Reimagining Identities with Distributed Ledger Technology

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TECH LAB

18th March, 2021,

Gowthaman (G'man) Ragothaman

- Global client lead at WPP before leaving to launch a marketing technology startup.

- A keen observer of technology and its implication in marketing, believes in the power of distributed ledger technology and what it can bring to marketing.

- His company, Aqilliz helps brands and platforms operate in a safe, secure and compliant marketplace where they can perform a fair value exchange with their consumers.

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Speakers

Shivendra Misra
Director APAC
IAB Tech Lab

Shailley Singh
SVP, Product & Global Programs
IAB Tech Lab

Jonas Jaanimagi
Tech Lead
IAB Australia

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Introduction to Tech Lab and Standards Portfolio

 Reimagining Identities with Distributed Ledger Technology

Q&A

Our Mission

Share the cost, share the benefits

Member-driven, member-developed

Engage a global member community 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
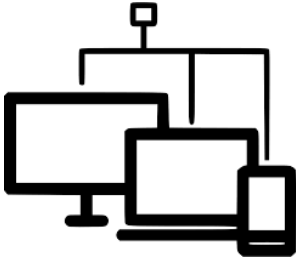
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Why we need technical standards

To help advance and grow the digital media ecosystem by:

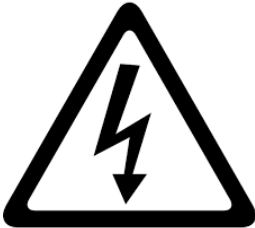Reducing product development efforts & costs

Improving interoperability & quality

Increasing speed to market

Fueling market innovation

Mitigating risks

As with other essential technologies, Tech Lab standards are indispensable for the growth and health of the digital media ecosystem

# Tech Lab Standards & Services: Interoperability, Efficiency, Innovation

① IDENTITY, DATA, & PRIVACY	② BRAND SAFETY & AD FRAUD	③ AD EXPERIENCES & MEASUREMENT	④ PROGRAMMATIC EFFECTIVENESS
Project Rearc (rearchitecting post-cookie/ID)	Content Taxonomy (contextual categories/channels)	VAST (video ad delivery spec)	OpenRTB (programmatic real-time protocol)
Data Label ("nutrition label" for data)	Ad Product Taxonomy (product categories)	SIMID (video ad interactivity spec)	OpenDirect (programmatic guaranteed spec)
Audience Taxonomy (data segment categories)	ads.txt / app-ads.txt (anti-fraud specs)	MRAID (mobile in-app rich media ads API)	CATS (ad request spec for direct buys)
Transparency & Consent Framework (IAB Europe)	ads.txt Aggregator (transparency insights)	New Ad Portfolio (ad weight, size, experience specs)	Ad Management API (creative approval API)
CCPA & Other Privacy Frameworks	sellers.json (anti-fraud, transparency spec)	SafeFrames (secure ad "container")	CTV/OTT Guidance (IFA, User Agent, app store ID)
	SupplyChain object (transparency spec)	Open Measurement (unified SDK for viewability & more)	Spiders & Bots (traffic detection & filtering list)
	ads.cert (security, anti-fraud spec)	Podcast Measurement Technical Guidelines	Blockchain education

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Tech Lab 2021 Product Priorities

PRIORITY	SUPPORTING STANDARDS
1. Define/Inform multiple solutions to privacy-centric **addressability** (without cookies/IDs)	a) (NEW) Rearc: Addressability/Privacy standards & compliance for contextual, demo/behavioral, authentication b) Browser/OS & industry engagement & education c) DigiTrust service/maintenance
2. Provide **technical standards for privacy**, to support compliance with local laws	a) TCF & CCPA framework b) (NEW) Global Privacy Framework
3. Promote **supply chain transparency** for brand safety, fraud, & data decisions	a) Sellers to buyers: ads/app-ads.txt (incl. CTV), sellers.json, SupplyChain object b) ads.txt Aggregator enhancement & (NEW) validation c) (NEW) Buyers to sellers: buyers.json, Ad Mgmt API, adv IDs? d) Taxonomy & OM SDK enhancements for brand safety e) Data Transparency/Label
4. Improve **measurement & attribution accuracy & consistency** (reacting to #1-3 & motivating those efforts)	a) (NEW) Measurement vision & roadmap b) OM SDKs/OMID – accelerate CTV? c) VAST 4.2 / SIMID / OM (incl. CATS & AdCOM) d) Podcast Measurement incl. enhancements if needed

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Global Board + Local IABs + Member Companies
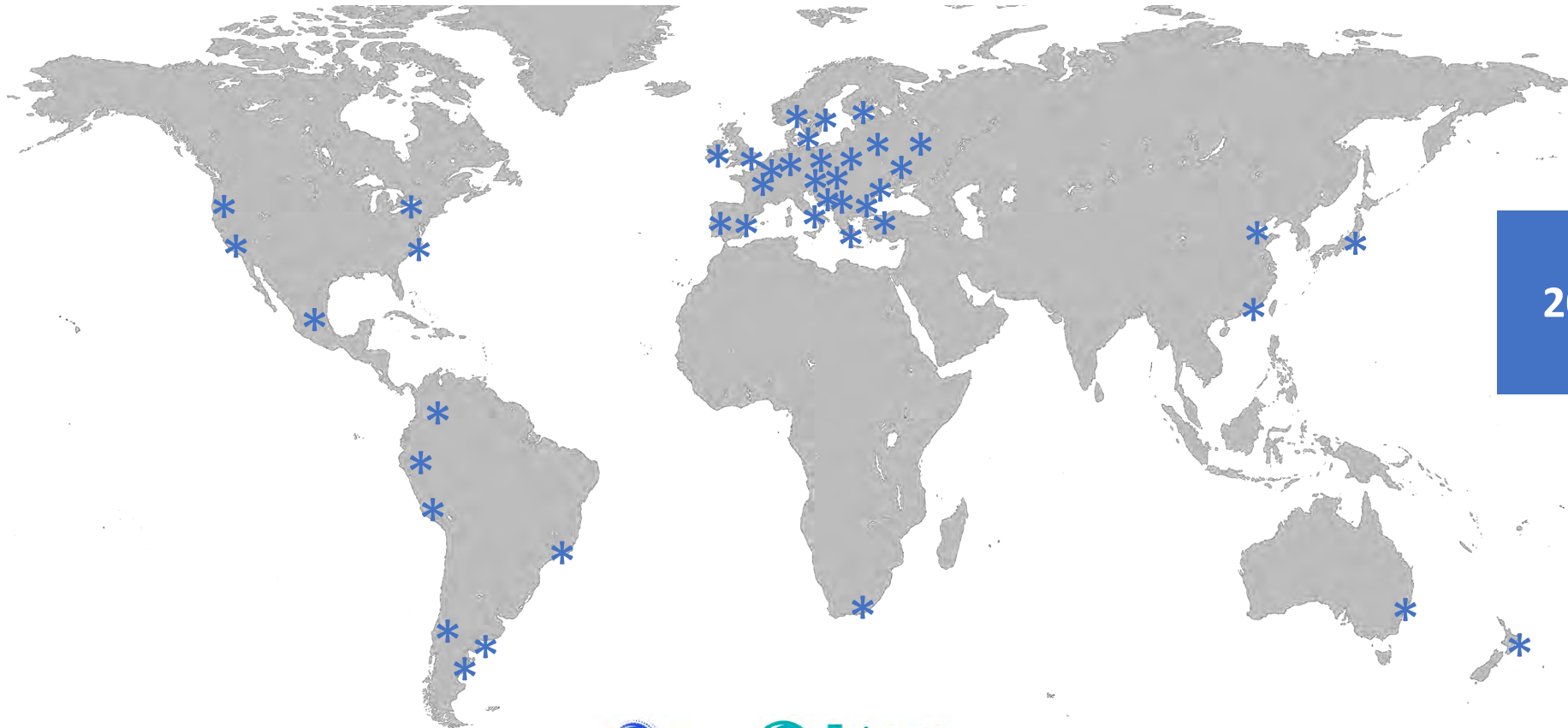
750+ companies
20+ working groups
2,500+ people

* Local/regional IABs supporting Tech Lab

Board of Directors

CBS Interactive · CONSENSYS · ER Extreme Reach · facebook · Google · group𝓶 · gumgum

HEARST · INDEX EXCHANGE · IAS Integral Ad Science · Linked in · LiveRamp · MediaMath · media.net · Microsoft

neustar · News Corp · ORACLE DATA CLOUD · OpenX · pandora · PubMatic · Quantcast · Rakuten Marketing

SPOTX · TAPAD · TikTok · theTradeDesk · verizon media · xandr · YAHOO! JAPAN

How Tech Lab works with IAB globally

Market Development
(supporting sales/marketing)

- Education & certification
- Research
- Policy
- Guidelines & business standards
- Events & networking

PROPRIETARY INNOVATION

- Packaging & pricing
- Competition
- Product/Service development
- Operational Innovation

Technical Standards
(supporting product development)

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

TRUSTED ADTECH ECOSYSTEM

WORLD BEYOND COOKIES/IDENTIFIERS

a defining moment for the ad industry

digital engagement systems will be removed of 3rd party cookies

and availability of identifiers will be reduced by end of 2021

⦿ advertisers will not have a complete and accurate view of the consumers for insights, segmentation and targeting

⦿ advertisers will not be able to perform any omnichannel personalisation of interactions and attribution

BigTech follows privacy preserving regulatory requirement, but with proprietary methodologies

a double problem

brands will struggle to discover their consumers and engage with them online

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○ regulatory protection towards privacy preserving personalisation; deprecation of 3P cookies and identifiers

○ fragmented supply chain encouraging opaque business practices; increasing cost of reaching the target audience

PRAM Governing members

industry launches **Partnership for Responsible and Addressable Media (PRAM)**; revisits digital supply chain audit

4 potential routes emerging now

Can you activate – CYA

Know your consumer - KYC

NO — YES

	NO	YES
YES	2 (20%)	4 (10%)
NO	1 (50%)	3 (20%)
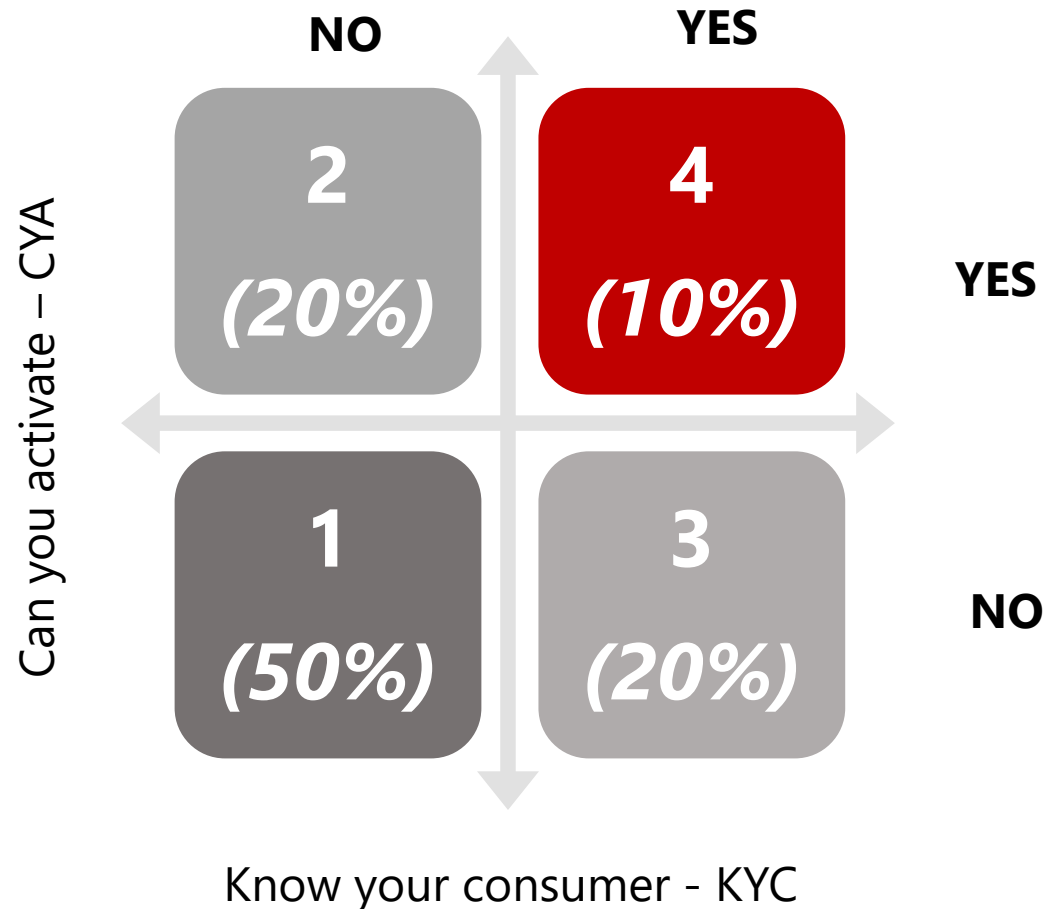
◉ Q1 - Aggregate level activation controlled by platforms like Google's *Federated Learning of Cohorts (FLoC)*

◉ Q2 - Bring your insights to activate on other platforms (walled gardens) with limited return path attribution

◉ Q3 - Bring your data to activate on other platforms (walled gardens) with slightly better return path attribution

◉ Q4 – The Holy Grail. Bring your server and activate on other platforms with full visibility on attribution

what is the ask?

Enabling Privacy and Accountability Across a Trusted Supply Chain

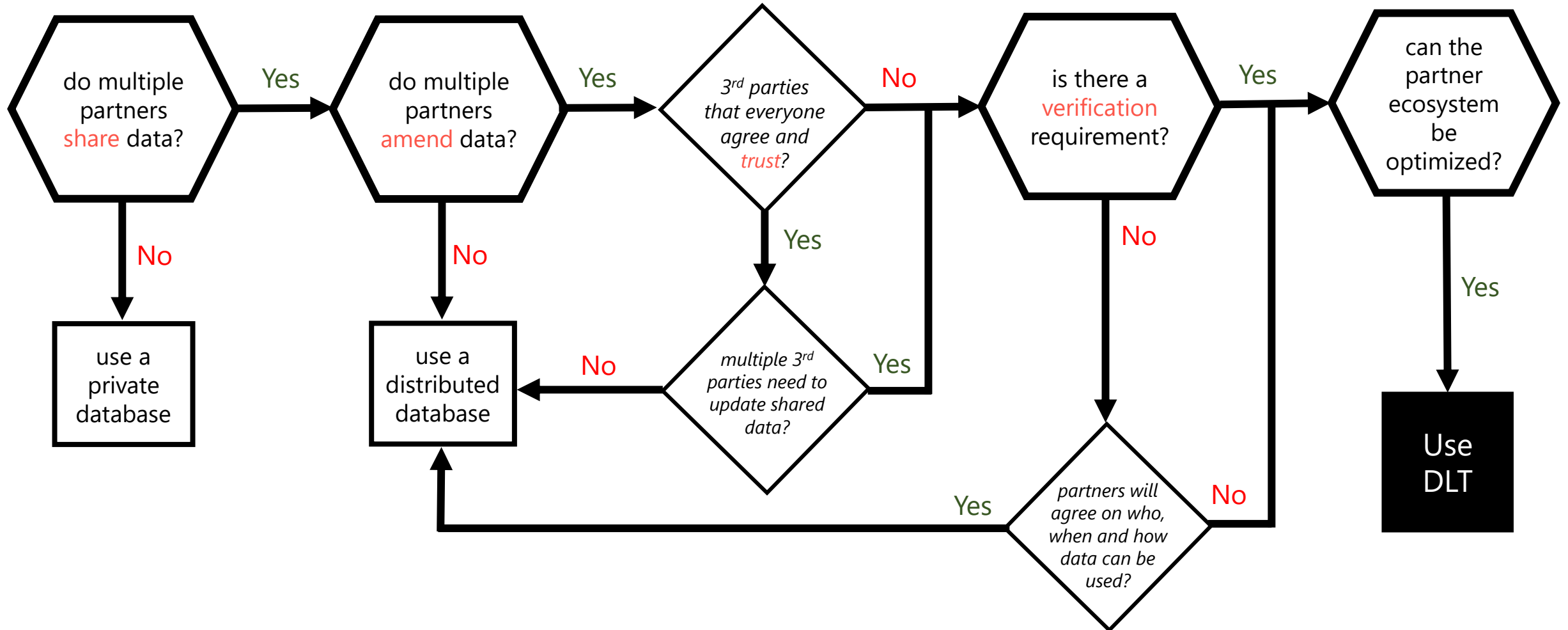Publisher   Third-Party   Third-Party   Marketer

⦿ responsible use of consumer provided identifiers, allowing third parties to execute on behalf of trusted first parties

⦿ passing content, contextual and first party attributes that are consistent for both cohorts and code development

Standardised taxonomy and data transparency with consent and compliance mechanisms

why distributed ledger

do multiple partners **share** data? → **Yes** → do multiple partners **amend** data? → **Yes** → *3rd parties that everyone agree and trust?* → **No** → is there a **verification** requirement? → **Yes** → can the partner ecosystem be optimized?

do multiple partners **share** data? → **No** → use a private database

do multiple partners **amend** data? → **No** → use a distributed database

3rd parties that everyone agree and trust? → **Yes** → *multiple 3rd parties need to update shared data?*

multiple 3rd parties need to update shared data? → **No** → use a distributed database

multiple 3rd parties need to update shared data? → **Yes** → is there a **verification** requirement?

is there a **verification** requirement? → **No** → *partners will agree on who, when and how data can be used?*

partners will agree on who, when and how data can be used? → **Yes** → use a distributed database

partners will agree on who, when and how data can be used? → **No** → can the partner ecosystem be optimized?

can the partner ecosystem be optimized? → **Yes** → Use DLT

identity management critical dependencies

Distributed databases

1. MULTIPLE NODES SHARING DATA
Need for a consistent set of rules and a central intermediary for governance (authentication)

Distributed 'ledgers" (DLT)

2. VALUE EXCHANGE BETWEEN NODES
Cyptographically linked record of transactions for further actions/settlement (authorisation)

Blockchains

3. SELECTIVE CHOICE OF NODES
Access to read, write and amend data provided under clear ownership rights

Permissioned blockchains

Adapted from University of Cambridge Global Blockchain Benchmarking Study model

- ❑ Encryption and salting
- ❑ Decentralised design
- ❑ Capture and convey consumer preferences across supply chain
- ❑ Transparency and consent portal
- ❑ Independent third party
- ❑ Non-biased
- ❑ Auditable
- ❑ Ability to detect fraud

solution

a safe, secure and compliant ecosystem for consumer discovery and engagement

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◉ designed to remove barriers for shared learning and activation in a federated manner with secure credentials

◉ customised and bespoke collaboration infrastructure for activation of *identities, impressions* and related *attribution*
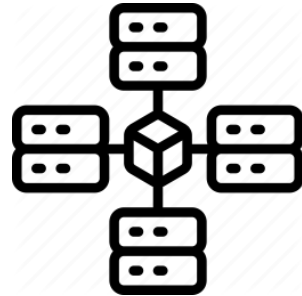
an enterprise installation that enables a trusted and transparent ecosystem
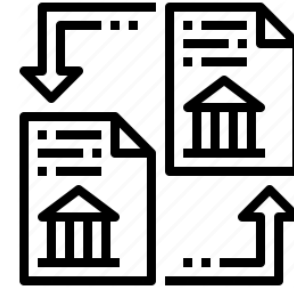
patent pending technology

differential privacy + **federated learning** + **distributed ledger**

◉ **privacy by design**. server to server shared learnings and insights between brands, platforms and consumers (with salting)

◉ **trusted & transparent.** all stakeholders maintain a concurrent record of processing of all activation and settlement

universal view of the single source of truth with an ability to perform advanced analytics

decentralised database for analytics
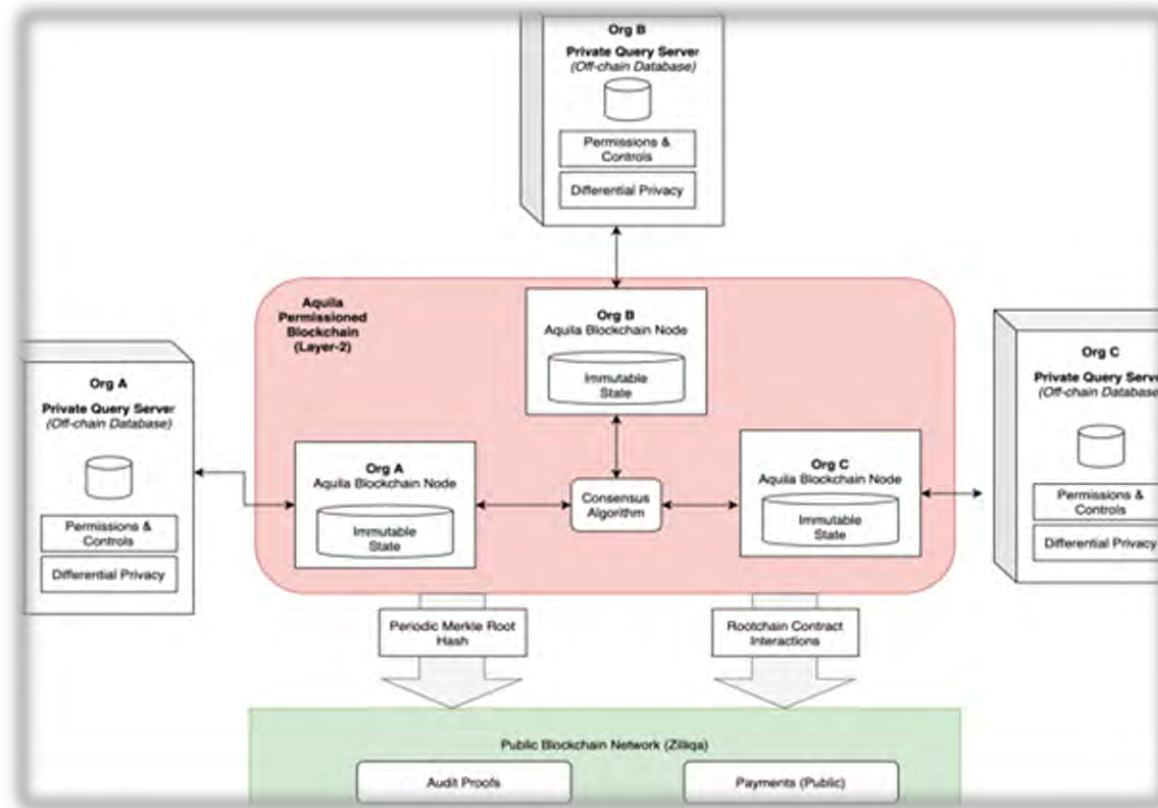
hybrid blockchain infrastructure
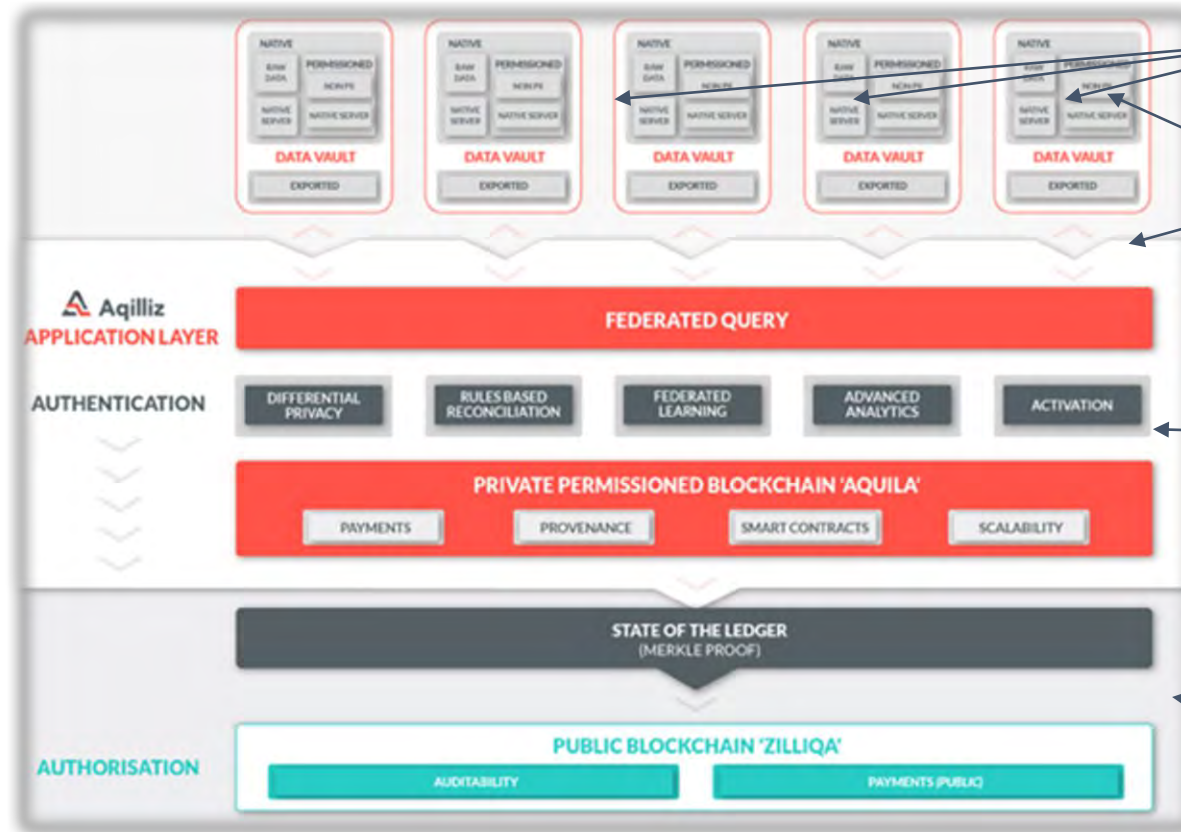
Separate Data Vaults ('Private Query Servers') for each data owner. PII anonymized

Data does not leave native location, can **only be queried** for measurement and activation

Private blockchain for **immutable record** of measurement and activation

Public blockchain for **'state of ledger' record**; interoperable with other public blockchains as required

UNDERSTANDING THE AQILLIZ ECOSYSTEM
THE DATA JOURNEY

ENTERING THE
Aqilliz
ECOSYSTEM

POINT OF INTERACTION
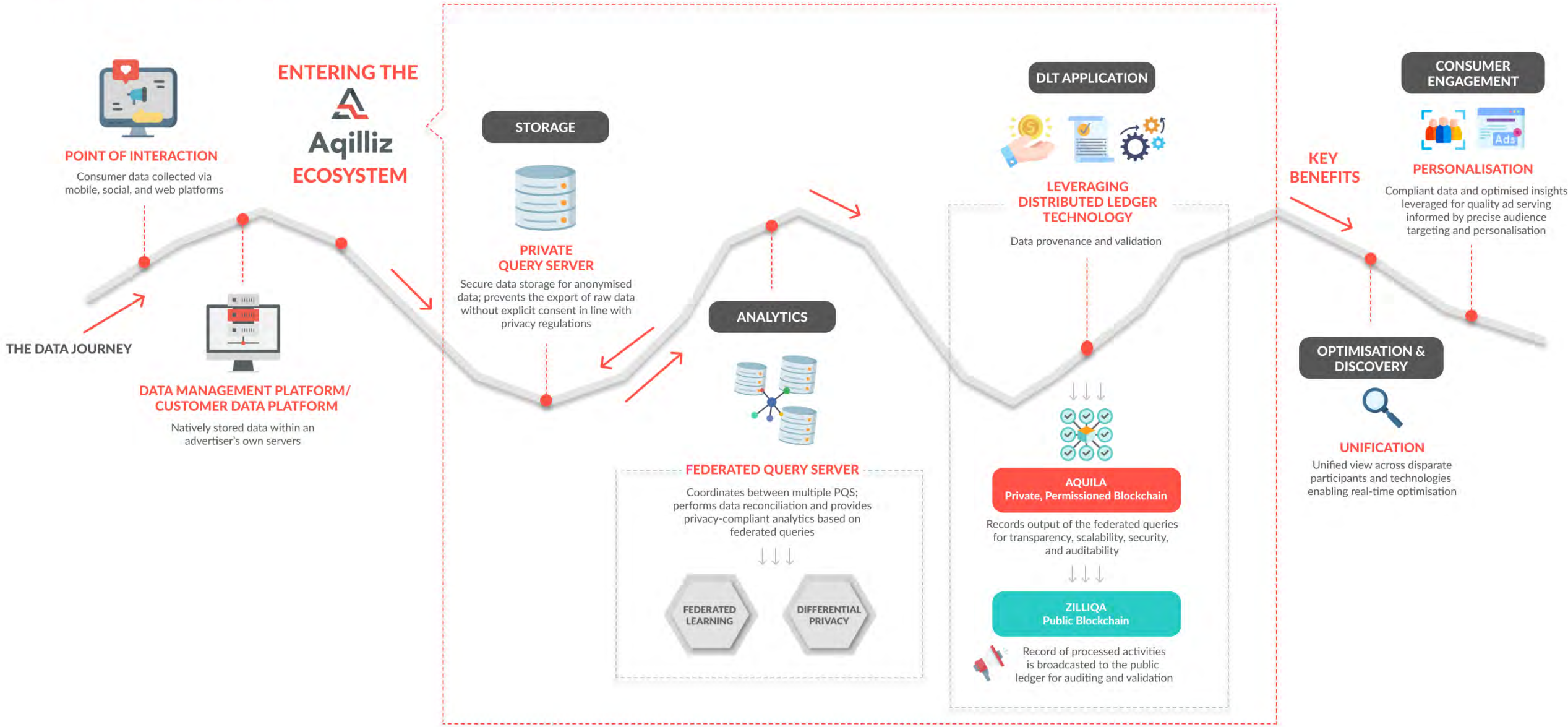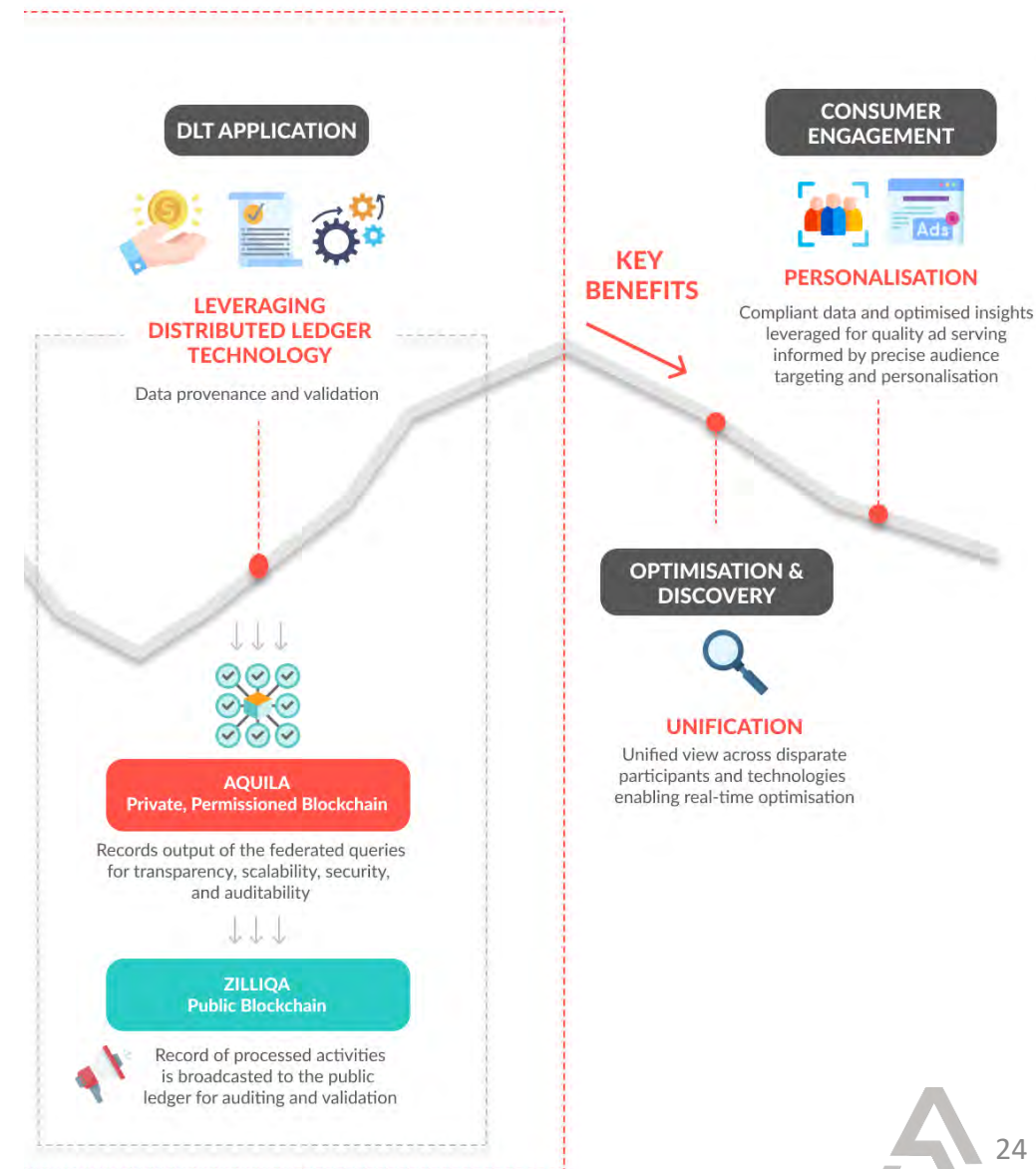Consumer data collected via mobile, social, and web platforms

THE DATA JOURNEY

DATA MANAGEMENT PLATFORM/ CUSTOMER DATA PLATFORM
Natively stored data within an advertiser's own servers

STORAGE

PRIVATE QUERY SERVER
Secure data storage for anonymised data; prevents the export of raw data without explicit consent in line with privacy regulations

ANALYTICS

FEDERATED QUERY SERVER
Coordinates between multiple PQS; performs data reconciliation and provides privacy-compliant analytics based on federated queries

↓ ↓ ↓

FEDERATED LEARNING

DIFFERENTIAL PRIVACY

DLT APPLICATION

LEVERAGING DISTRIBUTED LEDGER TECHNOLOGY
Data provenance and validation

AQUILA
Private, Permissioned Blockchain
Records output of the federated queries for transparency, scalability, security, and auditability

↓ ↓ ↓

ZILLIQA
Public Blockchain
Record of processed activities is broadcasted to the public ledger for auditing and validation

KEY BENEFITS

CONSUMER ENGAGEMENT

PERSONALISATION
Compliant data and optimised insights leveraged for quality ad serving informed by precise audience targeting and personalisation

OPTIMISATION & DISCOVERY

UNIFICATION
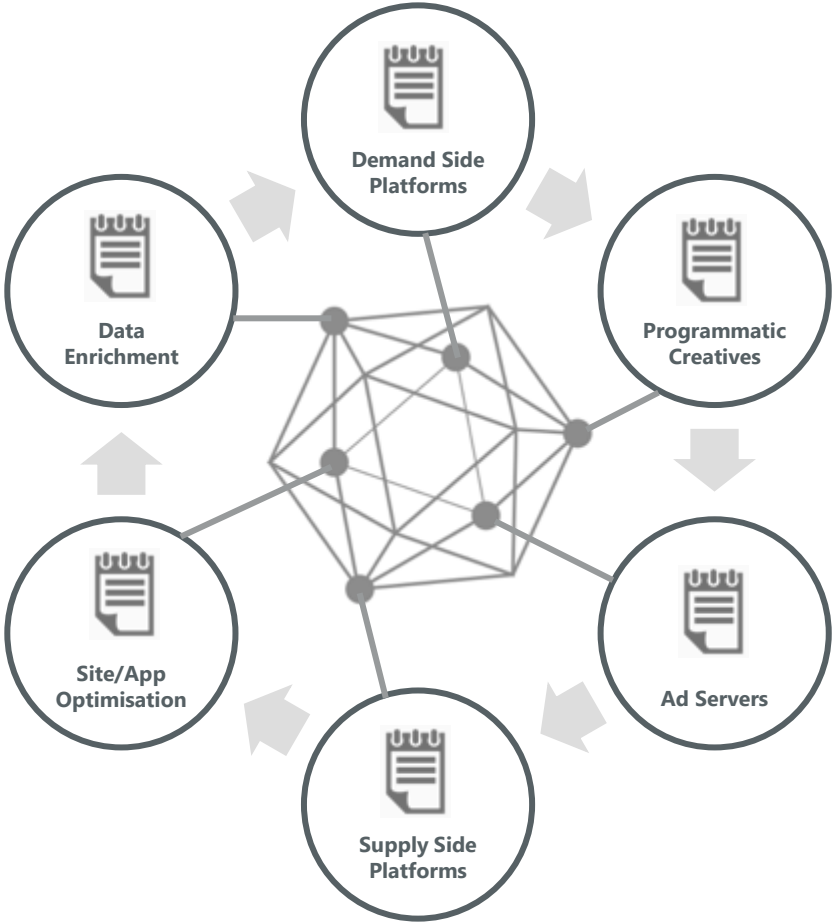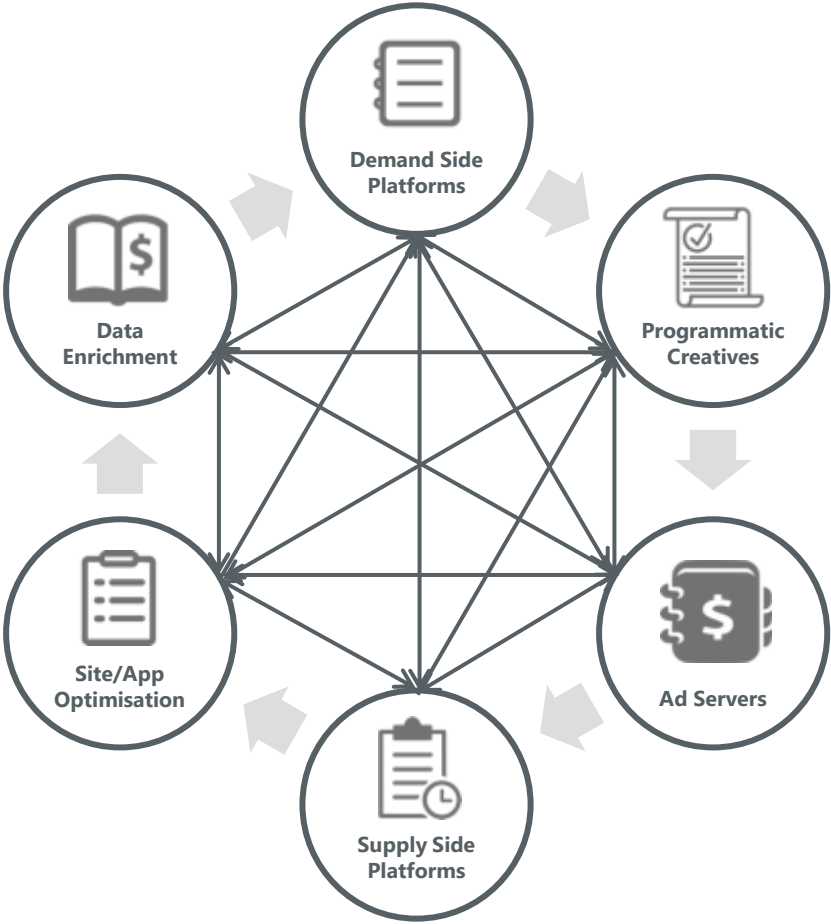Unified view across disparate participants and technologies enabling real-time optimisation

privacy preserving personalisation

❑ Record of Processing of Activities (Article 30, GDPR) the critical requirement for compliance; justifies the emergence of more walled gardens

❑ When two entities enrich their first party customer data, both need to maintain the same record of enrichment in their consent platforms

❑ All technical data environments are currently built for internal resolution of identities; external activation at an aggregate level only leading to lack of trust
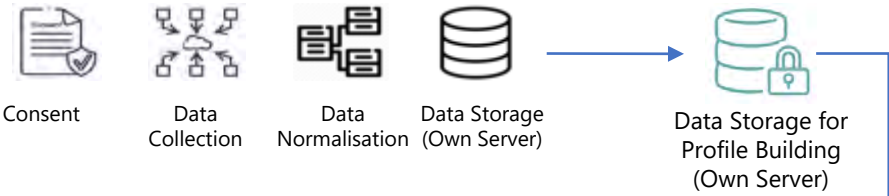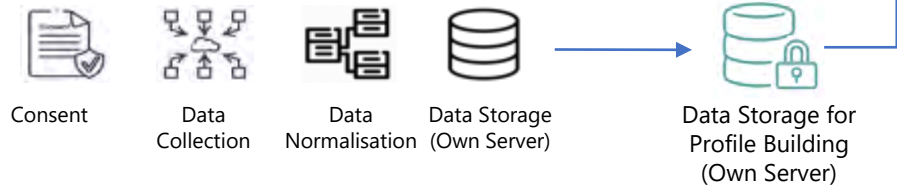

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OPTIMISATION & DISCOVERY

UNIFICATION

Unified view across disparate participants and technologies enabling real-time optimisation

enabling a trusted ad ecosystem

1	2	3	4	5	6	7	8
Data Collection and Storage	**Data Export**	**Profile Building**	**Privacy by design**	**Deterministic ID**	**Activation**	**Analytics & Measurement**	**Provenance**

Brand

Consent — Data Collection — Data Normalisation — Data Storage (Own Server) → Data Storage for Profile Building (Own Server)

Publisher 1

Consent — Data Collection — Data Normalisation — Data Storage (Own Server) → Data Storage for Profile Building (Own Server)

Publisher 2

Consent — Data Collection — Data Normalisation — Data Storage (Own Server) → Data Storage for Profile Building (Own Server)

Federated Query → Differential Privacy → Deterministic ID solution for ad serving **BritePool** → Activate matched IDs through DSP → Campaign analytics → Data Provenance

commercially viable business model

a SaaS solution deployed at the customer and unified with all the ecosystem participants

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◉ brands and/or participants pay a license for the software as annual subscription fee to operate in the trusted ecosystem

◉ provenance of impressions, identities and attribution offered as additional services for a fee/shared from the gains

friction free installation with invitation price incentivisation on infrastructure

Heads up! - Upcoming Webinar Engagements

More in the series, mark the dates, registration links to follow.

- **8th April – (*with Media.net) -** Contextual Approach to Targeting Digital Advertising

- **22nd April - (*with The Trade Desk*) -** Universal IDs and Authenticated Consumers UID 2.0

- **6th May - (*with Google*) -** Privacy Sandbox & Building a Privacy-First Future for Web Advertising

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Thank You!

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For any questions on Tech Lab compliance programs (OM SDK, Data Transparency, Podcast Measurement)
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For becoming part of APAC Communications Group and receiving regular updates in the region
apac_communications@iabtechlab.com