Google will blindside us by releasing the Chrome ID.

The Chrome ID will be open to all, ending the ID wars. Acting like a device ID, it will make basic targeting, measurement, and frequency-capping functionality possible. Ad tech will hate it, but sellers

ExchangeWire
EXCHANGEWIRE SUGGESTS

iab. TECH LAB
INNOVATION DAY

This is only set to get worse

DIGIDAY UK

NEWS ∨   DIGIDAY +   PODCASTS   EVENTS   AWARDS   CAREERS

THE GDPR IMPACT

'Don't sit on the fence': UK ___ warning to ad t___

SEPTEMBER 10, 201_

The clock is ticking for ad tech businesses that a___ compliance with the General Data Protection R___

In June, the U.K.'s data protection authority, th___ ad tech industry that the current way personal ___ transactions on the open exchange, via real-tim___ month grace period for them to address any gap___

ExchangeWire

Search ExchangeWire

HOME   NEWS   EVENTS   THE DIARY   PODCAST   TRADERTALK TV   AWARDS   RESEARCH   WIREDEX

POPULAR CATEGORIES   Transparency   Progr_

10 Wild Prediction ___ Ad Tech Week

by *Ciaran O'Kane* on 15th Aug 2019 in *News*

2. Google introduces open so___ IDFA from devices

While ad tech scraps to become the universal ___

The Chrome ID will be open to all, ending the ___ targeting, measurement, and frequency-cappin___

The Washington Post
Democracy Dies in Darkness

Sign In   Get this offer

Share

24

Tech Policy

California adopted the country's first major consumer privacy law. Now, Silicon Valley is trying to rewrite it.

Privacy advocates say the industry lobbying push — weeks before the legislature adjourns — threatens to undermine Web users' rights

Poultry AFRICA 2019

iab. TECH LAB
INNOVATION DAY

Removing identity is the only solution

- Work to IAB Data Transparency Standard

- Replace User ID with Audience ID

- Buy and sell every ad impression with trusted data

Only publishers can make this possible
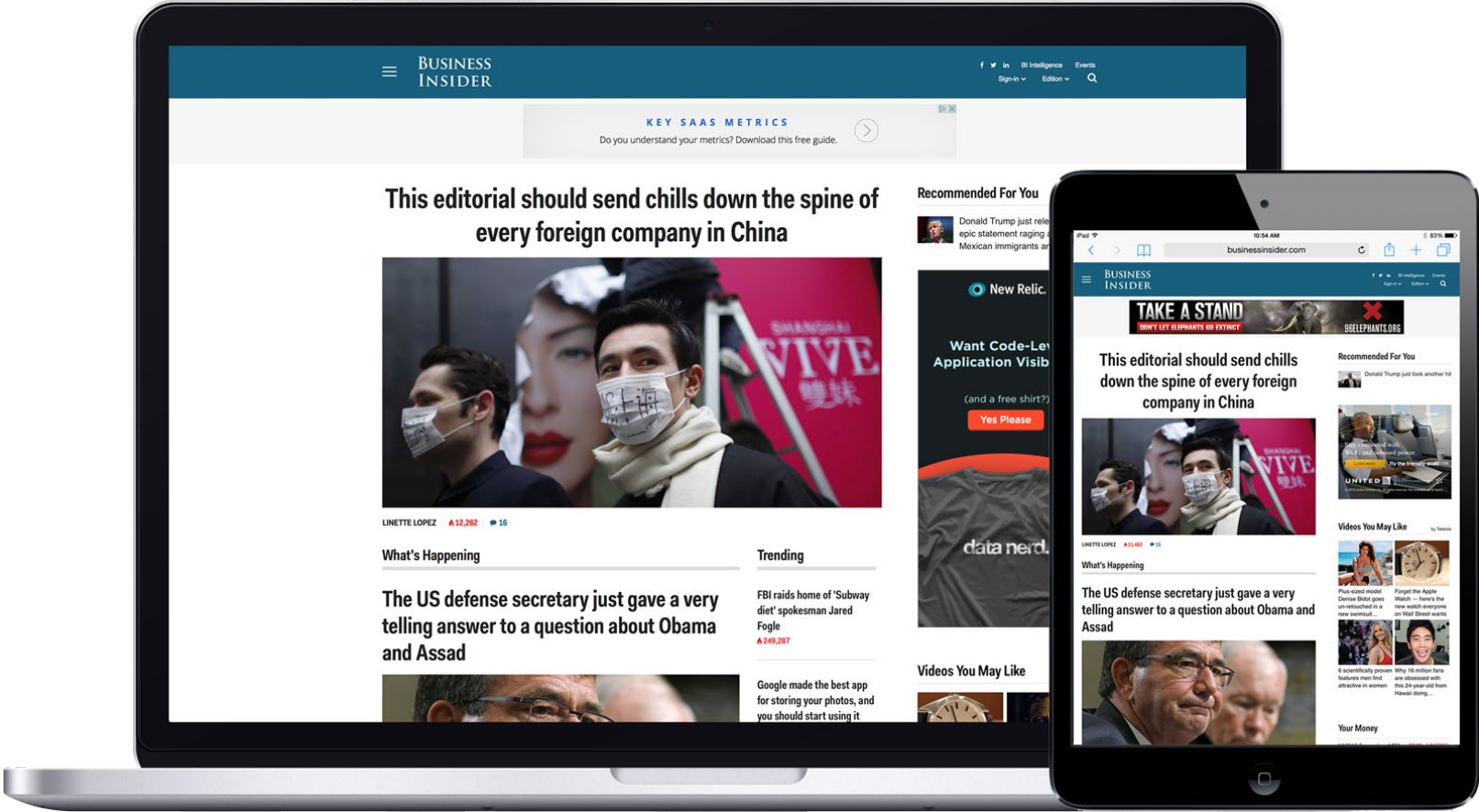
A scalable, privacy compliant solution

'North America Travel' Audience

Publisher A

Publisher B

Publisher C

Publisher D
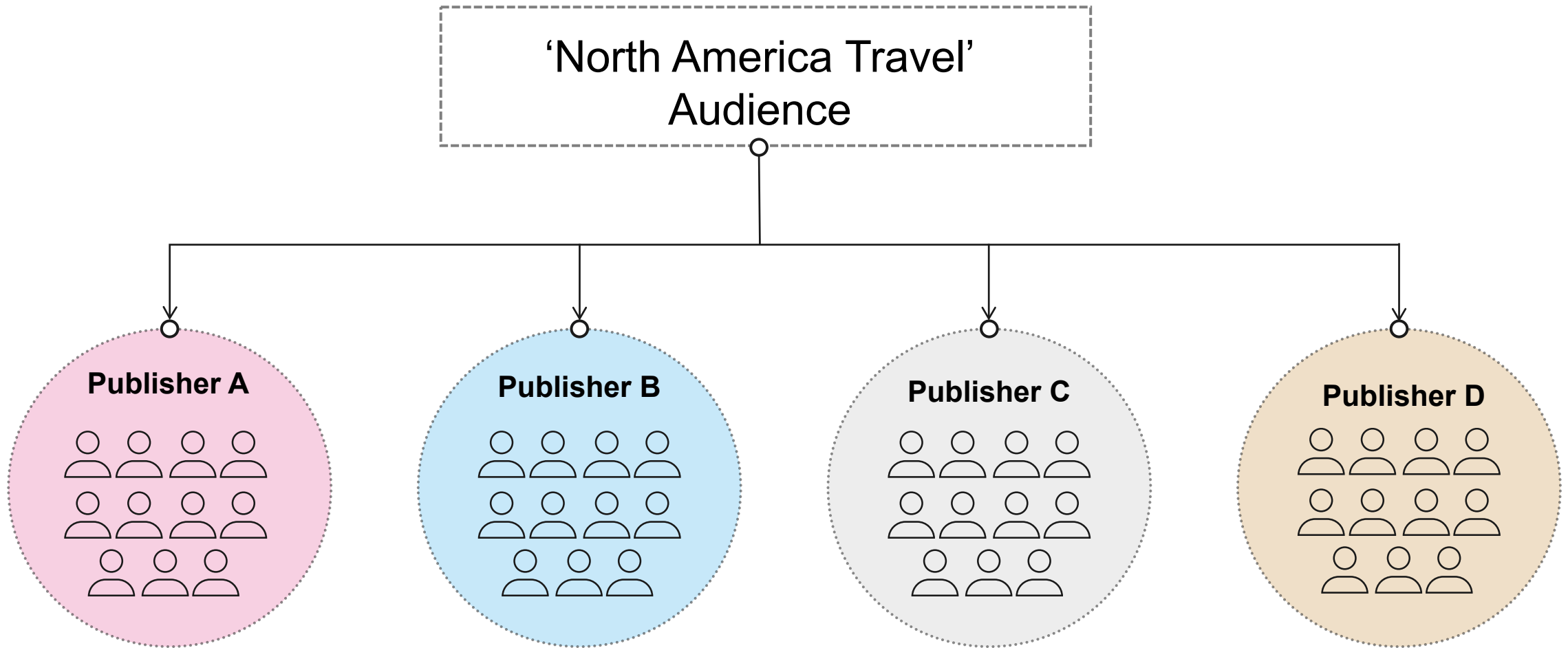
Thank you

Joe Root
CEO & co-founder
Permutive

joe@permutive.com

www.permutive.com

Transforming Mobile Personalization With Edge Computing

Abhishek Sen
Co-Founder and CEO
NumberEight
@ne_sdk
@1_abhi_1

Setting the stage

Setting the stage

Mobile Personalization

Edge Computing

Advertising

iab. TECH LAB
INNOVATION DAY

Setting the stage

Mobile Personalization

Edge Computing

Advertising

Setting the stage

Mobile Personalization

Edge Computing

Advertising

Setting the stage

Mobile Personalization

Edge Computing

Advertising

NE
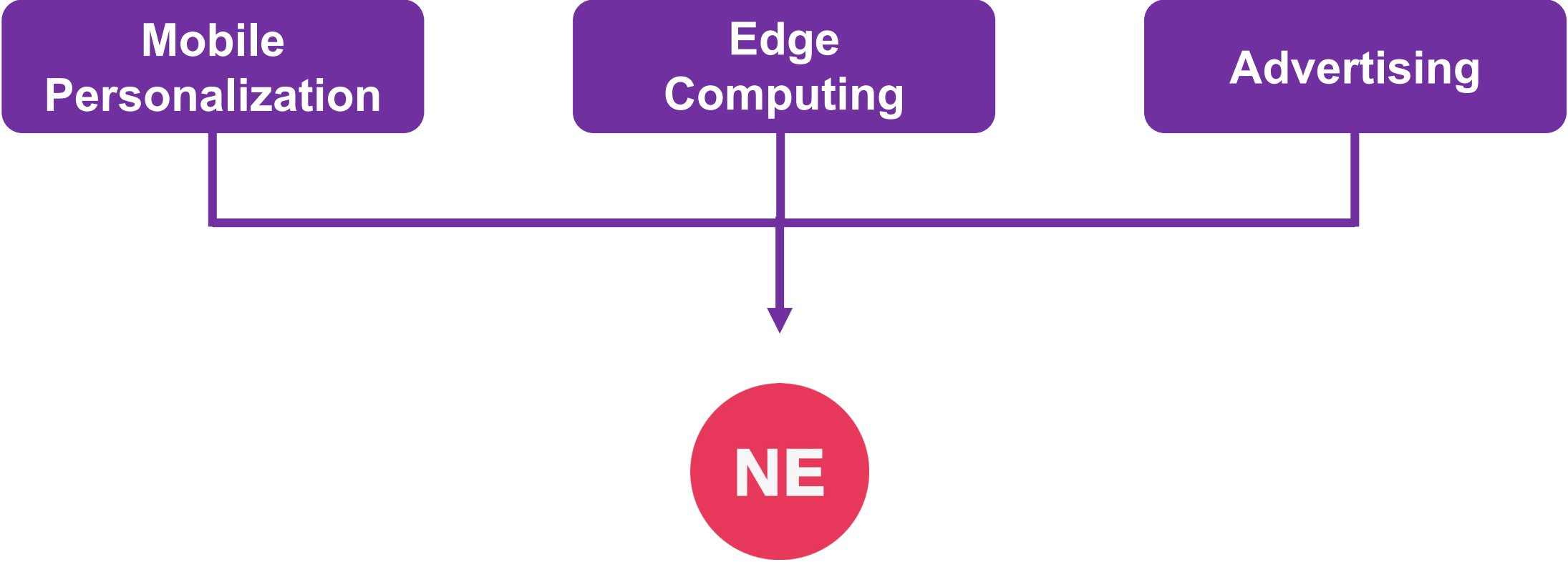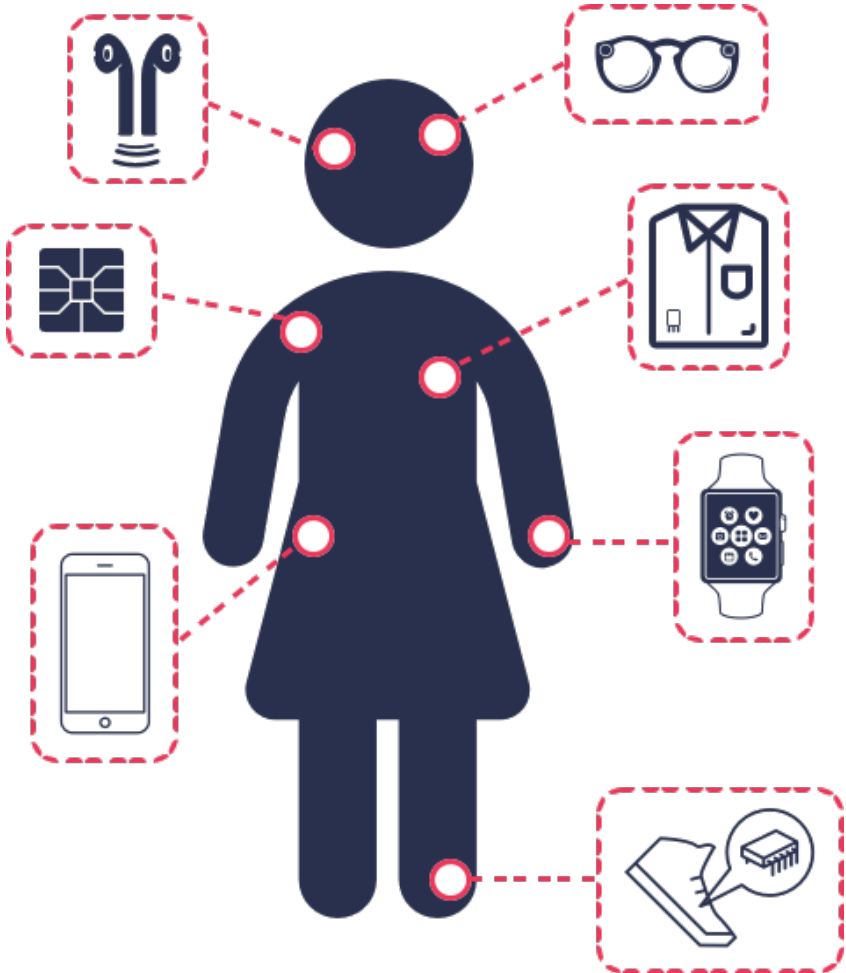
Personalization

Personalization
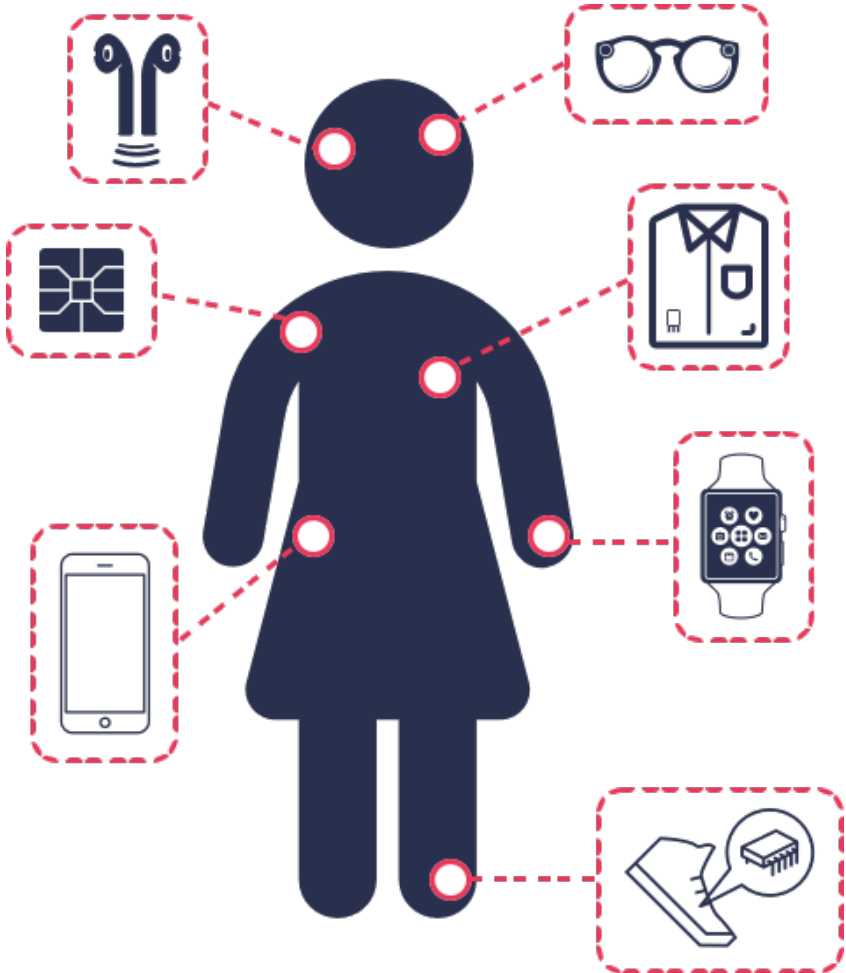
What do we do with our time?

Morning Rituals

Exercising

Commuting

Working

Relaxing

Shopping

Socializing

Sleeping

iab. TECH LAB
INNOVATION DAY

How can we adapt to the moment?

Adaptive User Interfaces

#morning-commute

Podcast / News

Music | Music | Music

#exercising

Music

Music | Music | Podcast
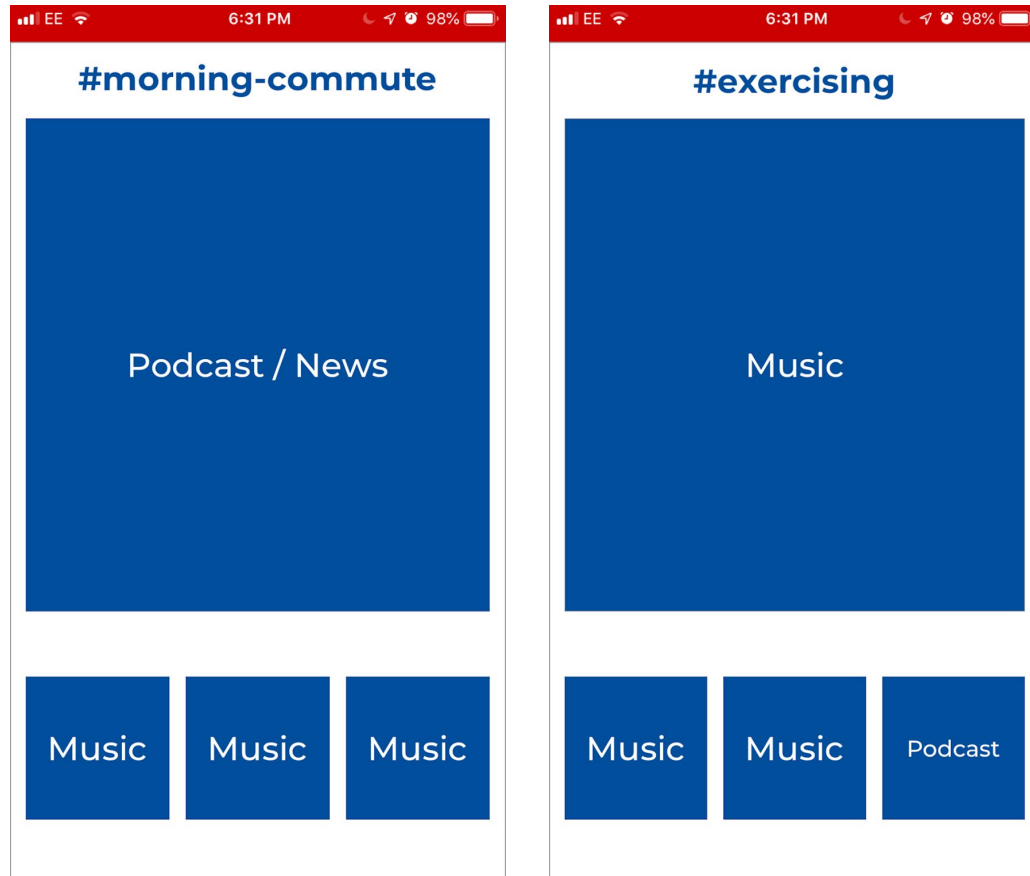
Contextual ads
Moment: Exercising

How can we adapt to the moment?

Adaptive User Interfaces

#morning-commute

Podcast / News

Music | Music | Music

#exercising

Music

Music | Music | Podcast
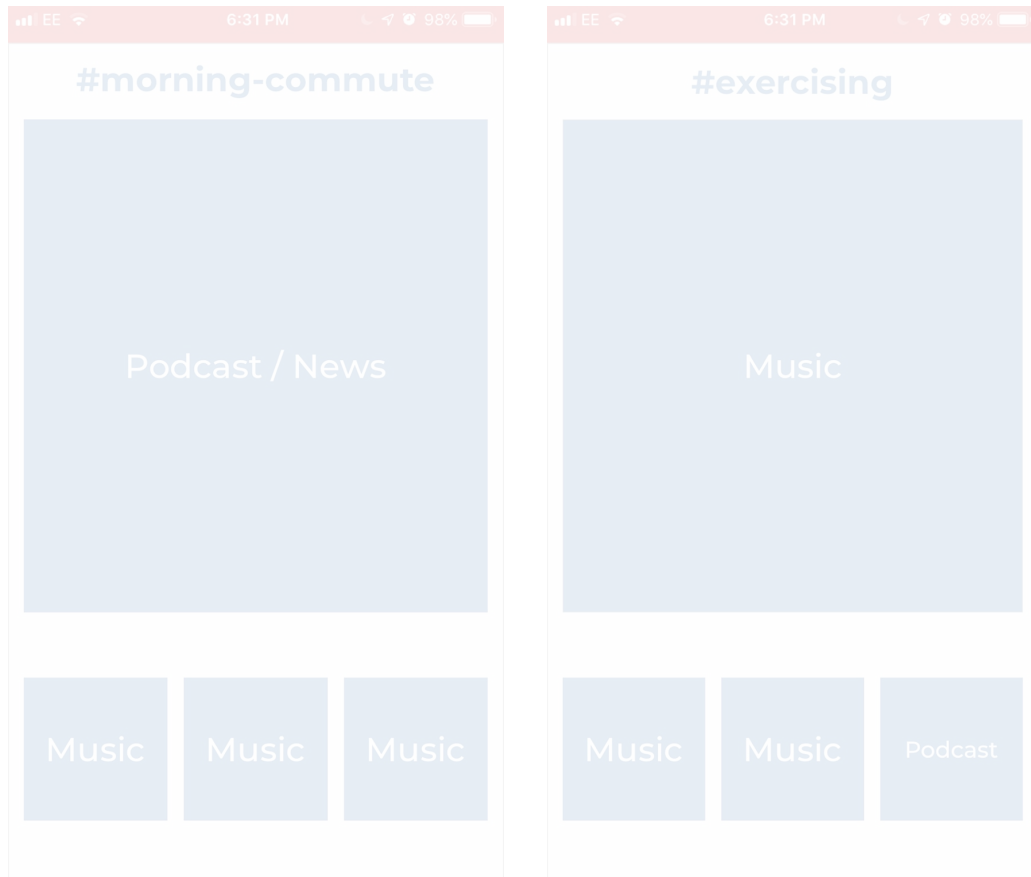
Contextual ads

Moment: Exercising

✗

✓

How did we get to … the Edge?

Mainframes	Client-Server	WWW	Mobile + Cloud	Edge
1970s-1980s	1990s	2000s	2010s	2020s
Centralized	Distributed	Internet	Wireless	Connected
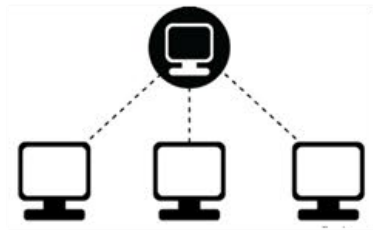
iab. TECH LAB
INNOVATION DAY

Edge Computing
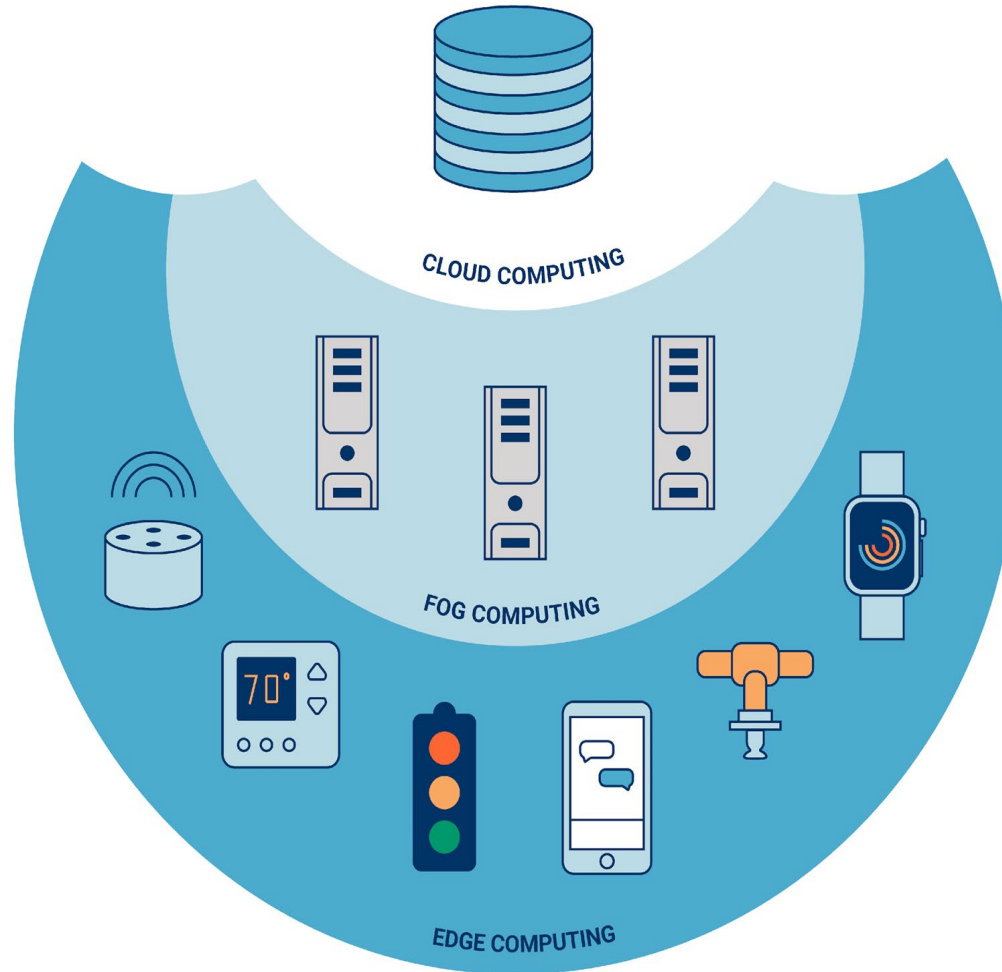
(CB Insights Research, 2019)

Cloud vs Edge

	Cloud	**Edge**
Real-time	Limited	By design
Privacy	At risk	By design
Offline functionality	Not possible	By design
Cost	Significantly higher	Significantly lower
Network traffic	Significantly higher	Negligible (if any)
Application efficiency	High latency, lower efficiency	Low latency, higher efficiency
Compute power	Significantly higher	Significantly lower

Mobile Marketing Technology Landscape (LUMAscape)

Edge Computing Impact on Mobile Advertising

Peace of Mind
Balance between privacy and personalization.

Simplified Bidding
For DSP decision engines.

Dynamic Profiles
Of each user, including habits.

Higher Bid Value
With better targeting.

iab.TECH LAB
INNOVATION DAY

Where NumberEight comes in
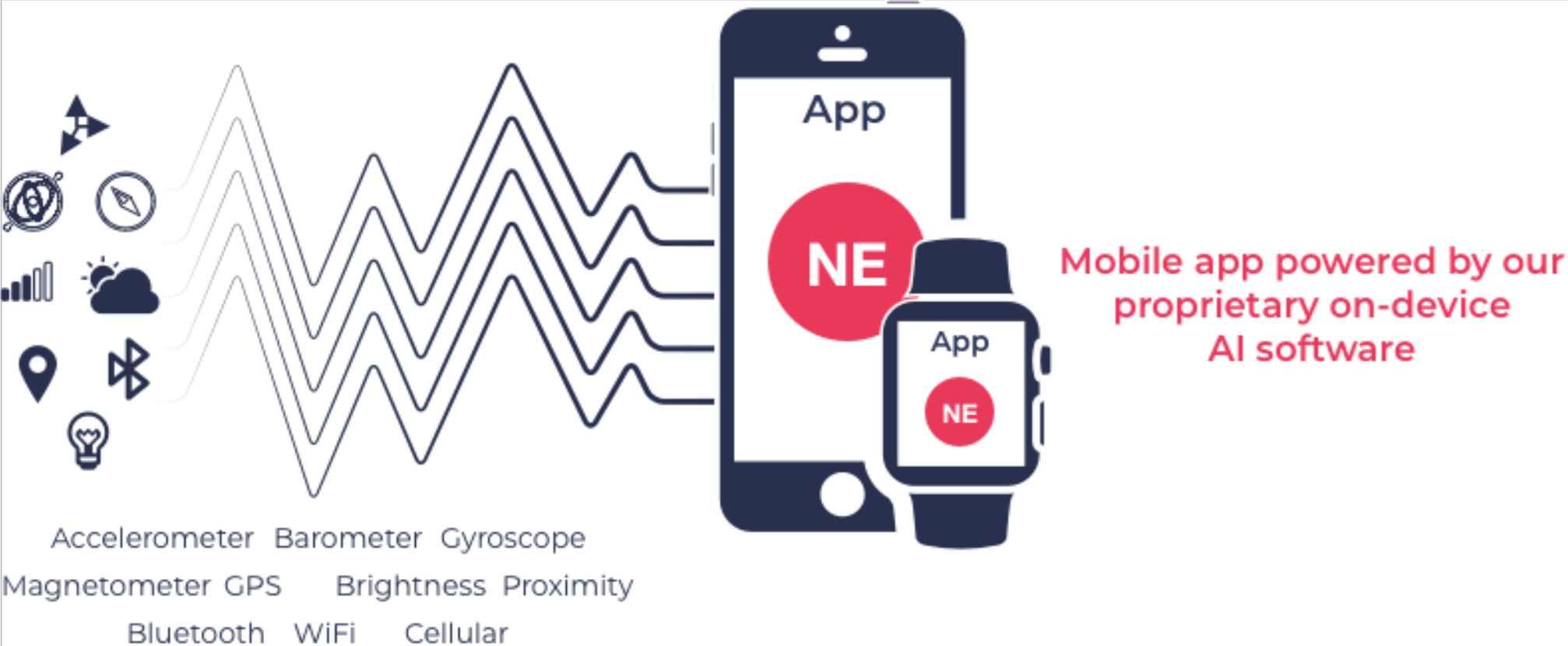
Mobile app powered by our proprietary on-device AI software
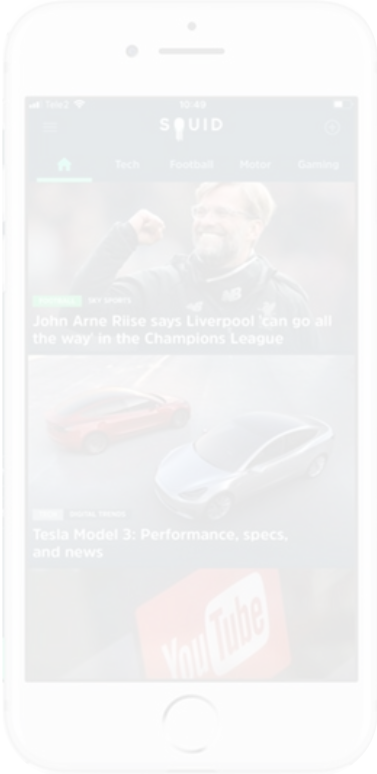
Accelerometer   Barometer   Gyroscope
Magnetometer   GPS   Brightness   Proximity
Bluetooth   WiFi   Cellular

iab. TECH LAB
INNOVATION DAY

Where NumberEight comes in

Accelerometer Barometer Gyroscope
Magnetometer GPS Brightness Proximity
Bluetooth WiFi Cellular

#working out #having drinks #sleeping
#morning commute #working #shopping
#relaxing at home #outdoor jog #roadtrip

100+ contextual signals

iab. TECH LAB
INNOVATION DAY

Sector Applications

Online Radio

News

Ticketing

Sector Applications

Online Radio

News

Ticketing

Sector Applications

Online Radio

News

Ticketing

DATA RESPONSIBILITY The New Normal in a Consumer-centric World
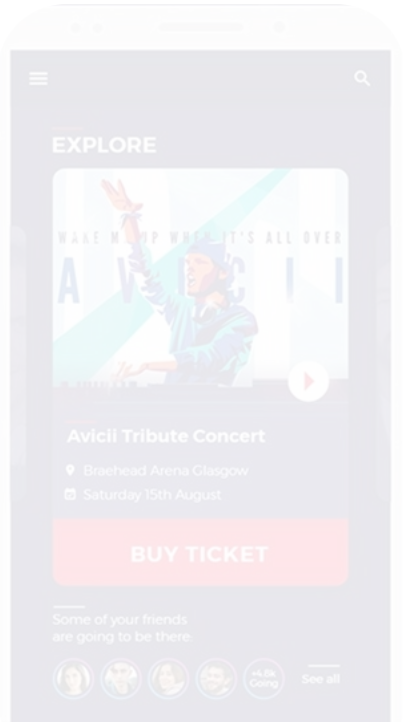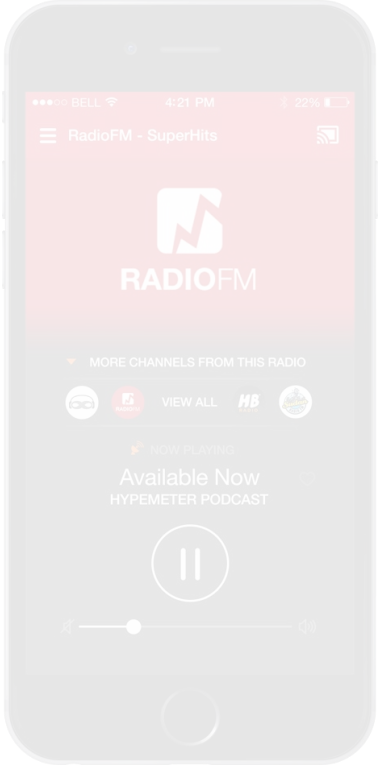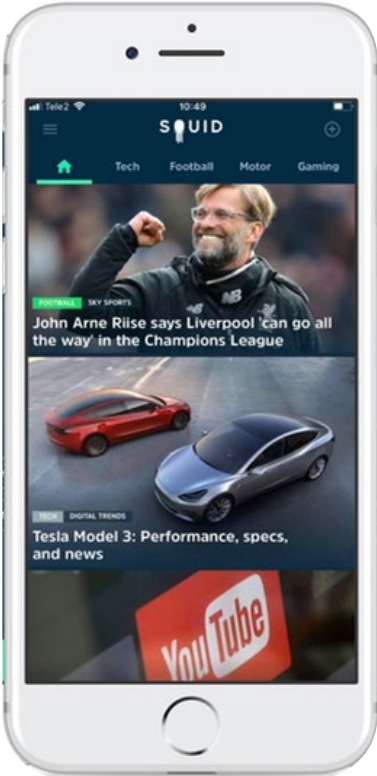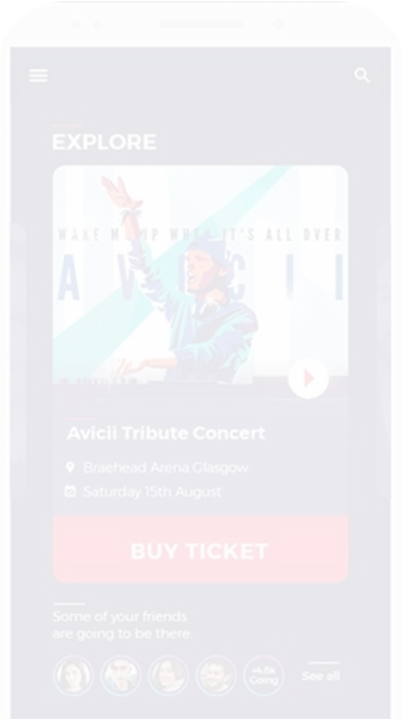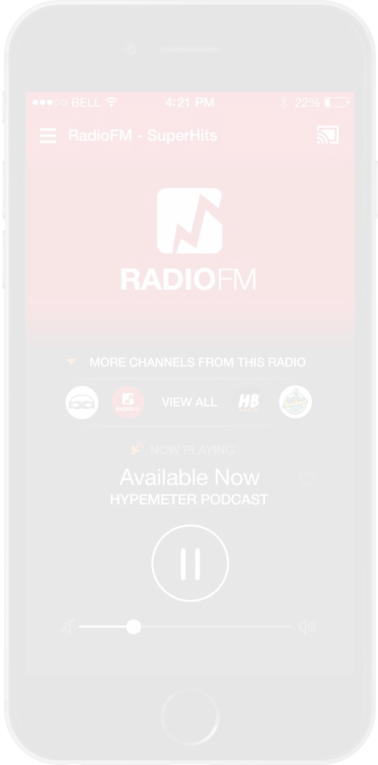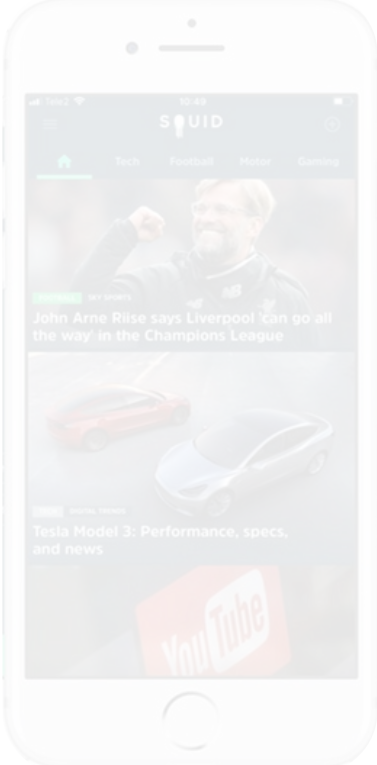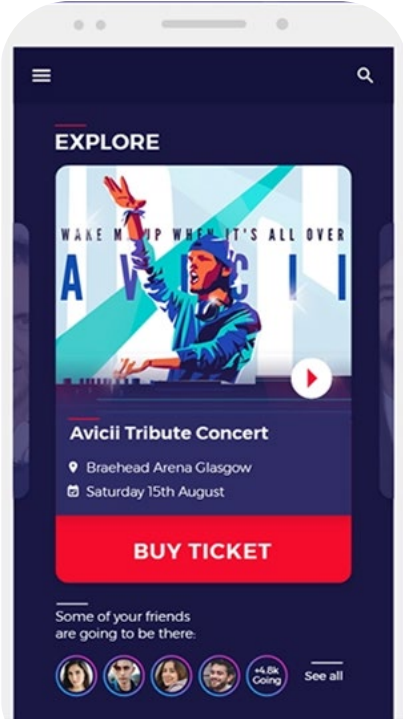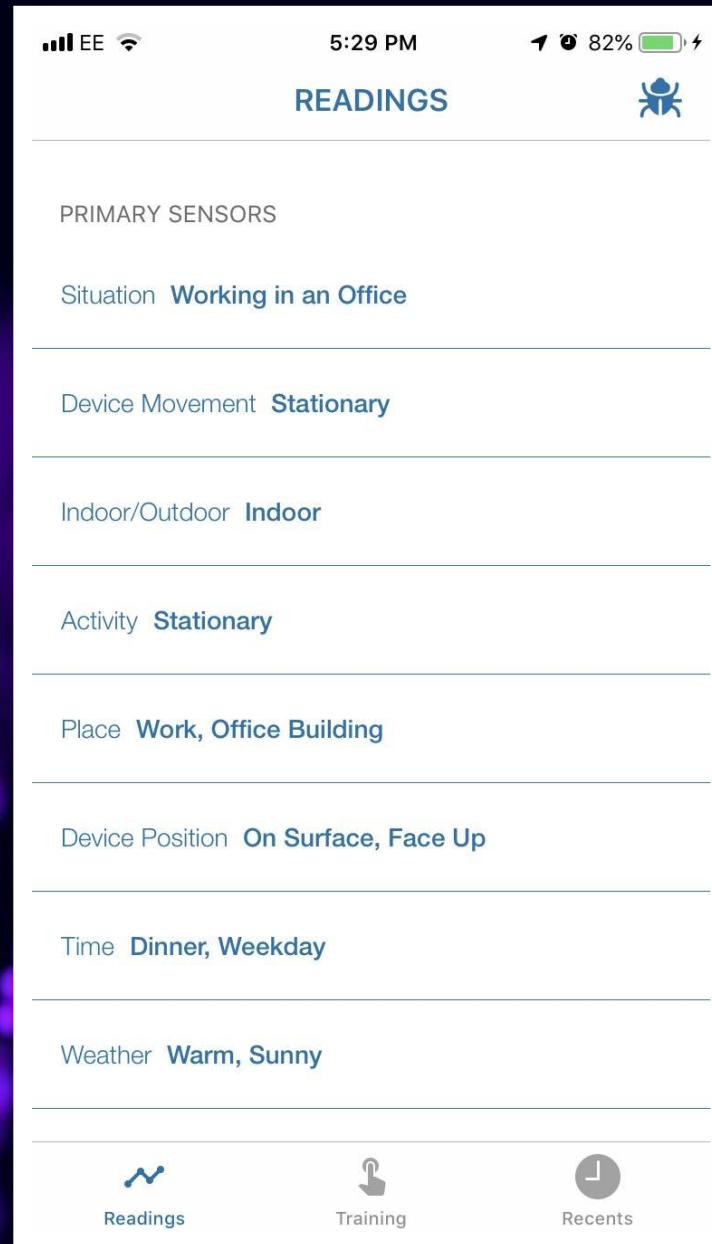
Thank you

abhishek@numbereight.me

A Proposal for Enhanced Consumer Privacy + Accountability

Jordan Mitchell
SVP, Membership & Operations
IAB Tech Lab
@iabtechlab
@kickstand

The Internet Evolved on Open Standards

The **HTTP Cookie** fueled tremendous innovation ....
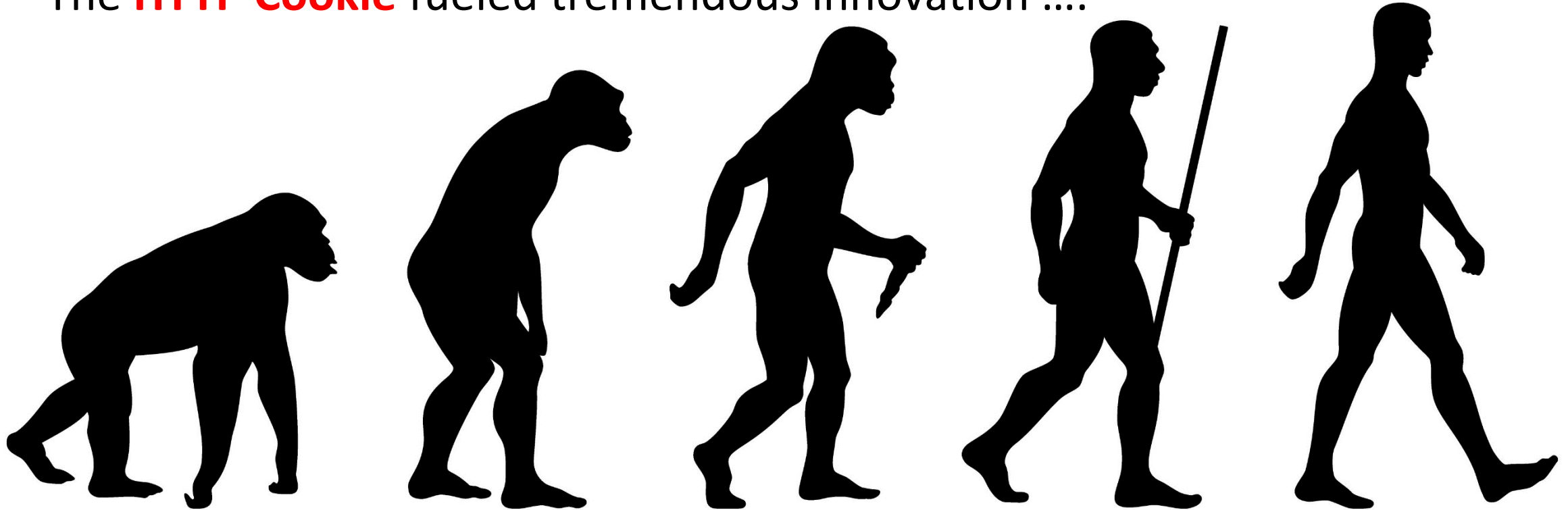
The **Birth**

The Age of
**Personalization +
eCommerce**

The Age of
**User-Generated
Content**

The Age of
Social

The Age of
**Marketing
Automation**

The HTTP Cookie Has Not ....

As the Internet evolved with more features, consumer expectations, companies and data collection, the mechanisms for identity and privacy have not evolved.

Evolution of Consumer Features

Evolution of Data Sharing

Evolution of identity and privacy

The Age of   The Age of   The Age of   The Age of

Birth   **Personalization + eCommerce**   **User-Generated Content**   **Social**   **Marketing Automation**
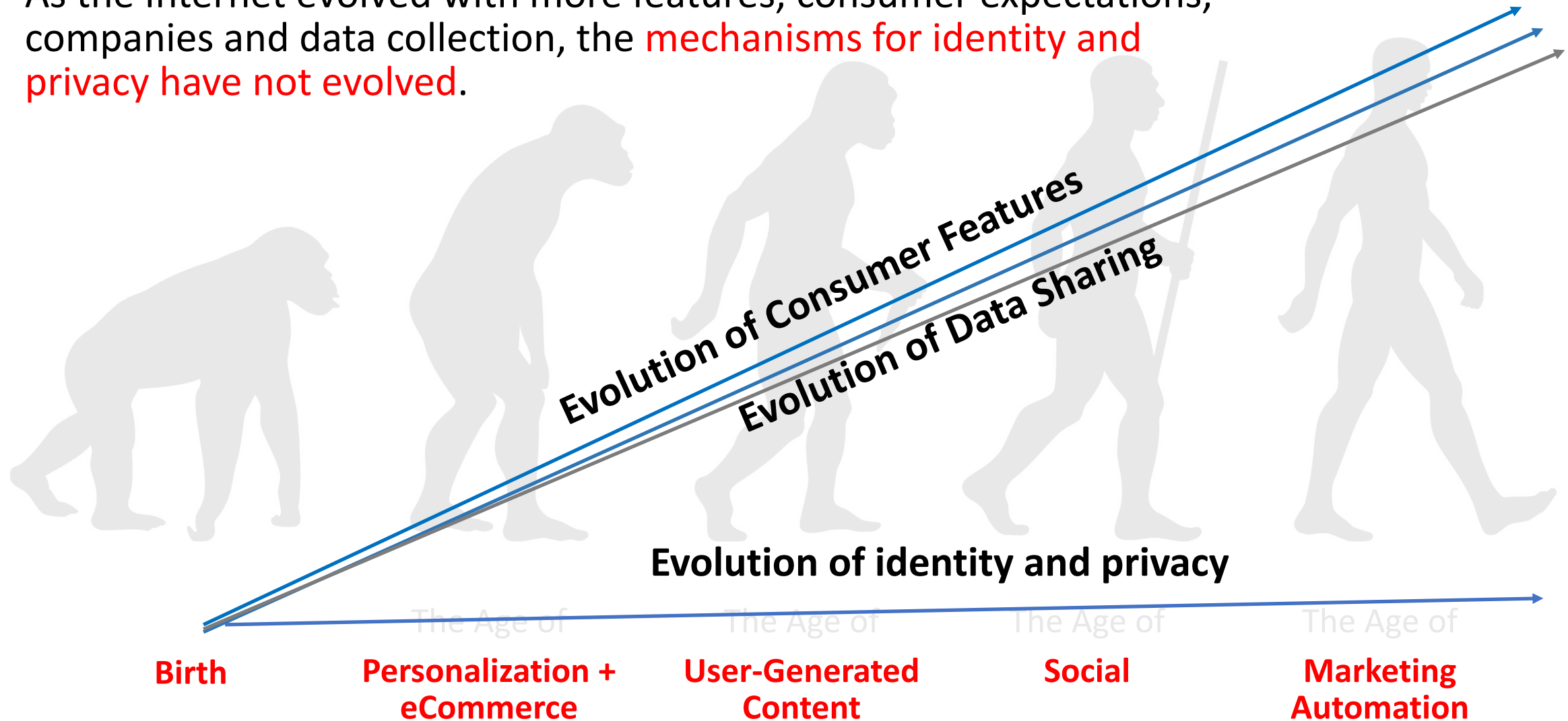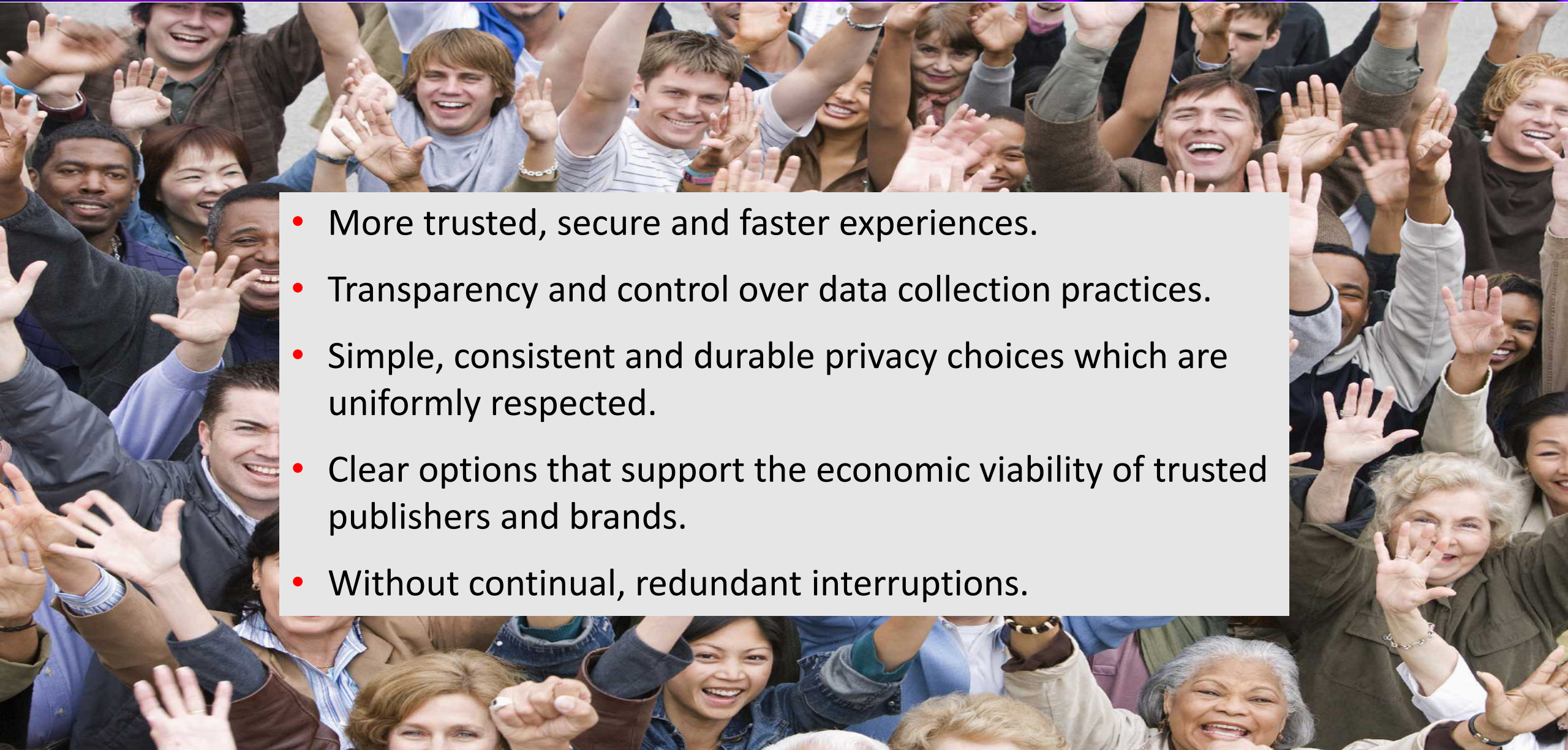
Unintended Consequences.

What's Best for Consumers?

- More trusted, secure and faster experiences.

- Transparency and control over data collection practices.

- Simple, consistent and durable privacy choices which are uniformly respected.

- Clear options that support the economic viability of trusted publishers and brands.

- Without continual, redundant interruptions.

IAB Tech Lab proposes cross-industry collaboration on a technology solution and standards (*replacing the third-party cookie*), binding:

- Consumer privacy controls,

- Regulatory settings,

- Identifier(s).

Details of the **Proposal for Enhanced Accountability (PFEA)** can be found on http://www.iabtechlab.com

---

A Proposal for Enhanced Accountability to Consumer Privacy within the Digital Marketing Industry

Request for Collaboration to Improve Consumer Trust and Experience with Technology Standards for Consumer Privacy

Draft dated August 6, 2019 -- for private consumption among participants.

Executive Summary

The Digital Marketing industry recognizes that improved consumer experience and trust is essential to the growth of our industry, growth of the Web as a public benefit, and to assuring a vibrant, inclusive, open, global and healthy Internet. We recognize our responsibility to contribute towards a more secure, trusted user experience that respects consumer privacy (as a fundamental consumer right). We also recognize the challenge of doing so while supporting the economic viability of a diverse publisher landscape, with consumption models that support quality content and open access for consumers.

The current operational and political environments, combined with the constraints inherent within established Internet protocols, implies that the digital marketing industry and browser community must collaborate if we are to meaningfully improve the consumer experience and consistently honor consumer privacy rights and preferences. Our industry's trade associations, which lead standards and best practices for our industry, have discussed programs and support for solving these issues responsibly that we would like to present for discussion, collaboration and joint problem-solving.

With a better consumer experience and the preservation of the global open Internet as our joint objective and common ground, we ask for browsers' cooperation in establishing and facilitating the use of a common, standardized mechanism for shared storage and access to:
- a standardized, restricted user token ,
- regulatory settings (consent strings, timestamps, permissions flags, etc.), and
- consumer privacy preferences.

We understand that participants within the browser and privacy community may not trust our industry to consistently respect consumers' privacy rights and preferences. However, we cannot do so if there is no persistent mechanism to attach those preferences to, and we understand

This is About Rebuilding TRUST

To enhance trust, we are prepared to:

- Honor & propagate privacy preferences as a condition of access.

- Introduce technical mechanisms to ensure auditable, compliant use of identifiers and data, in strict accordance with consumer preferences.

- Jointly govern the use of this solution with the browser and privacy community.

A Proposal for Enhanced Accountability to Consumer Privacy within the Digital Marketing Industry

Request for Collaboration to Improve Consumer Trust and Experience with Technology Standards for Consumer Privacy

Draft dated August 6, 2019 -- for private consumption among participants.

Executive Summary

The Digital Marketing industry recognizes that improved consumer experience and trust is essential to the growth of our industry, growth of the Web as a public benefit, and to assuring a vibrant, inclusive, open, global and healthy Internet. We recognize our responsibility to contribute towards a more secure, trusted user experience that respects consumer privacy (as a fundamental consumer right). We also recognize the challenge of doing so while supporting the economic viability of a diverse publisher landscape, with consumption models that support quality content and open access for consumers.

The current operational and political environments, combined with the constraints inherent within established Internet protocols, implies that the digital marketing industry and browser community must collaborate if we are to meaningfully improve the consumer experience and consistently honor consumer privacy rights and preferences. Our industry's trade associations, which lead standards and best practices for our industry, have discussed programs and support for solving these issues responsibly that we would like to present for discussion, collaboration and joint problem-solving.

With a better consumer experience and the preservation of the global open Internet as our joint objective and common ground, we ask for browsers' cooperation in establishing and facilitating the use of a common, standardized mechanism for shared storage and access to:
- a standardized, restricted user token ,
- regulatory settings (consent strings, timestamps, permissions flags, etc.), and
- consumer privacy preferences.

We understand that participants within the browser and privacy community may not trust our industry to consistently respect consumers' privacy rights and preferences. However, we cannot do so if there is no persistent mechanism to attach those preferences to, and we understand

We propose several technical mechanisms for building enhanced accountability to consumer privacy:

- An encrypted, revocable token, tied to a

- Joint accountability system, with a

- Controlled container for ad delivery.

A Proposal for Enhanced Accountability to Consumer Privacy within the Digital Marketing Industry

Request for Collaboration to Improve Consumer Trust and Experience with Technology Standards for Consumer Privacy

Draft dated August 6, 2019 -- for private consumption among participants.

Executive Summary

The Digital Marketing industry recognizes that improved consumer experience and trust is essential to the growth of our industry, growth of the Web as a public benefit, and to assuring a vibrant, inclusive, open, global and healthy Internet. We recognize our responsibility to contribute towards a more secure, trusted user experience that respects consumer privacy (as a fundamental consumer right). We also recognize the challenge of doing so while supporting the economic viability of a diverse publisher landscape, with consumption models that support quality content and open access for consumers.

The current operational and political environments, combined with the constraints inherent within established Internet protocols, implies that the digital marketing industry and browser community must collaborate if we are to meaningfully improve the consumer experience and consistently honor consumer privacy rights and preferences. Our industry's trade associations, which lead standards and best practices for our industry, have discussed programs and support for solving these issues responsibly that we would like to present for discussion, collaboration and joint problem-solving.

With a better consumer experience and the preservation of the global open Internet as our joint objective and common ground, we ask for browsers' cooperation in establishing and facilitating the use of a common, standardized mechanism for shared storage and access to:
- a standardized, restricted user token ,
- regulatory settings (consent strings, timestamps, permissions flags, etc.), and
- consumer privacy preferences.

We understand that participants within the browser and privacy community may not trust our industry to consistently respect consumers' privacy rights and preferences. However, we cannot do so if there is no persistent mechanism to attach those preferences to, and we understand

Joint Accountability System

This has been solved before!
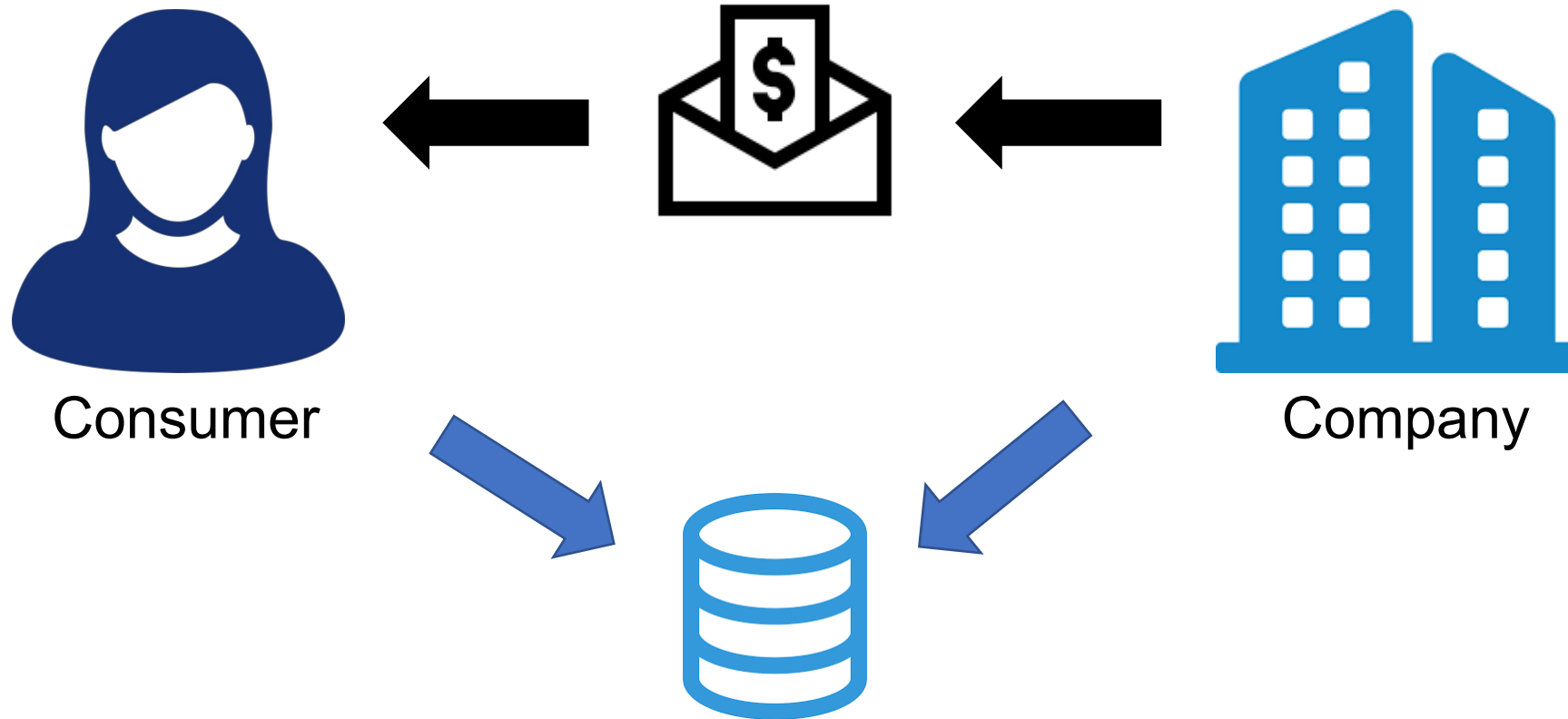
Consumer

Company

Income Tax Authority – Checks for Discrepancies

Personal Data and Privacy Preferences

Consumer

Company

Company   Company

Company   Company

Each of these events produces evidence of itself via system logs, which may be sampled and evaluated for non-compliance on an automated, ongoing basis.

Joint Accountability System

Consumer Privacy Use Cases:

- Who has information about me?
- What are they doing with it?
- I would like to opt-out (or in).
- I want to be a "ghost" …
- Restricting purposes and uses …
- Data deletion requests …
- Regulatory settings …

Transactional / Operational Use Cases

- RTB bid request and response
- Page or app-level data collection events
- Ad verification events
- Frequency caps, measurement, attribution
- S2S data transfers
- Consumer segmentation
- Personalization events
- Identifier resolution and/or cross-device

We can openly consider how privacy use cases can be reliably met within our industry through the advancement of technical standards and joint accountability systems.

Please participate in this effort ….

DATA RESPONSIBILITY The New Normal in a Consumer-centric World

Questions / Discussion?

Please submit additional feedback to:
responsibility@iabtechlab.com

Google

Giving users more **transparency**, **choice** and **control** over how their data is used in digital advertising

The Ad-Supported Ecosystem

What advertising has made possible

Advertising has made **open access to quality information on the web** possible

The risk ahead

But the open, ad-supported internet is at risk if digital practices don't evolve to reflect people's changing expectations for privacy.

The challenge

For many people, the digital advertising ecosystem is complex and opaque.

Google

iab. TECH LAB
INNOVATION DAY

Guiding Principles

01

Transparency

Users should be able to easily see and understand how their data is being collected and used for ads.

02

Choice

User choices about how they experience the web should be respected and any attempts to bypass those choices should be prevented.

03

Control

Users should have the ability to adjust how their data is collected and used to tailor the ads they see, including whether those ads are personalized at all.

Google

iab. TECH LAB
INNOVATION DAY

Working together

The web ecosystem is complex—it includes users, publishers, advertisers, technology and service providers, advocacy groups, regulatory bodies and more. We have to collaborate in order to come up with a solution that works for the entire ecosystem.

Efforts by individual browsers to block cookies used for ads personalization without suitable, broadly accepted alternatives have fallen down on two accounts:

- Lower programmatic revenue for publishers

- Have led some industry participants to use workarounds like fingerprinting, an opaque tracking technique that bypasses user choice and doesn't allow reasonable transparency or control.

Google

iab. TECH LAB
INNOVATION DAY

The effect of blocking cookies

- Based on an analysis of a randomly selected fraction of traffic on each of the 500 largest Google Ad Manager publishers globally over the last three months, we evaluated how the presence of a cookie affected programmatic revenue.

- Traffic for which there was no cookie present yielded **an average of 52 percent less revenue** for the publisher than traffic for which there was a cookie present.

- Lower revenue for traffic without a cookie was consistent for publishers across verticals.

Google

iab.TECH LAB
INNOVATION DAY

Our Proposal

We propose that **users should be able to see and control**:

01 — What data is being collected, by whom and why

02 — Who is responsible for an ad

03 — What caused an ad to appear

Google

We propose that **practices that do not respect user privacy** and attempts to bypass user choices should be prevented.

Practices that weaken or take away a **user's ability to see what data is collected** or control how it is used should be prevented. An example of this type of practice is fingerprinting.

Google

How users could access the information and controls

Individual ad

Stop showing ads like this

ABOUT THIS AD

Advertiser:

Served by:

Update your privacy

Webpage

Inspect ads shown on this page

Advertiser name
via Ad Tech Provider

Advertiser name
via Ad Tech Provider

What data is being collected?

Manage data collection

Website

https://mywebsite.com

This site follows privacy best practices

✓ Best practice #1
✓ Best practice #2
✓ Best practice #3

Learn about privacy best practices

Enable tailored ads

Browser

DATA COLLECTION ON THIS BROWSER

All sites | Last week | Logged in

84%

Measurement   89%

Interest-based advertising 55%

Content optimization   30%

ADS VIEWED

Advertiser name
via Ad Tech Provider

Advertiser name
via Ad Tech Provider

Manage the ads I see

Why is my data being collected?

Manage data collection

Enable tailored ads on this browser

Ecosystem

For a more respectful ecosystem

Metric #0   Metric #1   Metric #3

84%

Metric #2

Google

What needs to happen in order for this to work

01 A standard way to **surface how data is being collected**

02 A standard way to **label ads with metadata**

03 A standard way to **surface the companies involved** in showing ads

04 **A centralized registry** of participating companies

05 A way to **address approaches that undermine** industry best practices

Google

iab.TECH LAB
INNOVATION DAY

Next Steps

Gather industry feedback on
this proposal

Send feedback to
iab.com/google-ad-proposal

Continue to learn
from users

Google

iab. TECH LAB
INNOVATION DAY

Competing Browser Worldviews: A Technical Discussion on Privacy Positions + Q+A

Sam Tingleff
Chief Technology Officer
IAB Tech Lab
@iabtechlab
@samtingleff

Neal Richter
Chief Data Scientist
SpotX
@SpotX

Tracking the Browsers

2017 — Jun — Oct — 2018 — Jun — Oct — 2019 — Jun — 2019

Today

Safari ITP 1

Safari ITP 2

Firefox introduces ETP

Safari ITP 2.1

Safari ITP 2.2

Safari introduces PPACA

Chrome support for SameSite

Chrome announces the privacy sandbox

Firefox enables ETP by default

Edge announces "Auditing Privacy on the Web"

Chrome's Privacy Sandbox: Principles

- Identity is partitioned by First Party Site
- Third Parties can be allowed access to a first-party identity
- A per-first-party identity can only be associated with small amounts of cross-site information
- Targeted advertising represents economic value worth protecting

"*3 bits of conversion data, with 5% noise applied (that is, with 5% chance, we send a random 3 bits) ... sent to https://example.com/.well-known/register-conversion[?conversion-metadata=<metadata>]*"

"(Trust) tokens are non-personalized and cannot be used to track users, but are cryptographically signed so they cannot be forged."

Privacy Sandbox: Product Targeting

"We propose an API in which the browser, not the advertiser, holds onto the information about what the advertiser thinks a person is interested in."

Privacy Sandbox: Budgeting

"Subsequent API calls that violate the budget will either result in an error being thrown or, if possible, will be replaced with a privacy-preserving version of the API"

Who's In Charge of Your User Agent

Apple/Chrome/Firefox

Now with crypto magic!

	Anti-fraud	Measurement	Category Targeting	Product Targeting	Frequency Capping
Apple	?	🧙	⊖	⊖	⊖
Chrome NG	🧙	🧙	🧙	🧙	♻
Firefox	?	⊖	⊖	⊖	⊖

iab.TECH LAB INNOVATION DAY

The Crumbling Cookie: Can Universal IDs Help or Will We Need More?

Opening Remarks

Will Doherty
Executive Vice President, Global
Marketplace Development
Index Exchange
@wrdoherty @indexexchange

Moderator

Ronan Shields
Programmatic Editor
Adweek
@adweek @ronan_shields

Panelists

Jordan Mitchell
SVP, Membership & Operations
IAB Tech Lab
@kickstand @iabtechlab

Scott Menzer
Co-Founder & Vice President
Product & Operations
ID5
@smenzer @ID5_io

Gruia Pitigoi-Aron
Vice President of Product
The Trade Desk
@thetradedesk

John Slocum
Vice President, DMP
MediaMath
@mediamath

Decentralized Solutions for AdTech and Data: Ethereum and Beyond

**Alanna Gombert
Head of Advertising Technology
ConsenSys
@consensys
@alannaaroazzi**

Blockchain Marketing Technology Landscape in Q1 2018 – 88 Companies
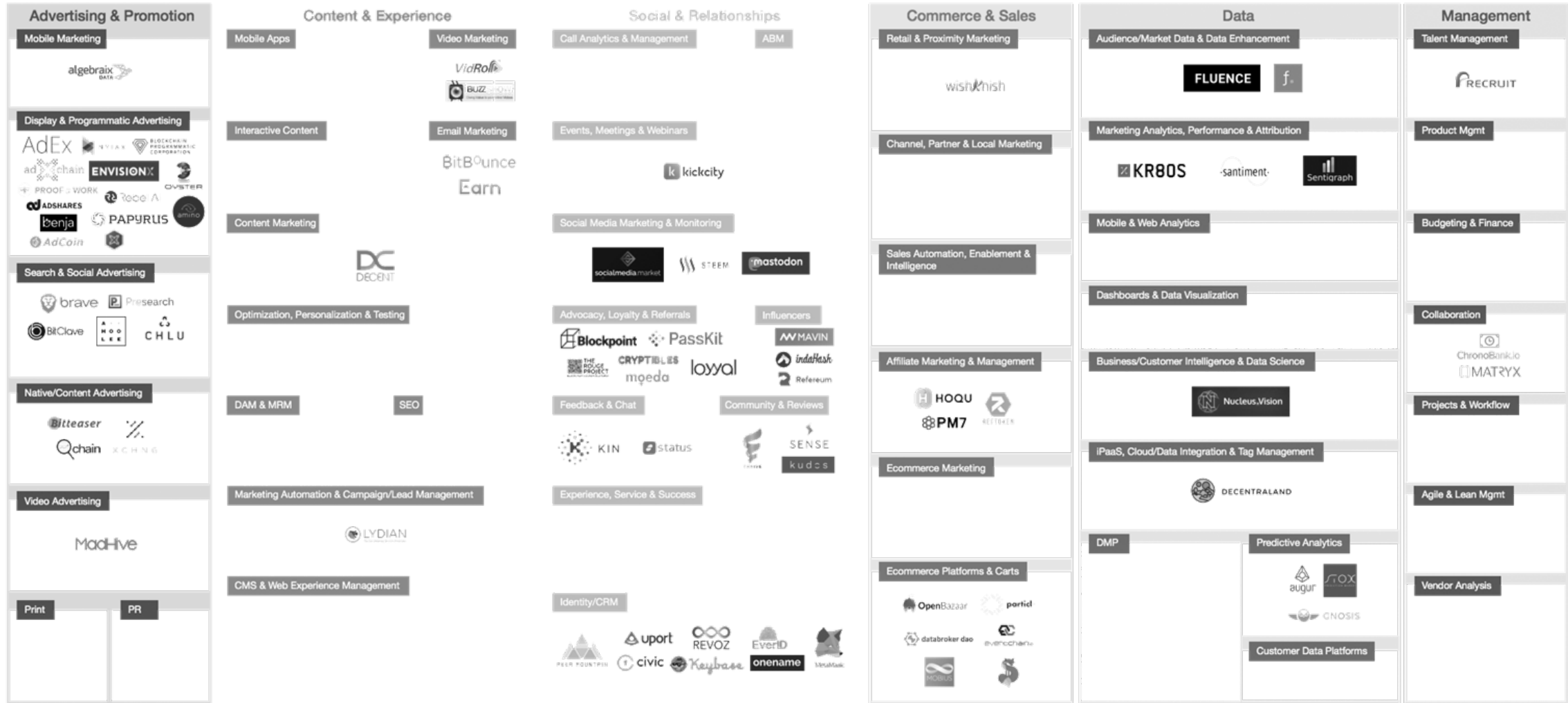
Blockchain Marketing Technology Landscape in Q1 2019 - 290 Companies

The current state of blockchain is **"growth".** From the Bitcoin blockchain to Ethereum to EOS, one common theme arises: **scale and capacity.**

There is a move to a **paradigm shift** with the blockchain community.

- Using public chains as **"breadcrumb"** trails
- Data points as identity markers, trading parameters, data locations etc. stored on chain
- **Pointers** are key
- Off-chain data bases and data for important data sets
- Sever links when deletion needs to occur - (GDPR etc.)
- All participants equal have a voice

Couple the breadcrumb trail reality with smart contracts (applications), trustless applications, and security matching in the form of public/private keys and zero knowledge proofs. Result? A robust infrastructure baseline.

Let's discuss the above terms in more detail and practical applications.

Trustless Applications

A **trustless system** is one that does not depend upon the intentions of its participants, who may be honorable or malicious. The **system** functions in the same manner regardless of intentions. The blockchain, with a peer-to-peer protocol that is also transparent and immutable, is **trustless**.

- Consensus Mechanisms – verification of blocks, token economics, consumer voice
- Private chains – not as impactful. Verification is minimal. Number of nodes == how secure a decentralized network.
- Advertising Implications – financial records, pricing, impression counts etc.
- Garbage in/Garbage out

Zero Knowledge Proofs

What are zero knowledge proofs?

- First proposed in the 1980's by MIT researchers, Silvio Micali and Charles Rackoff
- Working on interactive proof systems, theoretical systems where Prover tries to convince a Verifier that a mathematical statement is true.
- Challenge is to prove the Prover's possession of the solution to said mathematical statement to the Verifier without revealing any additional information.

Qualification:

- **Completeness**: If the statement is true, an honest verifier will be convinced by an honest prover.
- **Soundness**: If the statement is false, no cheating prover can convince an honest verifier that it is true.
- **Zero-knowledge**: If the statement is true, no cheating verifier learns anything other than the fact that the statement is true.

Examples: JP Morgan Chase Quorum, ZKRP

AdTech Implications

The creation of trustless verification systems implementing such mathematical theory as zero knowledge proofs opens up a new way to communicate within the AdTech universe.

Currently communication is silo'ed be it in application (adservers etc.) or externally within small groups or cliques.

One argument that is made for group communication is the notion of anti-trust and collusion. If a trustless system is built and the parties are all sharing the same data, the verification of these data blocks and the subsequent recording of data becomes verifiable and transparent.

How do you opt in to such a service?

Secure Protocol Messaging

Up till now the assumption from most is that all of the preceding work must be done on chain and publicly. Not so.

A **working hypothesis** states that there is a **need for a point to point confidential "messaging" conduit** between parties **in a micro workgroup (industry, clique etc.)**

Such conduits can be configured by smart contracts to create a step by step configuration (one contract per step).

E.G. Three suppliers and one buyer, one RFP, three confidential bids.
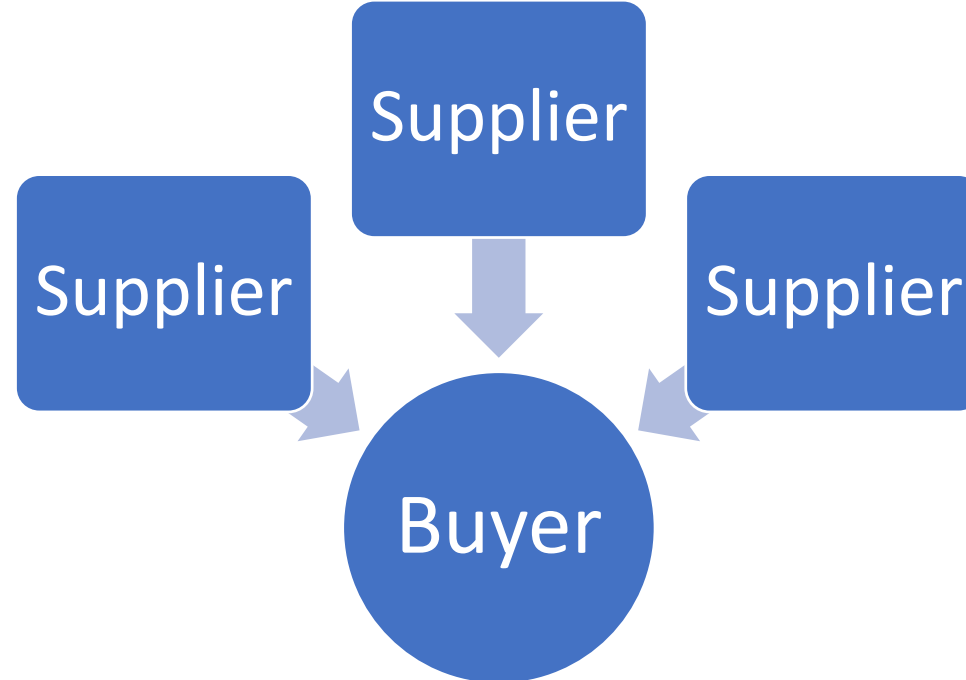
Fourth Conduit – Communications amongst all buyers and suppliers. Open channel.

Thus Four Smart Contracts in total.

One for initial four party communications and then three for confidential bids.

Solution: Implement stateless messaging service amongst the contracts using keys as a decryption mechanism to insure confidentiality and data integrity.

Useful for RFP submission, bidding strategies etc.

Coupling decentralized community technology practices, data management can be approached the same way.

- **Decentralized data stores or banks** are being proposed in legislation today.
- **Key exchange and zero knowledge proofs** are being explored as ways to share data amongst consumers and companies alike.
- Open source developers are being given refuge at the state level (Wyoming).
- Consumers can have an equal voice to corporations.
- Harken to the Cambridge Analytica/Facebook issues. What have we learned?

Summary

- Decentralized communications are an important technology to explore.
- Advertising technology can benefit from the implementation of such technology if done in the right way.
- Consumers can participate equally
- One way to participate in the decentralized community is through secure messaging protocols
- #ownyourdata is a battle cry not to be ignored
- RTFM

Thank you!

Alanna.gombert@consensys.net
Alanna.gombert@digitalasset.org

Agenda

History and Participation

Vision of PrivacyChain - What Should It Do?

Lessons Learned, 2018-2019

Operating Concepts

Invitation to Participation, 2019 & 2020
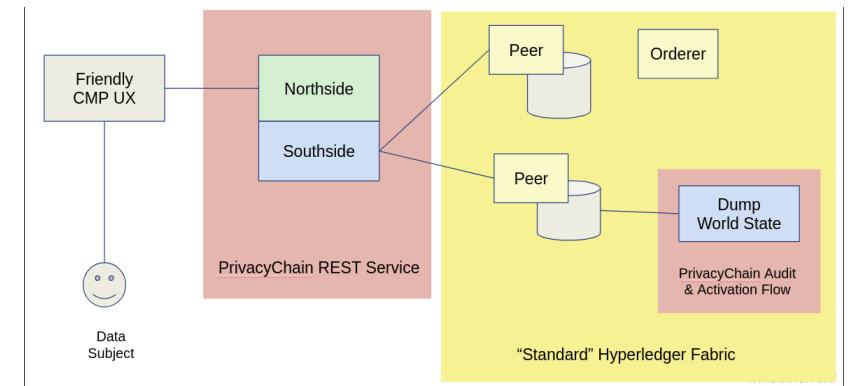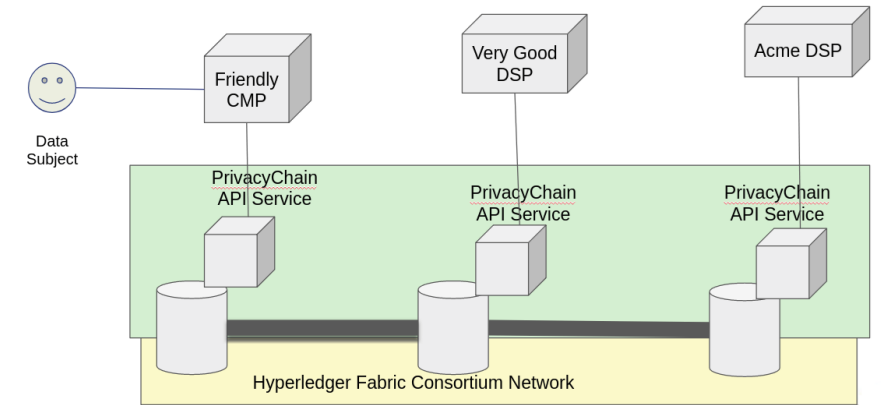
History & Participation

Oct. 2018 - First Proof of Concept, a CMP

- **Participants**: Acxiom

Jan. 2019 - PrivacyChain Engineering Working Group

- **Participants**: Didomi, LiveRamp, NYIAX, Sabio Mobile, Viacom, Verizon Media

2019 & 2020 - Completion & Pilots

- **Participants**: You or You or You … an invitation

What the MVP Does

1. ***Who*** can consent, how are they named?
2. **To *whom (what)*** is consent given, how are they named?
3. ***For which*** operations is control granted, how are they named?

Who: The *persons* each being represented by an assigned [identifier](#).
Whom(what): *the machines* operated by the [Global Vendors](#).
For ***which:*** The *operations* named in the [Transparency & Consent Framework](#).

Principles, Vision and Concept

1. Immutable authenticated record of consumer consent for use of their data

2. Record of downstream propagation of consumer data: Allow consumer Jane to know and manage consent when A gets Jane's consent and shares data and consent with B

3. Regulatory compliance auditability

Principles, Vision and Concept

1. Persons control Machines as a *consent* statement (*who*, *what*, *which*)

2. PrivacyChain is control channel in the modern media environment.

3. PrivacyChain is "always-on" and "everywhere available."

4. Has distributed operation "like infrastructure" "like a utility" "like DNS"

5. Has auditability.

More practical - The Simplified MVP

Expect a few separate deployments "as a service." But also possible to have independent operators.

- The service offers Consent Management Platform (CMP) recordkeeping.
- The service is "back-office," it has no UX or consumer face.
- The separate CMP or publisher provides the consent UX flow.
- Accent distributed ledger capabilities: distributed, immutable, auditable.
- Show end-to-end operation of the consent read-write-audit flow.

Distributed System Operations
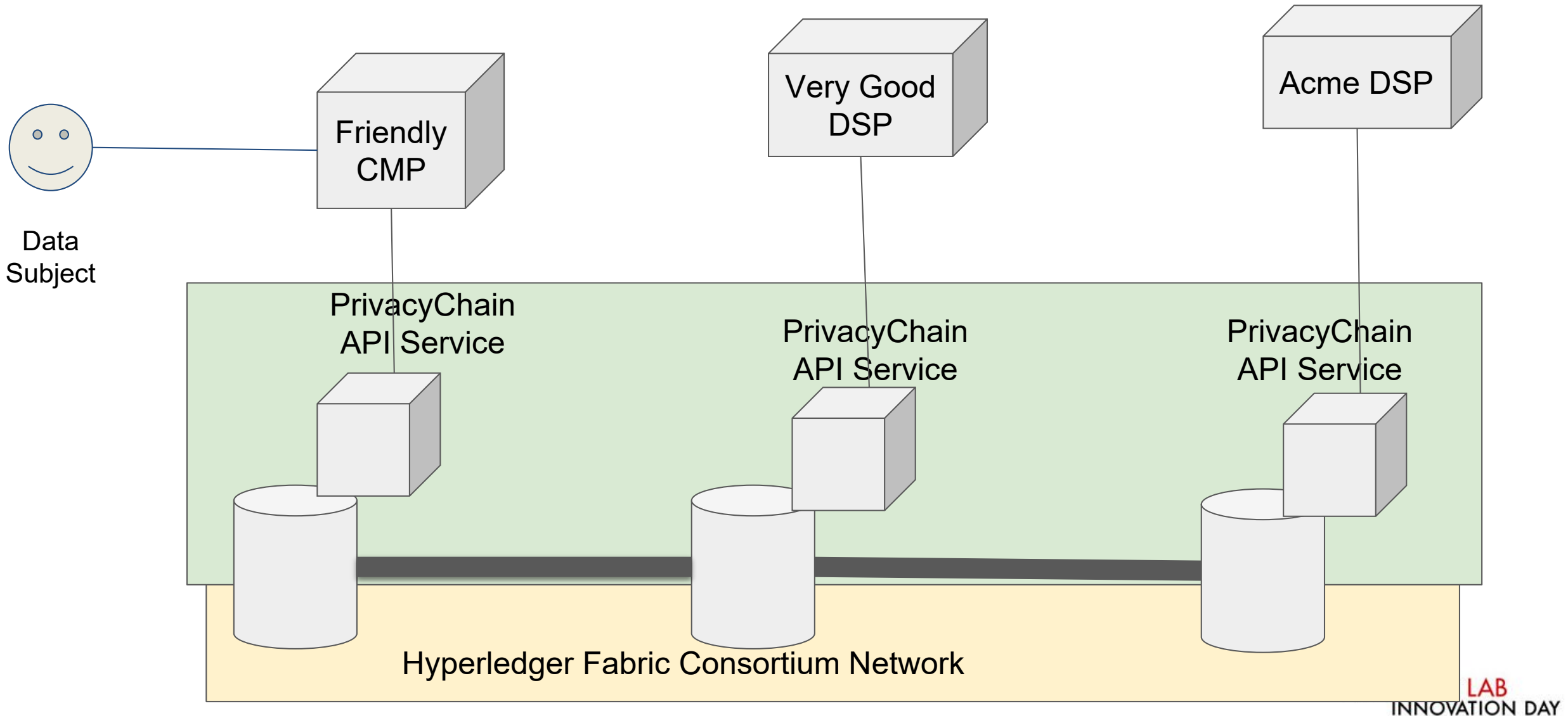
Anatomy of a PrivacyChain Site
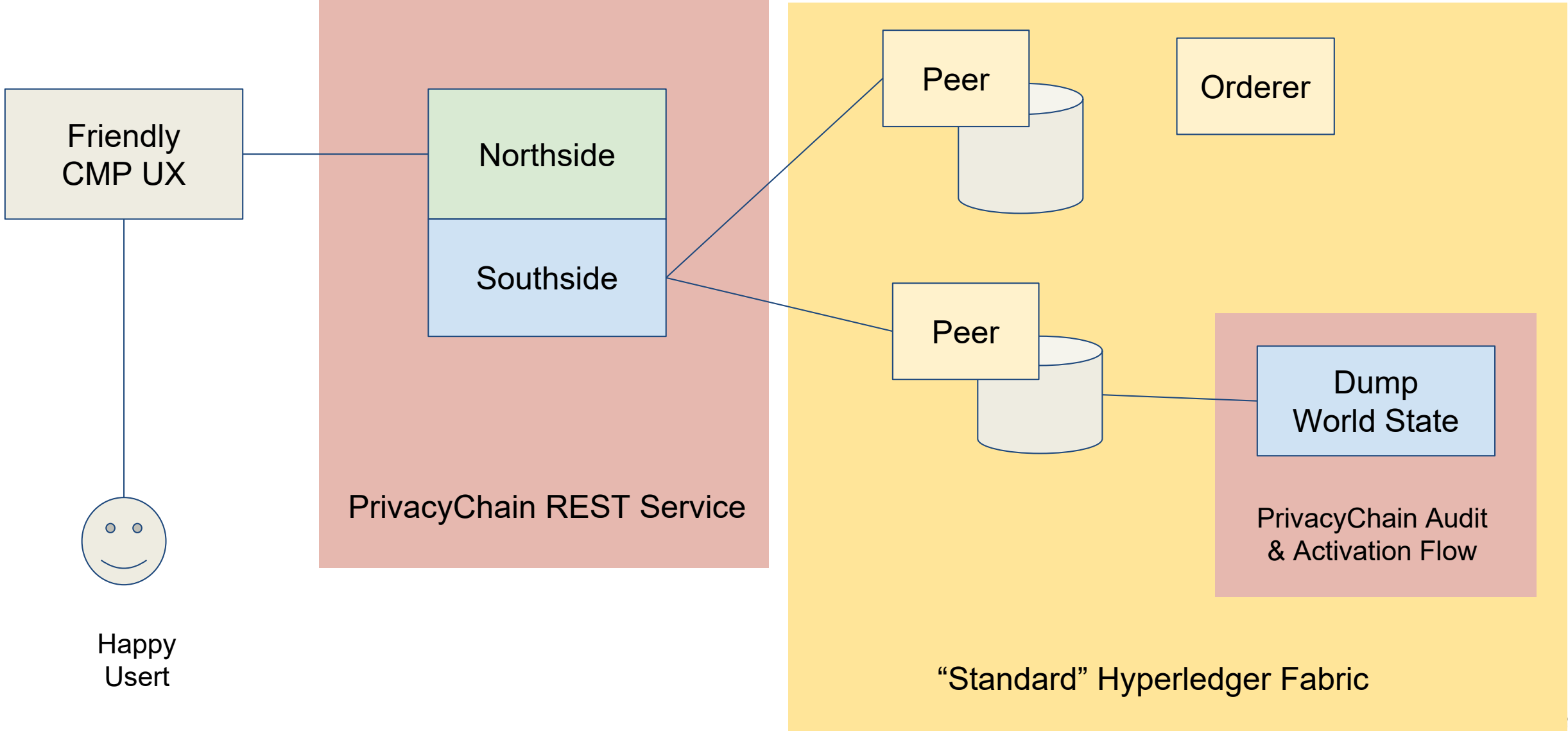
Four Tracks of Development

1. North Side API (REST)
   CRUD and history of Consent Statements

2. South Side API (Hyperledger Fabric)
   Distributed Ledger of Consent Statements

3. Operating Considerations
   How does "on call" work?

4. Ownership Considerations
   Vesting of control and responsibility

Lessons Learned, 2018-2019

1. Product requires constant evolution, from laws, business, technology *etc.*

2. Engineering in the Open Source mode is not Standards Development

3. The distributed ledger technologies are very new

4. If infrastructure operations is hard, distributed operation is harder

5. A business model is an important component of product

Distributed Operating Concepts

1. ## Separate Code (Reference Implementations), **Common Specification**

    Each consortium member operates their own software.

    Independent implementations of a common specification.

    Common schema, but also bi-lateral "channels" and "private data sharing"

    Easier: independent releases; Harder: independent engineering & operations.

    e.g. Verizon Media's (2019) State Space Solutions reference implementation,

    e.g. IAB Tech Lab's (2018) PrivacyChain Proof of Concept

2. ## Shared Code (Standard Implementation), **Common Operations**

    All consortium members must run the same software.

    All consortium members operate the same API & database schema.

    A central governance coordinates updates & maintains.

    Easier: it's the same code everywhere; Harder: governance and maintenance.

Invitation to Participate, 2019 & 2020

IAB Tech Lab Blockchain Working Group is actively seeking participation around:

- Product fit & function defines the future evolution of the specification.

- Consortium operators coordinate the business side
  Consortium operators hand the "on call" nature of the service

- Software Engineering for web-friendly north-facing APIs.
  Software Engineering for distributed ledger south-facing APIs.

- Database operations for the distributed ledger technologies.

On to 2020

The Evolution of CTV: Protocols, Audience and Content Data

**Jessica Berman
Senior Product Manager
Audience, Data and Privacy
SpotX
@SpotX**

SPOTX

Leading video ad serving and monetization platform and programmatic infrastructure

Our footprint in the video advertising ecosystem

- 60+ integrated DSP partners, 45+ Deal ID enabled

- 600+ premium media owners

- 20 billion OTT transactions monthly

Fully owned subsidiary of RTL Group

- Powering 150+ international media owners including RTL Netherlands, IP Deutschland, and M6

Founded in
2007

12
offices worldwide

600+
premium media owners

Changes in TV Viewership

TV Has Changed

Pay TV vs. Non-Pay-TV Households in the US, 2013-2023
millions

100.5 100.5 99.6 97.7 94.3 90.3 86.5 82.9 79.4 76.0 72.7

56.1 52.3 48.3 44.3 40.2 36.0 31.6 26.9 23.6 22.0 20.6

2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
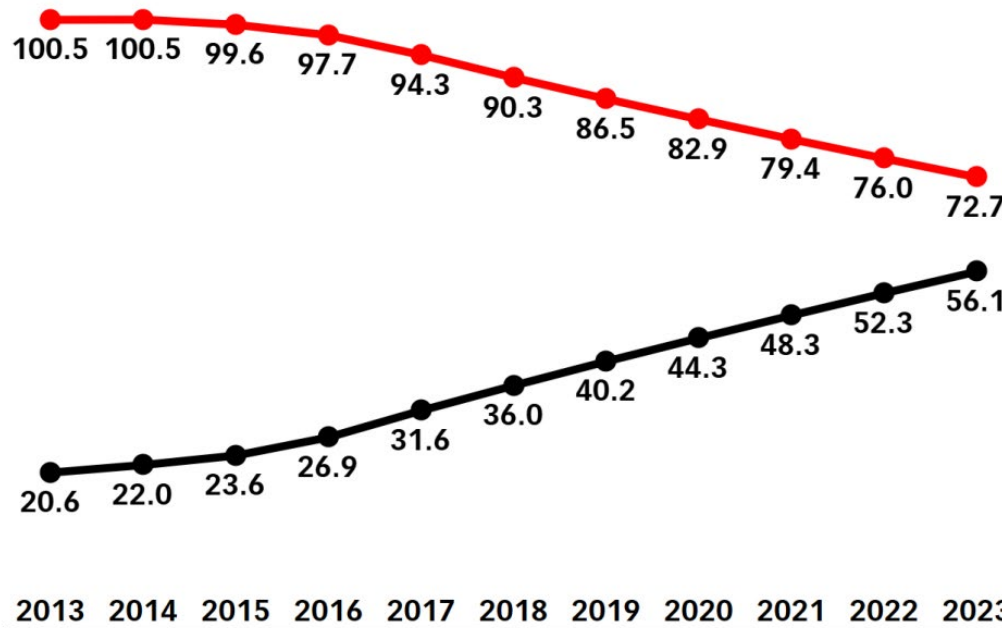
- ■ **Pay TV households**
- ■ **Non-pay-TV households**

Note: pay TV households are households with a subscription to traditional pay TV services; includes cable, satellite, telco/fiber operators and multiple system operators (MSOs); excludes IPTV and pure-play online video services (e.g., Hulu, Netflix, YouTube, etc.)
Source: eMarketer, July 2019

T10457

"OTT Aggregator / Standalone"

Subscription

Transactional

Ad-Supported

Device Diversity

Apple TV

Smart DVD Players

Roku Streaming Stick

Smart TVs

Gaming Consoles

Amazon Fire TV Stick

amazon fireTV

iOS

android

chromecast

Roku

androidtv

TIZEN

tvOS
Apple tv OS

android OTT

LG
webOS

Content Type & Ads

- Live Events
- Linear Channel
- Time-shifted viewing
- C3, D4, D21+ content
- On-demand

- First-run episodic
- Short-run movies
- Live Sports
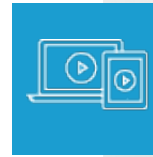- Live reality/game TV
- Full series libraries
- User/Influencer Video

Planning, buying and ad loads vary between types of content, even when the show is the same

Efficient Targeting

- Build effective reach across familiar TV content and beyond
- Reach consumers where they consumer content

CRM

Data Management Platform

DMP

Connected devices
Smart TVs, multimedia devices, and gaming consoles serve as content gateways.

TV programmers
Direct-to-consumer apps on connected TVs distribute live and on-demand content.

Virtual MVPDs
Virtual MVPDs, also known as "skinny" cable bundles, provide more than 100 linear TV networks and on-demand content.

Advertising video-on-demand platforms
Curated libraries of TV content and movies are available on-demand through connected devices

X-Screen Support
Targeting, measurement and frequency capping across a user's screens
.

SPOTX

OTT Programmatic Deals

Open marketplace
Curated marketplaces
1:1 and programmatic guaranteed
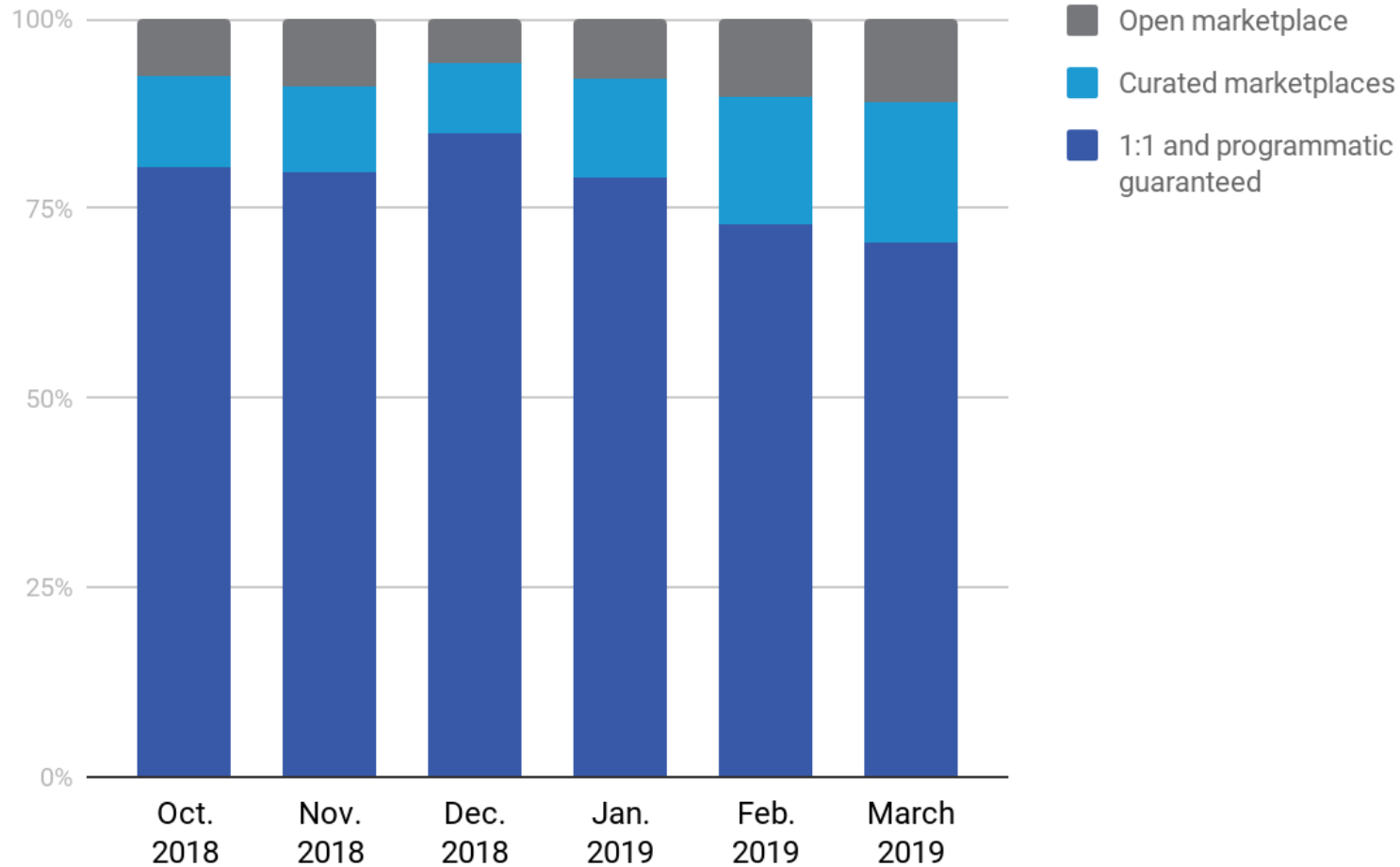
Curated deals accounted for

18.5%

of global OTT ad spend
in March 2019

1:1 deals and programmatic
guaranteed accounted for

70.5%

from October 2018 to March 2019

Version 1.5

Problem Areas in OTT

Friction Areas in Programmatic CTV

- Traditional Linear is still separate from Programmatic

- OTT is fragmented, 300 apps in US alone

- Linear TV buyers are used to GRP currency

- Display tools don't port over well, no cookies!

- Frequency and competitive separation is harder

Version 1.5

Risk Areas in Programmatic CTV

- Opaque schedules and device reach

- SSAI Proxy Fraud

- SSAI Caching/Transcoding Issues

- Fake and "MFA" OTT Apps

- Replay Attacks

- Illegitimate blending/replicating

- VAST/VPAID Event Attacks

Protocols for CTV

- OpenRTB 3.0 vs OpenRTB 2.5

- OTT IFA Guidance

- Content ID and Metadata APIs

- Ad schedule metadata

- Authorized Apps (app-ads.txt)

- Certified Transactions (ads.cert)

Measurement for CTV

- GRP How is audience defined and measured?

- How will CCPA, GDPR effect measurement?

- Destination Device validation?

- Certified Vendors?

Thank you

Perspectives on Cross-Device & The Evolution of Targeting and Measurement

Ajit Thupil,
SVP, Identity
Tapad
@Tapad

Travis Clinger,
Vice President, Strategic Partnerships
LiveRamp
@tclinger @LiveRamp

Tammy Greasby
Director, Data Science
The Trade Desk
@tagyoureit3296 @thetradedesk

Tapad: the global leader in cross-device identity
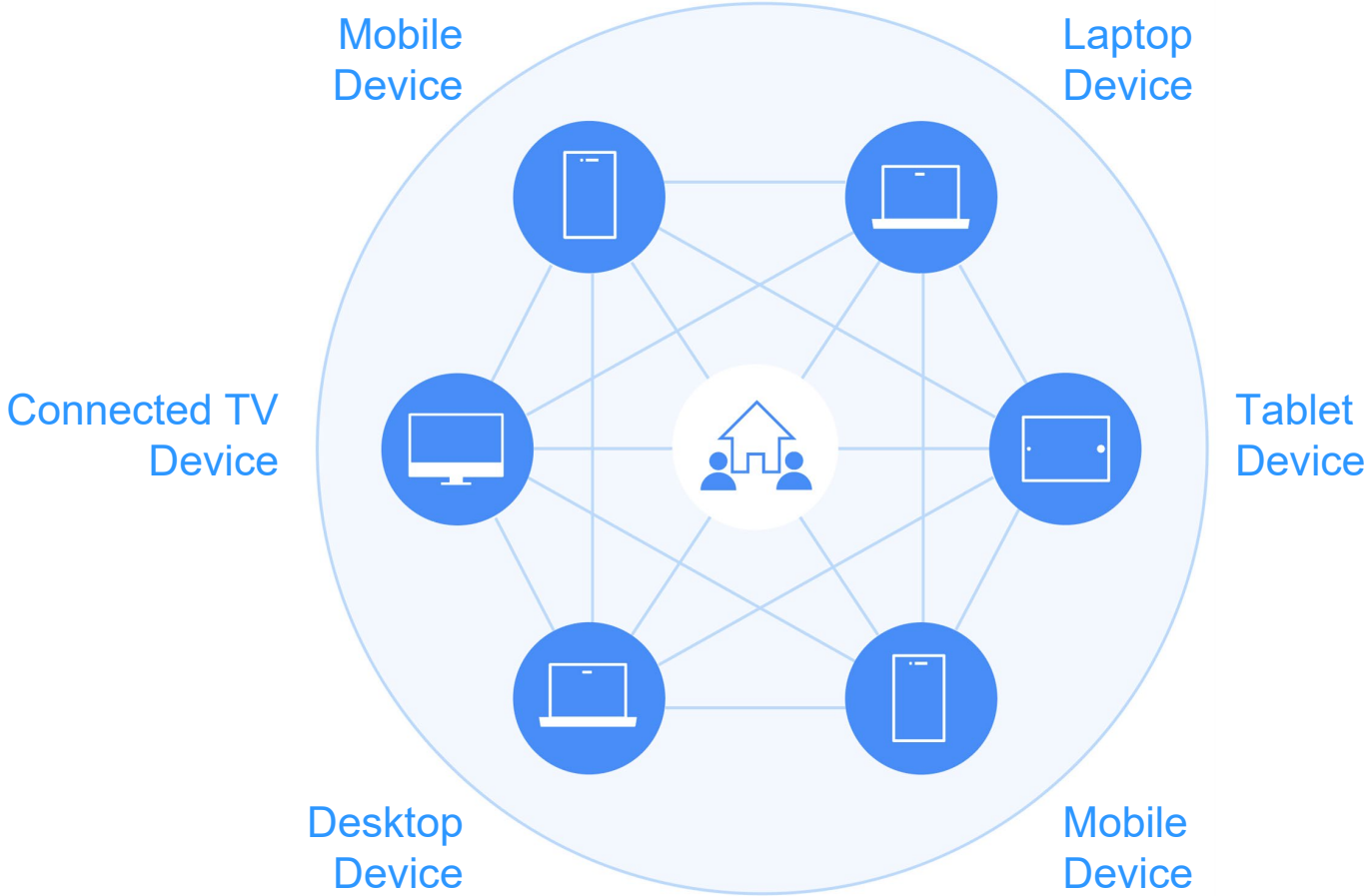
How The Tapad Graph is Built
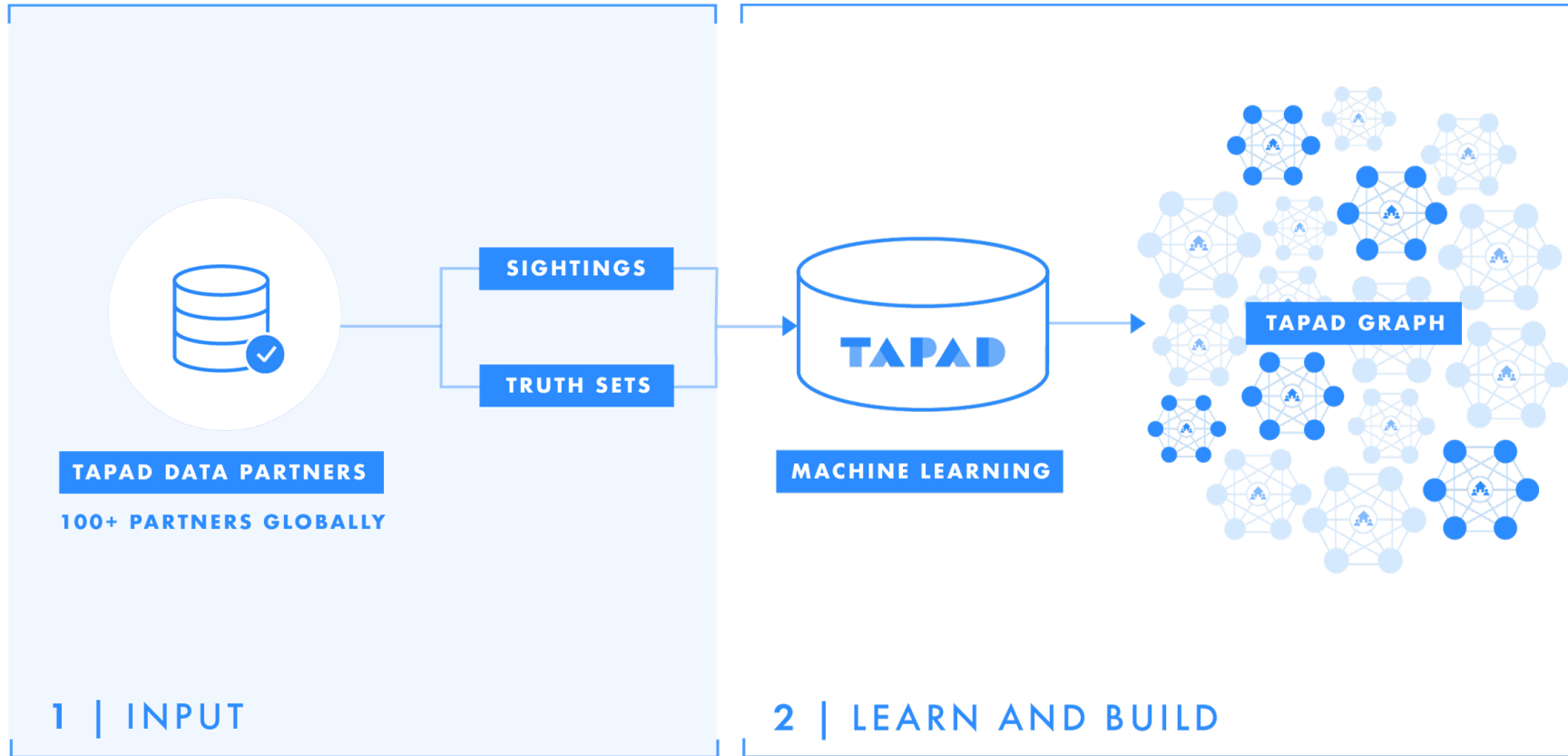
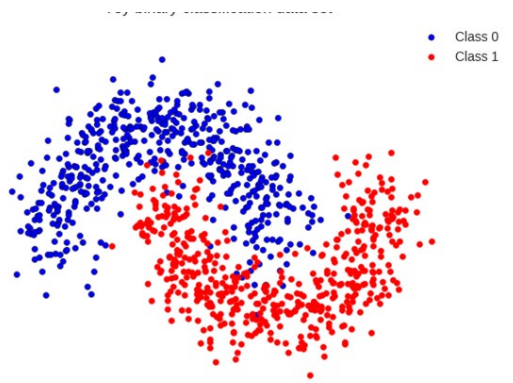**SIGHTINGS:** digital ID, timestamp, user agent, platform, IP addresses
TRUTH SETS: digital ID, timestamp, hashed email, IP addresses
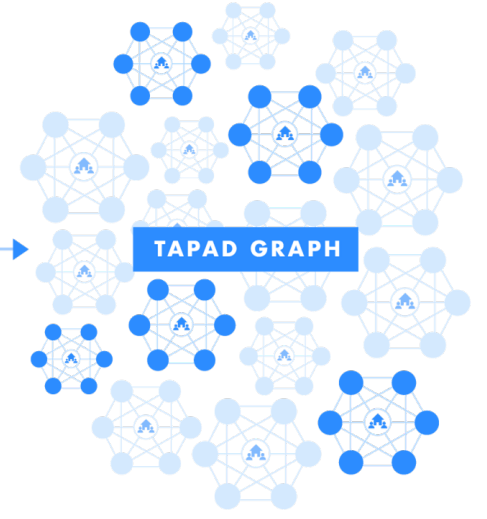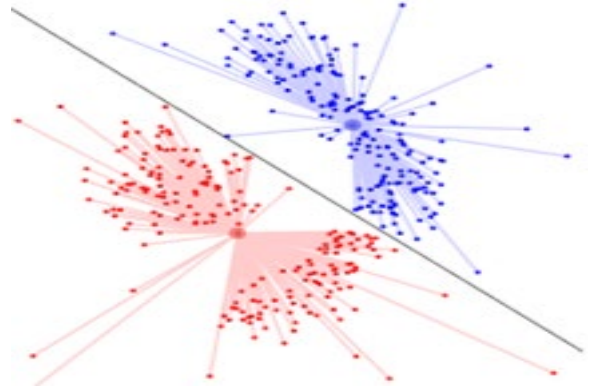
Tapad uses a two-step process

Supervised classification

Unsupervised clustering

TAPAD

MACHINE LEARNING
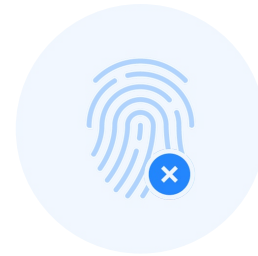
TAPAD GRAPH

Trusted privacy-safe partner

100% committed to ensuring privacy laws and principles are followed in all data processing activities globally

Thorough review of all data sources - quality and legal complaint is essential

Extend opt-out beyond the device level in addition to easy opt-out choices through Tapad's site, or centralized industry opt-outs

No fingerprinting; Voluntary classification of cookies as 3rd party in Chrome

Compliant with major frameworks - IAB, Appchoices, NAI

Solving for universal challenges in today's ecosystem

Start, broaden or continue personalized conversations with customers across devices

Reach consumers at global scale with defined precision

Measure and optimize engagement throughout the customer journey

Leverage Tapad's privacy by design technology and privacy compliance globally

LiveRamp's IdentityLink

Travis Clinger, VP Strategic Partnerships
LiveRamp

The largest deterministic graph - linking offline and online
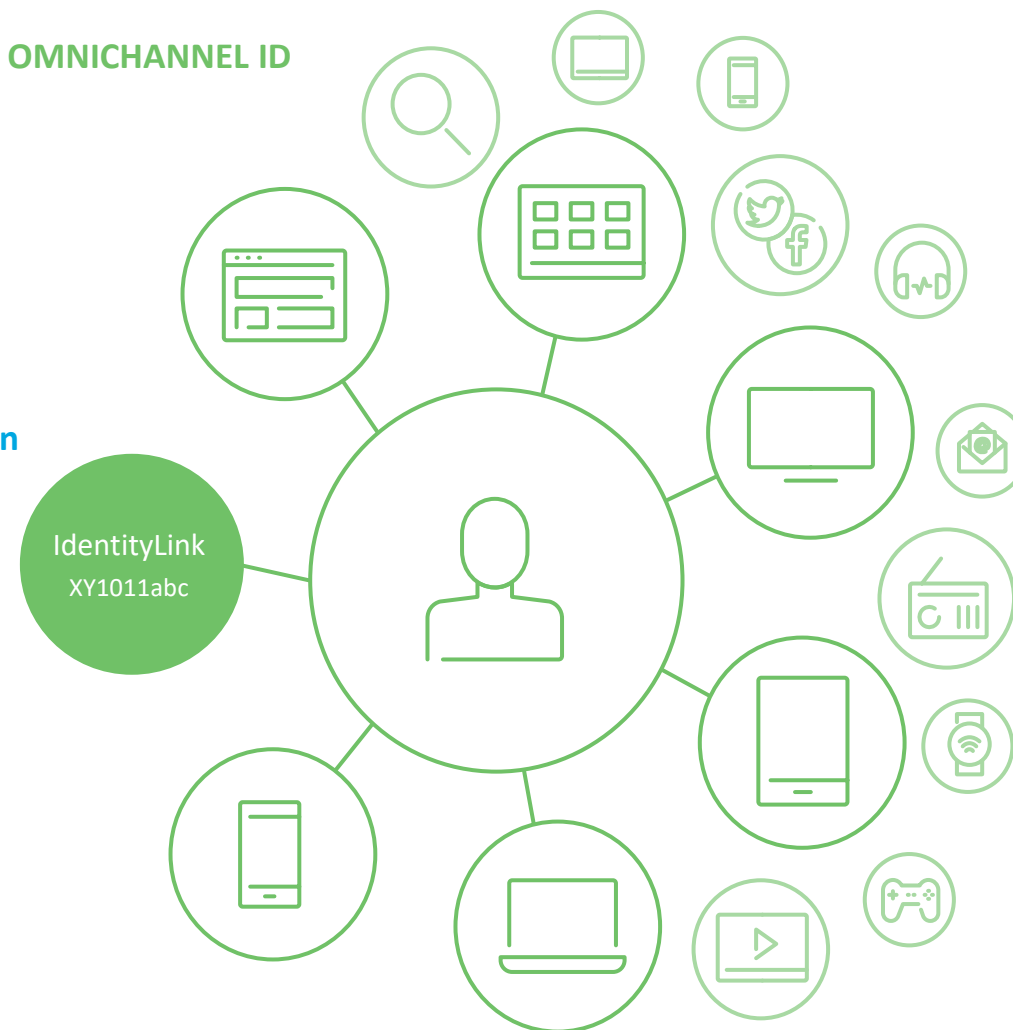
A Known Offline Identity

Liz S. Wilson
20 Stag Dr
Chicago, IL

E. S. Jones
10 Main St
Plano, TX

E. S. Wilson
20 Longhorn Ave
Chicago, IL

ABILITEC ID
abc12345

Liz Jones
123 Sunrise Ave
Plano, TX
Ph: 555-1212

Elizabeth Wilson
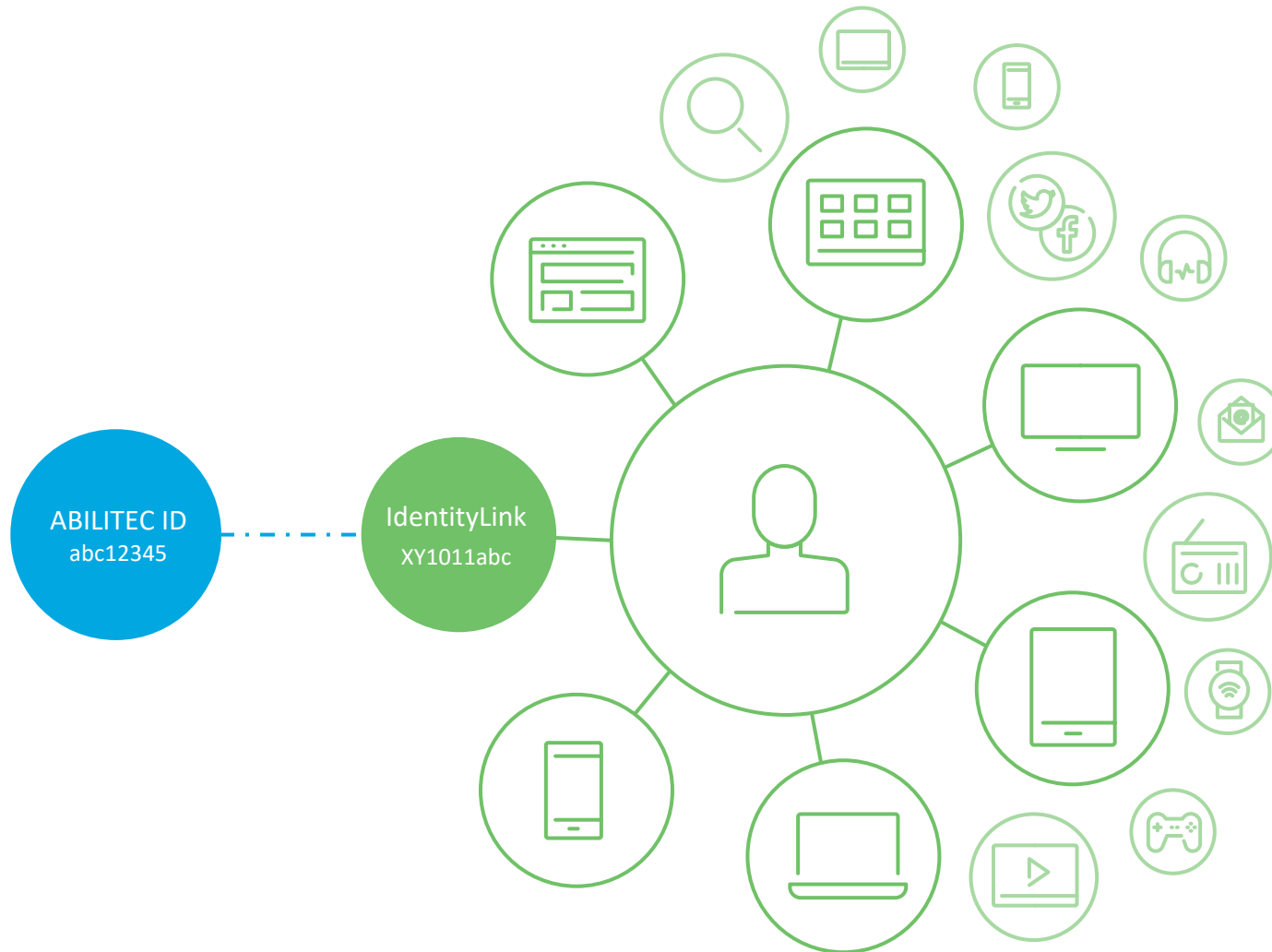20 Longhorn Ave
lizzy@homepc.com

Elizabeth Jones
Cell Phone:
555-2323

Largest Deterministic Graph for the Open Internet

- **45+ years** of consumer contact data

- **150+** data sources

- **4.5+ billion** name & postal records

- **900+ million** email addresses

- **450+ million** phone numbers

LiveRamp®

Anonymous & Deterministic Online Identity Grounded in Offline Graph

Deterministic matches tying devices, cookies, or Customer IDs to a known user touchpoint

LiveRamp **looks for the the user in Abilitec (offline graph)** using a one-way hash to maintain privacy

Any new matches are connected to an existing IdentityLink which strengthens match rate and addressability

Our Match Methodology

A match is only made when a **clear connection** is observed

Our matches are at the individual / household level, **not just ZIP or city**

We count all connected devices as *one* **match**, not one match per device

We keep our graph fresh by **removing inactive cookies/devices**

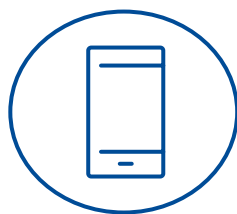We **screen fake emails** for data cleanliness

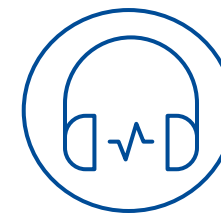**>95%** accurate

comSCORE.

Offline Data Extends Online Reach

Historical and offline data link touchpoints that could never be connected with exclusively online matches by linking online identifiers based on offline data.

cookie ID
jyidms33hd4e263hd93

MAID
c14e7fb1–4476–4b21

Customer ID
P097yt7493jf

lizzy@msn.com

ejones@yahoo.com

Elizabeth Jones
AKA Liz Jones
lizzy@msn.com
ejone@yahoo.com

LiveRamp

Scale Equivalent to the Largest Closed Ecosystems

LiveRamp maintains the scaled open equivalent to the largest closed ecosystems, but can activate data across the entire ecosystem.

facebook
240M+
Active US users

Google
210M+
Active US users

LiveRamp
200M+
Active US users

amazon
180M+
Active US users

An omnichannel graph is more than cookies

LiveRamp's identity footprint is highly diversified in stable identifiers
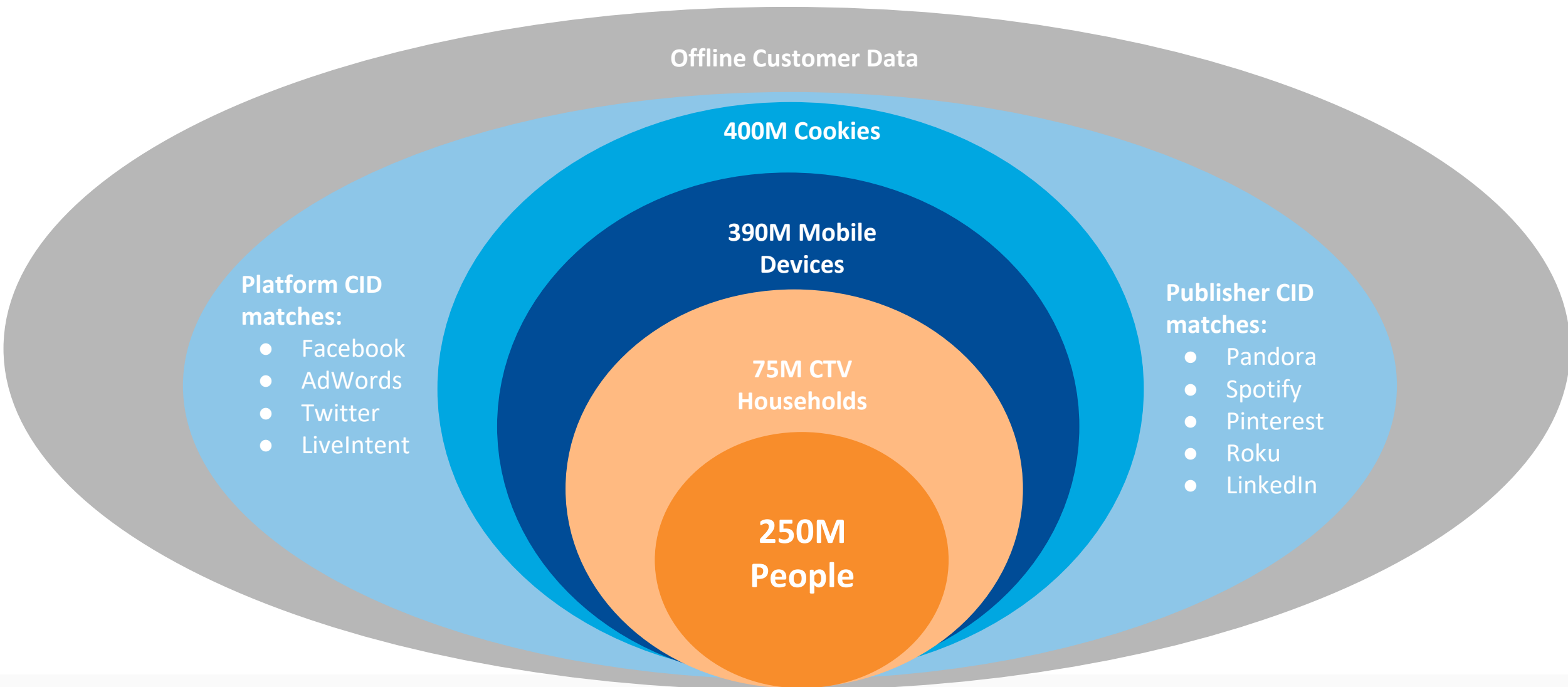
A True End to End Solution

LiveRamp now provides the ecosystem equivalent capabilities to the walled gardens by integrating our neutral, persistent, people-based identifier across the ecosystem
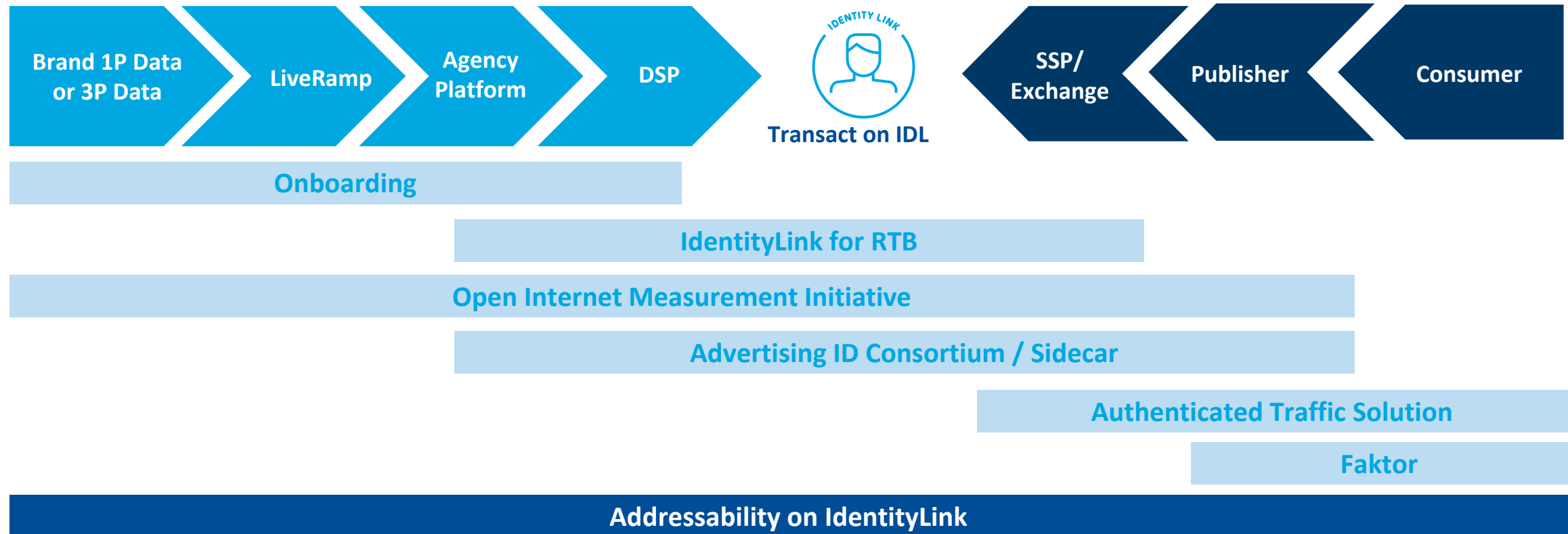
Identity for the ecosystem

Offline Transactions
DSP clients can onboard offline transactions into a DSP for measurement/optimization

CRM
Clients can onboard 1st party data with no minimums directly on the DSP platform

Data Store
Clients can access 150+ data providers in the DSP UI

DSP

Advanced TV Inventory has IDL

Digital Inventory has IDL and Common cookies/IDFA/AAID

SIDECAR

SSPs use Sidecar capabilities to put IDL on all available bid requests—regardless of inventory source

SSP

CRM Party Data

Data Store
Clients can access 150+ data providers in the SSP UI for PMP deals

Video Inventory

Advanced TV Inventory

Display Inventory

Mobile Inventory

SIDECAR

DMPs leverage Sidecar technology to send segments to DSPs on IDL

Online Data
DMPs can use LiveRamp's Real Time ID Service to identify browsers on first view

CRM
Clients can onboard 1st party data with no minimums directly on the DMP platform

Data Store
Clients can access 150+ data providers in the DMP UI

DMP

Brand Measurement Environment/ Measurement Providers

Brands receive standardized exposure logs tied to IDL
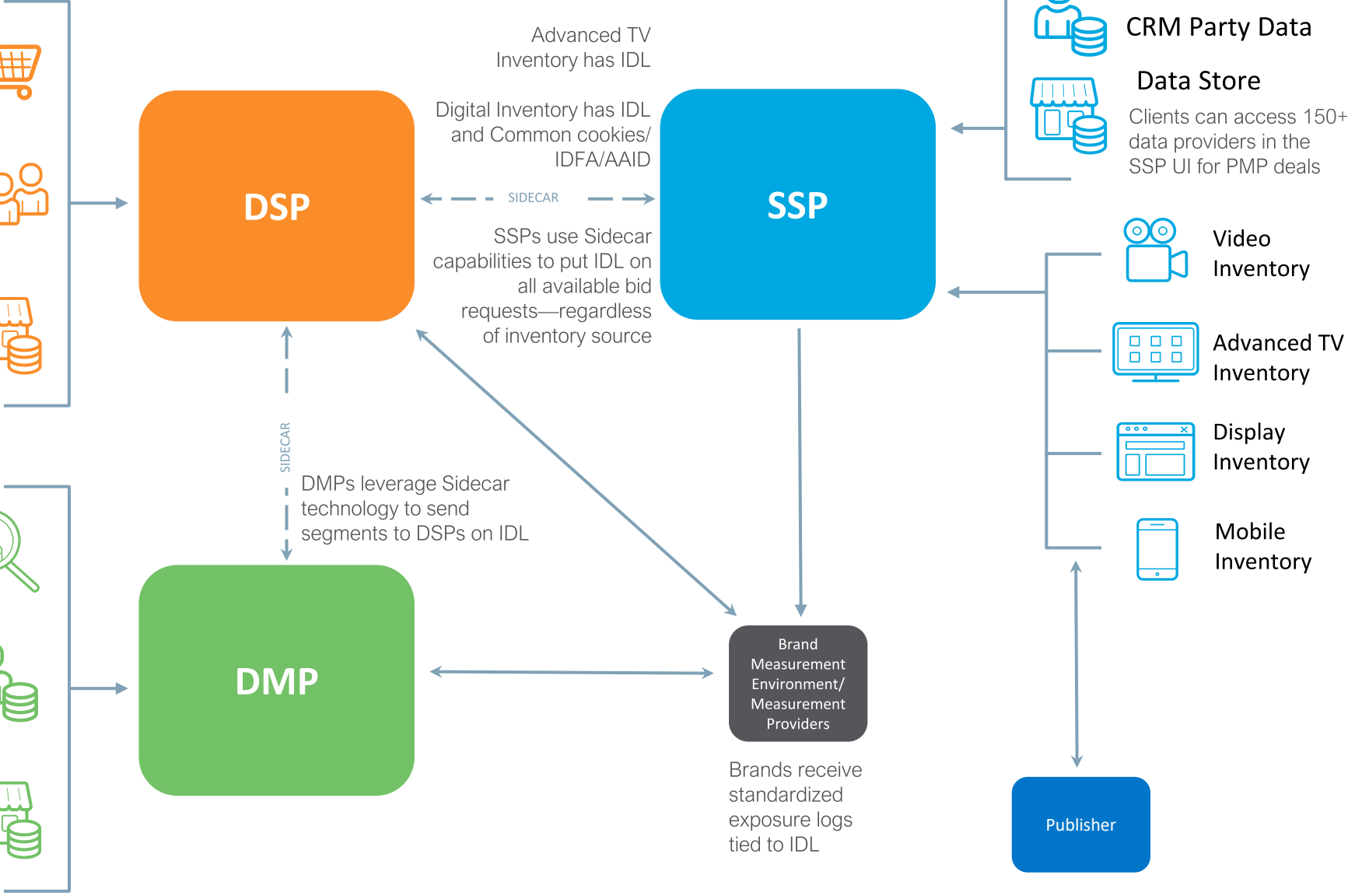
Publisher

Cross device is *really* hard.
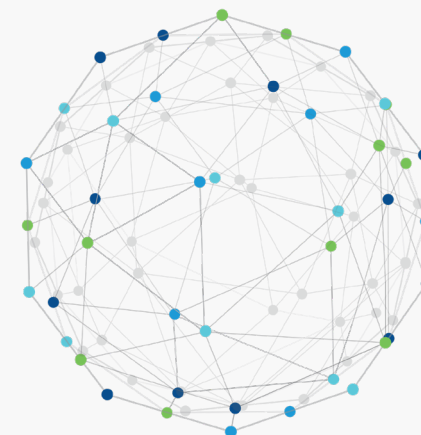
How to build a graph

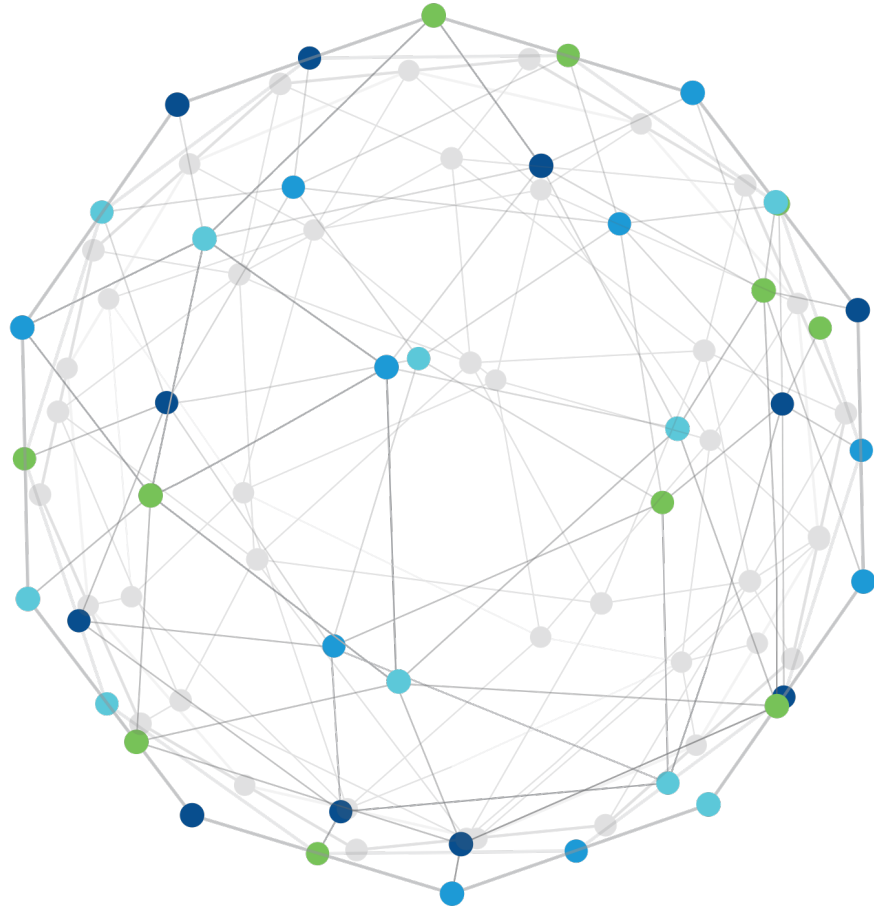

Step 1
Ingest billions of events

Step 2
Probabilistic: Train and build a machine learning model
Deterministic: Implement your matching methodology
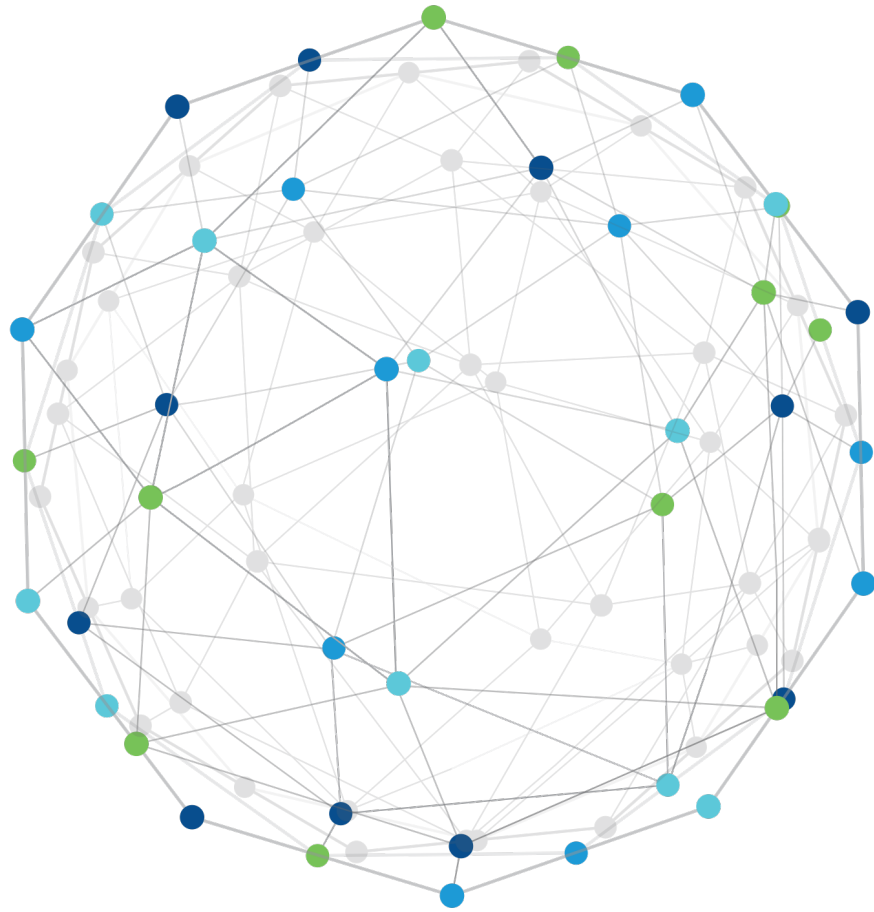
Step 3
Construct the graph

Even once you have a graph, there are a ton of decisions

Regardless of *probabilistic* or *deterministic*, when creating a cross-device graph we are forced to choose between *quality* and *scale*

Even once you have a graph, there are a ton of decisions

Regardless of *probabilistic* or *deterministic*, when creating a cross-device graph we are forced to choose between *quality* and *scale*

Probabilistic:
Cookie A ←→ Cookie B with probability 0.2
Cookie B ←→ Cookie C with probability 0.9

Deterministic:
Cookie A ←→ Cookie B used the same email on 1 login
Cookie B ←→ Cookie C used the same email on 10 logins

If you only keep highly confident connections your graph will be small.

If you take all connections, some will be wrong.

At what cost?

Targeting

With the high-confidence graph, you miss reaching your customer as they are making a buying decision. That could be a missed sale for your brand!

With the graph optimized to scale, the cost may be wasted ad spend -- the ad may be shown to someone incorrectly associated.

Measurement

With the high-confidence graph, that cost could be under-estimating the impact of your media, particularly when someone sees converts on a different device than the ad was exposed.

For the scale optimized graph, that cost could be never seeing differences in your strategies because too many conversions are counted that were incorrectly associated

theTradeDesk

iab. TECH LAB
INNOVATION DAY

How do you build a product that works for everyone?

You choose for them

You build a graph that satisfies the use cases for most advertisers

Pro: Easy to use
Con: It's not necessarily optimal for any given advertiser/campaign/strategy

You allow them to tune the graph themselves

For each campaign, placement, etc., allow the user to select the confidence level

Pro: Can work for everyone
Con: Tuning is hard! Requires a lot of training and understanding

theTradeDesk

iab.TECH LAB
INNOVATION DAY

Bringing causal inference thinking to identity resolution

Casual inference refers to general methods we use to understand and quantify the causal relationships

After seeing an ad, 100 people bought my product. **Half of them would have bought the product without seeing an ad, but the ad caused the other half to buy.**

For cross-device we can ask the question, **as I add and remove connections from my cross-device graph, how does that change my primary KPI?**

Does it change any of my decisions around performance?"

Once the problem is posed in that way, all the decisions get easier

The Trade Desk Identity Alliance

1. Start big – take all connections across multiple cross-device graphs

    - Each graph vendor provides a confidence score for a given connection – a way to quantify how confident they are that the connection is right
    - TTD standardizes that score

2. The customer defines their KPI for a given campaign – reach, CPA, etc.

3. We trim the graph for every customer/KPI.
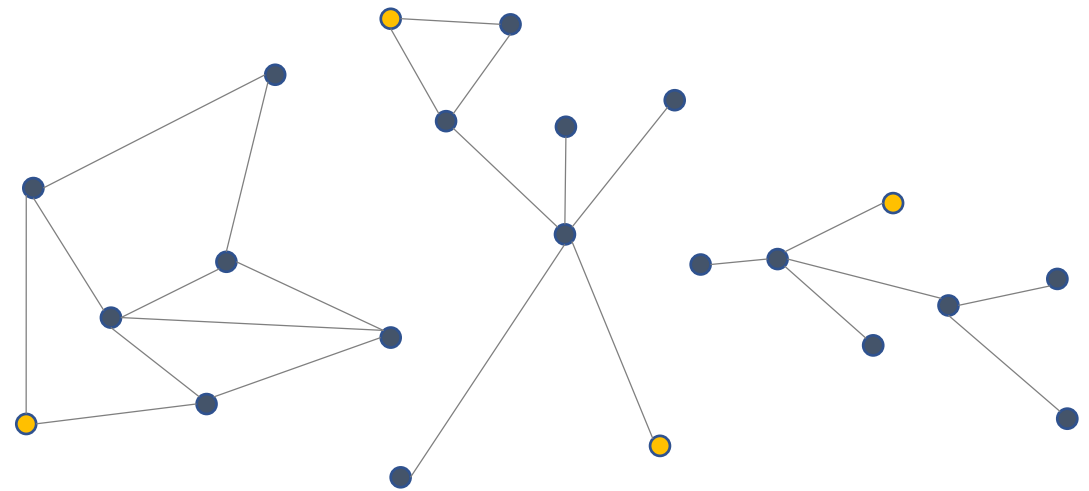
Advertiser A: Reach goal

The Trade Desk Identity Alliance

1. Start big – take all connections across multiple cross-device graphs

    - Each graph vendor provides a confidence score for a given connection – a way to quantify how confident they are that the connection is right
    - TTD standardizes that score

2. The customer defines their KPI for a given campaign – reach, CPA, etc.

3. We trim the graph for every customer/KPI.

Advertiser A: Reach goal
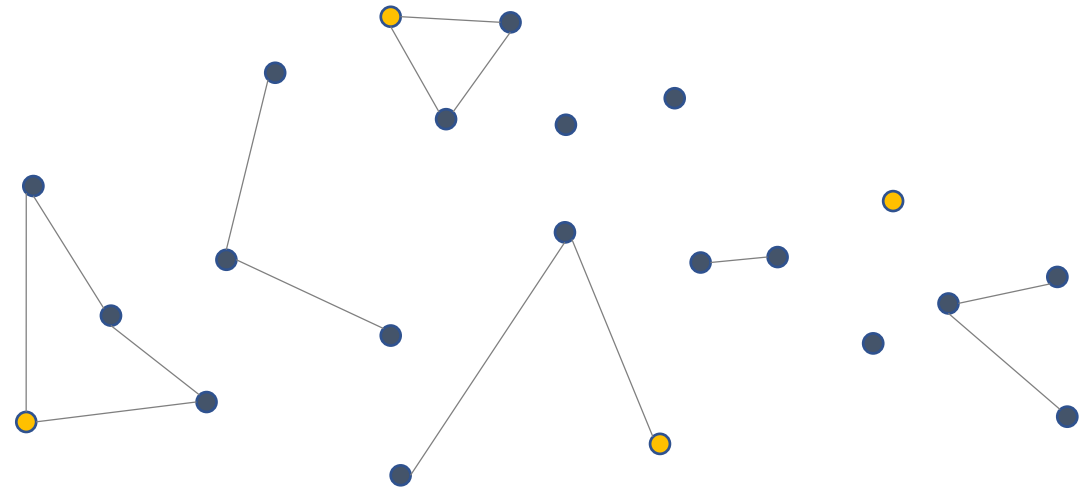Advertiser B: CPA on a purchase pixel

The Trade Desk Identity Alliance

1. Start big – take all connections across multiple cross-device graphs

   - Each graph vendor provides a confidence score for a given connection – a way to quantify how confident they are that the connection is right
   - TTD standardizes that score

2. The customer defines their KPI for a given campaign – reach, CPA, etc.

3. We trim the graph for every customer/KPI.

Advertiser A: Reach goal
Advertiser B: CPA on a purchase pixel

Koa
IDENTITY ALLIANCE

ADBRAIN   TAPAD

LiveRamp   ORACLE
an acxiom company   DATA CLOUD

theTradeDesk   The key is adapting the graph to each use case   iab. TECH LAB INNOVATION DAY

A quick recap

1. Cross device is hard.

2. The one size fits all solution won't work for everyone.

3. When we can look at it from the casual inference point of view, decisions get easier.

Thanks!

Q&A

**Benjamin Dick
Director of Product, Data
IAB Tech Lab
@iabtechlab**

**Ajit Thupil,
SVP, Identity
Tapad
@Tapad**

**Travis Clinger,
Vice President, Strategic Partnerships
LiveRamp
@tclinger @LiveRamp**

**Tamara Greasby
Director, Data Science
The Trade Desk
@tagyoureit3296 @thetradedesk**

Neal Rich

Partner and Director, Marketing
at Boston Consulting Group

Presentation Redacted

Neal Rich
Partner and Director, Marketing
Boston Consulting Group

Angela Venus

NA Head of Retail
Measurement at Facebook

facebook

Success story: Dick's Sporting Goods

The leading US sporting goods store drove online and in-store sales by adopting a test and learn mindset to identify the right combination of media levers to use during the winter holiday period.

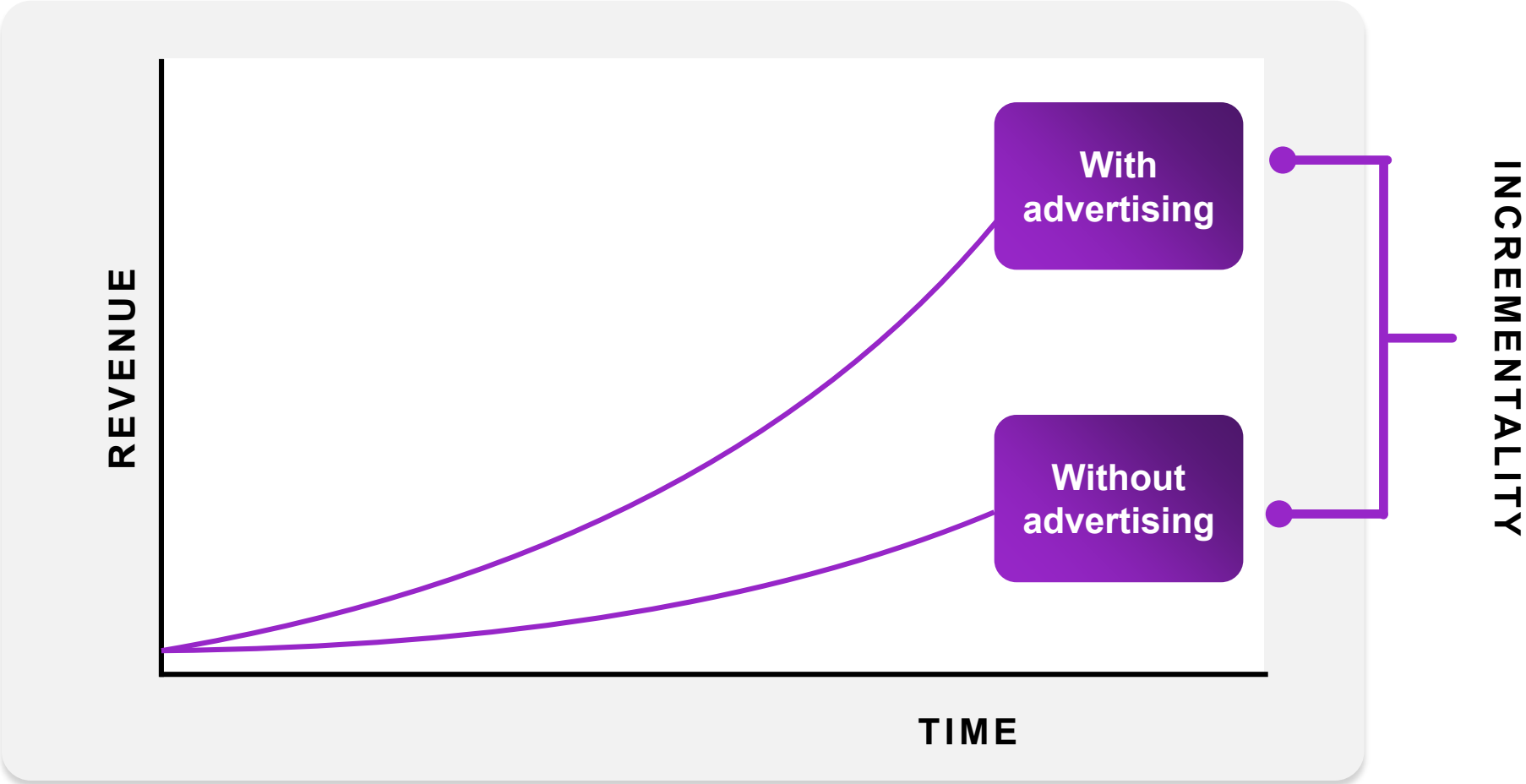**$10M**

In incremental sales

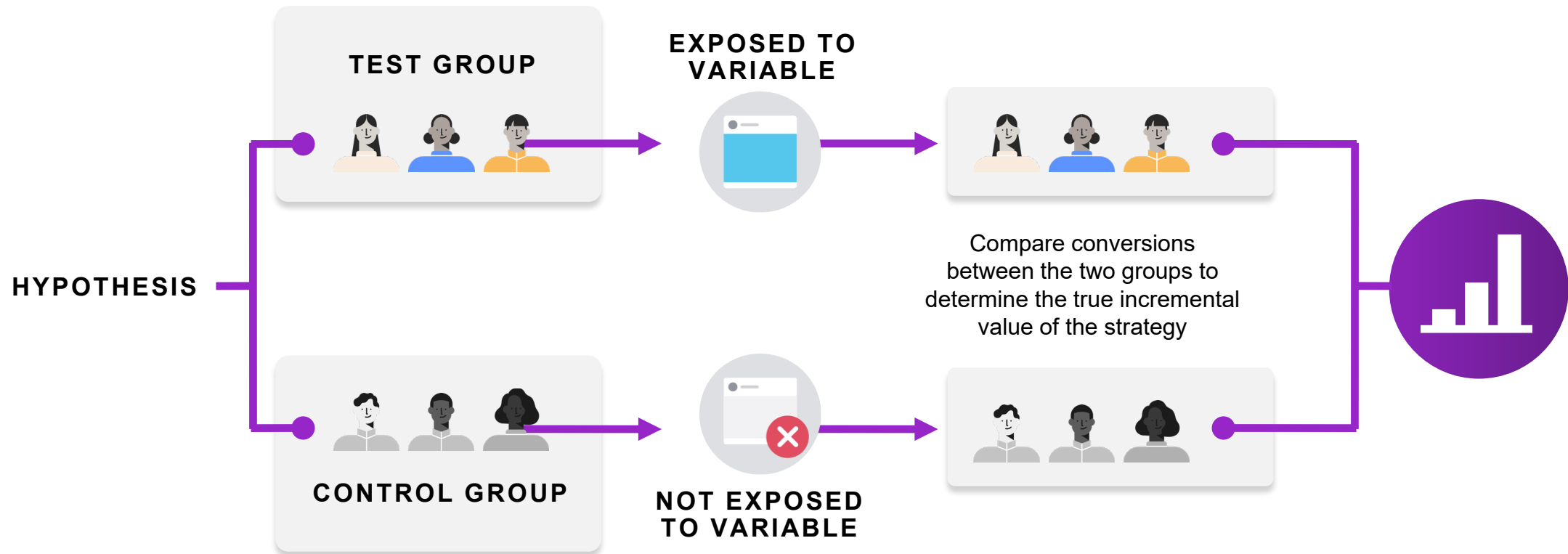**1.7%**

Lift in sales

100,000

Incremental purchases

" Through testing, we found that customers who were previously exposed to our TV ad had comparable ROAS (return on ad spend) to the lookalike audience we had been using. This supported us using Facebook as a full-funnel platform. "
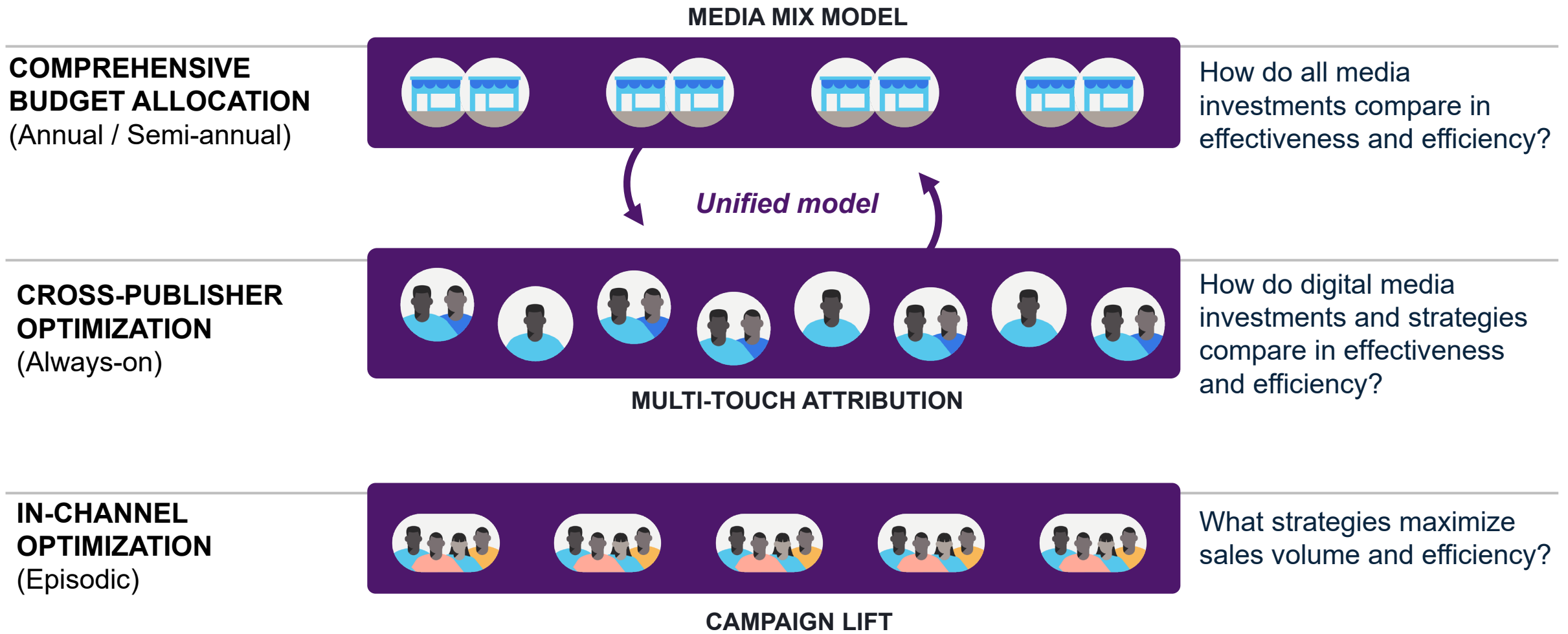
— James Keaney, Director of Digital Marketing

Goal remains for advertising to drive profitable growth

Methodology 1 – Experimental

TEST GROUP

EXPOSED TO VARIABLE

HYPOTHESIS

Compare conversions between the two groups to determine the true incremental value of the strategy

CONTROL GROUP

NOT EXPOSED TO VARIABLE

Thank You and Next Steps
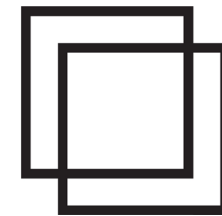
We Need Your Feedback!

- IAB Tech Lab's Proposal for Enhanced Accountability – **responsibility@iabtechlab.com**

- Google Ad Team Proposal (Chrome) - **https://iab.com/google-ad-proposal**

Go Get a Drink Upstairs!