



CHARTING THE COURSE FOR THIRD PARTY, CROSS-MEDIA AUDIENCE MEASUREMENT

Every year, marketers waste an estimated \$15B in video ad spend¹ due to the lack of accurate, comparable audience measurement across video publishers and digital platforms. Consumers fare no better, facing oversaturation and excess frequency of ads across channels. What can marketers and agencies do? YouTube believes that by working together with the industry, we can align on principles for measurement and implement them across channels. Along with our partners, we can then collectively address these inefficiencies, and improve consumer ad experiences.

Today, we are sharing five principles for third party (3P) cross-media video audience measurement solutions, and how we apply them to our real world partnerships. We hope others will join us to promote a robust and fair measurement ecosystem. These principles are aligned with the <u>World Federation of Advertisers' (WFA) North Star</u>, guide our partnership decisions, and are always aimed at achieving three key goals:

- 1: Protect the privacy and improve the experience of our audience
- 2: Help marketers, agencies and partners achieve their objectives in the most efficient way possible
- Ensure all channels, including YouTube, are accurately & fairly represented, and compared in audience measurement solutions

¹ Association of National Advertisers, Open Consensus-Based Advertiser Estimate, 2022



YOUTUBE'S PRINCIPLES FOR CROSS-MEDIA MEASUREMENT

Over the last two years, market demand for better audience measurement has led to an explosion of third party solutions and providers in the US alone. While this will drive much needed innovation and choice in the industry, the influx of third party offerings has also placed a burden onto publishers, marketers, and agencies to evaluate and pick through a wide range of inconsistent options, metrics, and inclusion criteria. YouTube is approaching this problem by rooting our evaluation of third party audience measurement solutions in 5 clear principles. In short, we believe third party video audience measurement must be:



COMPREHENSIVE

Solutions should capture a holistic view of audiences across platforms. Marketers need a clear, unified picture across publishers and distribution channels.



FAIR & COMPARABLE

Impressions, reach, and frequency must be measured using common definitions across platforms. Common standards for measuring media exposure (reach, frequency, impressions) drive consistent accountability and fair comparisons. They are also foundational inputs into more advanced metrics, like brand and sales lift.



PRIVACY-CENTRIC

Solutions must respect consumer privacy. By putting the consumer first and meeting the highest bar of privacy, we can create solutions that will improve consumer trust, and be durable over time. To protect our users, YouTube only partners with providers on solutions that are privacy-centric.



INDEPENDENT & TRUSTWORTHY

Solutions should be objective, transparent and marketer oriented. Achieving high-quality measurement requires metrics and methodologies endorsed by independent third parties and marketers, and proven via accreditation or external audits, where possible.



ACTIONABLE FOR ADVERTISERS

Solutions should serve the needs of marketers and agencies in the most efficient manner possible. In 2023, one of the major challenges for actionability is the proliferation of third party measurement solutions. Through that lens, we believe that solutions should adhere to strict principles to reduce complexity, while enabling marketer choice.



PRINCIPLE 1:

COMPREHENSIVE MEASUREMENT

Video measurement is more than just legacy TV content and ads

In a recent study by Ad Perceptions, **74% of marketers said lack of holistic cross-platform measurement was very/somewhat concerning**². To be truly comprehensive, third party audience measurement solutions should reflect how consumers watch video, including all channels, viewers, and environments. That includes TV, Connected TV, and digital platforms, across devices. In practice, comprehensive measurement will take time to adapt to innovation (e.g. new formats, new channels), however, the industry should aim for full coverage wherever possible. Marketers and agencies should reject any new measurement initiative that isn't purposely built to unify video audiences across TV and digital platforms. A unified view in measurement solutions offers multiple benefits:

IT IMPROVES THE EFFICIENCY OF AD SPEND AND ELIMINATES WASTE

By reflecting the modern reality of where audiences are spending their time, comprehensive systems allow marketers and agencies to make more efficient campaign decisions. According to a report by Forrester, "a more holistic view commonly identifies opportunities to improve the efficiency of marketing budgets by 15% to 20%"³.

IT IMPROVES CONSUMER EXPERIENCES

Comprehensive solutions improve ad experience by allowing marketers to better understand deduplicated reach and frequency across media, and reduces excess frequency for consumers.



"Unilever has long been committed to driving the adoption of a robust and transparent cross-media measurement system across the industry **to offer brands more transparency in terms of their investment and better online experiences for consumers**. It's encouraging to see YouTube align its principles for measurement by adopting industry standards and collaborating with the wider ecosystem."





- Luis Di Como, Global Head of Media, Unilever

IT BENEFITS PUBLISHERS & BROADCASTERS

Solutions that are comprehensive ensure publishers can accurately represent the scale and strength of their platform, allowing them to compete on the merit of their offerings. Marketers and agencies can help push the industry towards more comprehensive solutions, by insisting on it as a requirement across their partners and measurement providers.

² Advertiser Perceptions, TV Measurement In A Converged Landscape, US, 2022

³ Forrester, Customer-Obsessed Marketing Demands Unified Measurement,

https://pages.quanticmind.com/rs/810-WIK-720/images/Forrester-Report-Customer-Obsessed-Marketing-2018-QuanticMind.pdf, US, 2018



PREMIUM FOR WHOM?

In recent months, the concept of premium has been referenced as a reason to differentiate and silo some inventory from others in measurement systems. Is this a meaningful distinction for users and marketers?

What is 'premium'? We believe premium video should be defined as the content that best engages users and meets marketers' objectives, not just longform content using arbitrary definitions of high production value or professional curation, as a recent study by Eye Square showed that ads featured in creator-produced content delivered equivalent brand lift results to ads shown in broadcast produced content⁴.

	CREATOR-PRODUCED		STUDIO-PRODUCED	CONTROL
EYE SQUARE RESULTS	YOUTUBE SELECT	YOUTUBE AUCTION		
UNAIDED BRAND RECALL	49%	47%	47%	40%
AIDED BRAND RECALL	89%	89%	89%	87%
BRAND LIKING	72%	70%	72%	70%
CONSIDERATION	66%	66%	66%	61%
PREFERENCE	38%	37%	36%	30%

This is unsurprising, as consumers say that telling a good story is 4x more important than structure, and 4.2x more important than being 'made by an established production company'⁵.

Should we keep 'premium' video separate in measurement systems? While understanding the content surrounding an ad can be insightful for marketers, using definitions of 'premium' to silo channels in measurement systems eliminates a brand's ability to see a complete picture of their audience. Instead, audience measurement solutions should capture a complete picture of the audience that marketers can use, with additional signals, to assess context and impact.



Quality content is determined by the consumer and no one else. With viewers

consuming content across many platforms, channels, and screens, all that our clients and media partners can do is determine a fair value for quality - and it starts with measurement. It's important that, as an industry, we collaborate to make an accurate and sustainable environment with standardized measurement capabilities to help make advertising work better for our clients and consumers



- Bharad Ramesh, Executive Director, Research & Investment Analytics, GroupM

⁵ Google/Talk Shoppe, whyVideo 2022 study, US, n=2,000 A18-64 GenPop video users, survey in field January 11-21, 2022.

⁴ Google/Eye Square, YouTube Content and Device research study, US, n=1200, A18-49, survey in field December 2021-January 2022.



PRINCIPLE 2:

FAIR & COMPARABLE MEASUREMENT

Use the Media Ratings Council (MRC) viewable impression as the basis for reach and frequency, report other metrics separately

In addition to being comprehensive, measurement solutions need to enable accurate comparisons. To do so, 3Ps must use common approaches across channels. Common approaches should include a consistent methodology, and more importantly, utilize a shared definition of exposures and impact. Often referred to as 'standards,' the definition of key metrics will dramatically change the accuracy and comparability of a measurement solution. In a recent study by Ad Perceptions, 57% of marketers and agencies surveyed cited a 'lack of standard measurement' as the number one challenge for cross-screen video reporting⁶.

There are many types of standards that the industry relies on for both **exposure** metrics and **impact** metrics.

	EXPOSURE METRICS	IMPACT METRICS
WHAT	Impressions, Reach, Frequency, Watch Time	Brand lift, Sales Lift, MMMs
WHY	USED TO MEASURE THE EFFICIENCY OF THE REACH Helps marketers understand content consumption and ad delivery Are foundational inputs into impact metrics Must be defined in a consistent way to enable comparability	USED TO MEASURE THE EFFECTIVENESS OF THE REACH Helps marketers understand business impact Can vary across marketers and campaigns Must be applied consistently within a campaign for comparability, but can differ over time or by campaign objective
EXAMPLE	Marketer A wants to understand how many people they reached on TV vs. digital. They also plan to take impression counts across their campaign to support MMM analysis.	Marketer B wants to understand whether a specific creative drove increased sales. They use a sales lift study and apply the same methodology across all channels in the campaign. Marketer B also wants to build brand awareness. They use brand lift studies on a different, brand focused campaign to understand that impact.

 $^{^{\}rm 6}$ Ad Perceptions, Video Advertising Convergence Report., H2, 2019



Audience measurement naturally focuses on exposure metrics, like impression counts, reach, and frequency to help us understand campaign delivery. How many times did my ad show? How many people did I reach? How big is the audience on Publisher A's platform?

Exposure metrics also feed into impact metrics. Calculating sales lift or brand lift requires you to know how many people you reached. As a result, it is critical that exposure metrics are consistent across all channels to provide an accurate baseline.

Unfortunately, we still lack a consistent definition of an impression applied across all video channels. Definitions tend to diverge on one of a few dimensions:



GRANULARITY

Are ads and content measured at the second or minute level? Are all channels using equivalent granularity?



VIEWABILITY

When is an ad considered viewable? When 100% of pixels are on screen? Or 50% of pixels?



DURATION QUALIFIERS OR WEIGHTING

Should we count an impression as soon as it's served? After 2 seconds? Should we weigh impression counts based on duration?



BRAND SAFETY

How should brand safety definitions impact impression counts?

Differences in how an impression is defined across these dimensions can dramatically skew measurement outputs and create inaccurate views of publishers' inventory.

HOW YOU COUNT MATTERS! AN ILLUSTRATIVE EXAMPLE

Marketer A is launching an exciting new product. They're targeting a wide range of people (adults over 18) and are optimizing their ad campaign for maximum reach to build awareness of their new product. After an initial two week video campaign, they spent \$200,000 on two channels and are eager to see results before continuing the campaign.

	SPEND	IMPRESSIONS	MRC VIEWABILITY	AVG FREQ
CHANNEL A	\$100,000	3,000,000	90%	5
CHANNEL B	\$100,000	5,000,000	50%	5



In this example, if you apply no standard, you can calculate the reach on each channel by dividing impressions by average frequency. You can also calculate an effective CPM by dividing the spend by impressions divided by a thousand. In this case, **Channel B** is a *much* better deal! It delivered significantly more reach for a much lower CPM.

	REACH	еСРМ
CHANNEL A	600,000	\$33
CHANNEL B	1,000,000	\$20

However, when you apply the MRC viewability to your impression counts (i.e. only counting impressions that met a viewability threshold) and reach calculations your assessment changes.

	VIEWABLE IMPRESSIONS	VIEWABLE REACH	VIEWABLE eCPM
CHANNEL A	2,700,000	540,000	\$37
CHANNEL B	2,500,000	500,000	\$40

Now both channels are more evenly matched, with channel A performing slightly better! Simply by counting impressions in a different way, you can dramatically change results and investment decisions.

We support standards that reflect consumer behavior, have a proven connection to marketer objectives & needs, and are supported by impartial standards setting bodies like the Media Ratings Council (MRC). The good news is that such a standard exists and can be applied by 3Ps today - the viewable impression, defined as 100% of pixels for 2 seconds, with no other duration qualifiers or weighting. In other words, video impressions should only be counted once they meet this threshold. The viewable impression is part of the MRC's cross-video standard, which recommends that the viewable video impression be the sole common definition for the purposes of cross-media reach. They also suggest that supplemental signals, like total view duration, be available to assess creative delivery. We are ready to enable the viewable impression in 3P cross-media solutions for our instream video content and ads, and will support the adoption of this MRC standard, across all channels, as a requirement in our partnerships with measurement providers. We will also continue to engage with the MRC and other industry stakeholders to develop and evolve standards for new metrics, and formats (e.g. cross-format standards, viewability guidelines for new formats, etc.).



WHY THE VIEWABLE IMPRESSION?

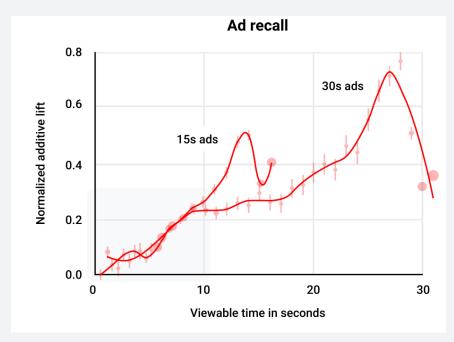
Why the viewable impression at 100% of pixels for 2 seconds?

There is significant evidence to suggest that this viewability standard is tied to marketer objectives including positive brand lift outcomes, across consideration, recall and awareness, as it ensures there is an opportunity to see the ad.

Why not longer? Some measurement solutions have longer duration qualifiers, or use duration weighting, before they count an impression. However, setting a long duration qualifier before counting an impression can be detrimental to consumers and marketers.

A recent study found nearly three-quarters of US internet users said they spent at least 30 minutes per day watching short form videos⁷. Additionally, 71% of adults over the age of 18 in the US reported regularly watching short form video⁸, and ad spend on short form video is projected to grow by 10.4% in 2023, second only to CTV video ad spend⁹. By setting a duration qualifier too high (e.g. only counting impressions after 10 seconds), measurement solutions risk significantly discounting these valuable content and ad impressions. This can also create unintended consequences for consumers by incentivizing publishers to deliver longer, forced ads to ensure their media is counted.

Does duration matter? Duration is still a valuable data point to assess the effectiveness of a video or ad creative.



We analyzed over 3000 brand lift studies, which amounted to a little over 5M exposures and 7M respondents.

We looked at duration and the related lift by view time and ad length and found that more time spent with advertising drives more lift for marketers¹⁰.

However, duration weighting, (i.e. weighting or dividing ad view time by the ad length or a standard denominator), biases towards forced ads, and ads that equal the length of your weighted denominator. For example, if you only count an impression after

10 secs, publishers would be incentivized to show more 10 secs (or longer) ads that viewers must

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⁷eMarketer: Insider Intelligence, Average Time Spent per Day Watching Digital Short-Video* Content Among US Internet Users, by
Agehttps://chart-na1.emarketer.com/243989/average-time-spent-per-day-watching-digital-short-video-content-among-us-internet-users-by-age-oct-2020-of-respondents-each-group, US,
2020

⁸ eMarketer: Insider Intelligence, Do US Consumers Regularly Watch Short-Form Video Content* on Social Media
Platforms?, https://chart-na1.emarketer.com/254065/do-us-consumers-regularly-watch-short-form-video-content-on-social-media-platforms-of-respondents-sep-2021. US, 2021

⁹Magna Global, US Total Media Ad Spending and Growth, by Format/Media, 2022-2023 (billions, % change and % of total), https://chart-na1.emarketer.com/260581/us-total-media-ad-spending-growth-by-formatmedia-2022-2023-billions-change-of-total, US, 2022

¹⁰Google/AMT "Viewable time vs Impact", US, n=1,500 A18-64 survey in field in 2018



watch. This incentive can create negative experiences for users as mentioned above.

Additionally, we believe that this can dramatically skew marketers' evaluation of ad impact. Based on our findings, 10 seconds of a 15 second ad (two thirds completed) is not twice as impactful as 10 seconds of a 30 second ad (one third completed). In fact, the associated lift is about the same, as you can see on the graph above. However, if you used relative duration weighting for counting impressions, you would credit the former 10 second exposure as two-thirds of an impression and the latter as one-third of an impression, even though they both drive similar results.

	AD DURATION	AD VIEW DURATION	DURATION WEIGHTED IMPRESSION COUNT
CHANNEL A	30 secs	10 secs	0.33
CHANNEL B	6 secs	6 secs	1

In short, while duration is an important metric, it shouldn't be used as a qualifier for impression counts beyond viewability thresholds. Instead, duration should be measured as a separate metric so that marketers can get a full view of their audience *and* analyze the impact of duration without impacting consumer experience or skewing their results.

Once we have accurate and clean exposure metrics, additional signals become extremely valuable. Given marketers' objectives will naturally vary across brands, campaigns, etc., ensuring flexibility is key. By protecting the accuracy of impression counts, via the application of common standards, marketers can then build upon those impression counts to produce reliable analyses tailored to their marketing objectives.



PRINCIPLE 3:

PRIVACY-CENTRIC MEASUREMENT

Only solutions that are privacy-centric can meet consumer expectations, while providing durable, accurate measurement for marketers

Over the last several years, consumer expectations around privacy have evolved. According to a study by Pew, half of Americans have decided not to use a product or service because of privacy concerns¹¹. These expectations also have a direct impact on marketers. According to the 2022 Digital Trust Benchmark, half of social media consumers decide whether to engage with an ad based on the platform's privacy and data practices¹².

Measurement systems have always had to deliver meaningful insights for marketers while protecting consumer privacy. Twenty years ago, this was easier to achieve, by using panel-only solutions that relied on explicit consent from participating panelists or simple aggregation. However, as measurement solutions have developed, and consumer and regulatory expectations around privacy have evolved, the need for more advanced techniques, in addition to panels, has increased.

We believe our collective investment in upholding a high standard for privacy will benefit the advertising industry by putting consumer needs for security, control, and transparency front and center. To that end, we partner with providers and solutions that can meet evolving consumer expectations and regulatory environments. We strongly recommend the implementation of advanced privacy preserving techniques to ensure long term durability. Specifically, YouTube consistently reviews partners' privacy practices, including:

GREEN FLAGS

Proactive, explicit consent for panelists

Best in class anonymization techniques (including: data aggregation and differential privacy)

Privacy-centric data collection & security processes, such as:

- Collection limited to data required for specific, defined use cases
- Data handled and deleted to respect consumer privacy
- Clear & transparent data disclosures to consumers

Use of vetted solutions like double-blinded clean rooms or the WFA's open source solution (i.e. Halo)

RED FLAGS

Lack of explicit and clear consent for panelists

Tracking mechanisms enabling large-scale individualized (non-anonymized) user tracking (e.g. SDKs)

Broad data collection, specifically the use of PII and fingerprinting

Poor data handling and security processes, such as:

- Lack of transparency in data collection processes, scope and usage, and opt-out procedures.
- Lack of policies that govern how partners collect/outsource/purchase data.

History of consumer privacy violations

¹¹ emarketer: Insider Intelligence, Privacy as a Competitive Advantage, https://www.insiderintelligence.com/content/privacy-competitive-advantage, US, 2020

¹² emarketer: Insider Intelligence, Privacy the leading factor in social ad engagement, https://content-na1.emarketer.com/privacy-leading-factor-social-ad-engagement, US, 2022



There are many measurement providers creating innovative solutions with various approaches to privacy. YouTube only integrates into those solutions that respect consumer privacy by applying best practices. Solutions that don't meet a high privacy bar not only create risk for all those involved, but also have a downstream impact on marketers. Without integrations with privacy-minded publishers like YouTube, these third parties have to rely exclusively on modeled approaches that reduce the accuracy of their outputs. Where providers "measure" YouTube without our involvement, we will continue to provide our perspective on the issues and inaccuracies in those solutions. We encourage marketers and agencies to hold a high bar on privacy-best practices to reinforce consumer trust in their brands, while ensuring complete and comprehensive cross-media measurement.



PRINCIPLE 4:

INDEPENDENT & TRUSTWORTHY MEASUREMENT

Trust solutions that are credible, transparent and marketer-oriented

YouTube, like other publishers, offers marketers a number of proprietary solutions to enable timely campaign planning and measurement. While we firmly believe in the quality of those solutions and the unique role they play, we also see tremendous value in independent 3P solutions for the industry. When assessing a 3P solution on this basis, we consider whether its methodology and governance processes enable objective and transparent measurement.

This requires a number of methodological considerations. Providers may vary to a degree, and still produce highly accurate, comparable outputs. Here are some approaches that we consider to be positive indicators of trustworthy measurement:

ACCREDITATION & AUDITING

Providers and solutions that are MRC accredited (or could meet the specifications for accreditation, i.e. accreditable), and/or provide regular, transparents audits.

USE OF PRIVACY-CENTRIC CENSUS DATA

Census data refers to impression logs, which can be combined with panel data to produce more complete audience measurement. Where census data is used, appropriate hygiene measures are a must, such as removing spam, and controlling for biases or differences in data collection.

DATA DRIVEN, DOCUMENTED MODEL INPUTS

Solutions that can explain how they define their measurement scope and make key assumptions, supported by high quality data (e.g. What is the measurement 'universe'? What data is used to inform assumptions?).

PRECISE DATA

For example, using commercial ratings to measure ads vs. relying on inferences from content ratings. Similarly, using ad spot measurement vs. average commercial minute, which can skew impression counts, reach and frequency.

ACCURATELY ACCOUNTING FOR CONSUMER BEHAVIOR

Solutions that reflect consumers' viewing behaviors across and between different devices. For the TV screen, this means accounting for shared 'co-viewing' experiences, when multiple people watch content together and view ads at the same time.

USE OF A REPRESENTATIVE PANEL FOR CALIBRATION

Where a panel is required, those that measure across all devices using privacy-centric metering technology can improve accuracy. Additionally, ensuring a representative panel that covers all audiences, and accurately models overlap for deduplication is critical.



Lastly, the decision making processes of providers can have an impact on a solution's trustworthiness. For example, many providers struggle to innovate at pace while also meeting the needs of their current constituencies. This can lead to measurement solutions becoming stale, or missing important features. When working with third party providers, YouTube considers whether decision making processes:

Enable the best outcome for marketers and consumers?

Favor one media type over another?

Are unduly influenced by commercial models or financial considerations?

There is no single decision making model that guarantees this of course, however, we generally believe that solutions are most independent when they are marketer-oriented. Instances where marketers and agencies are more involved in providing economic incentives to measurement providers, vs. deferring to publishers and broadcasters, can lead to excellent results.



PRINCIPLE 5:

ACTIONABILITY FOR ADVERTISERS

Measurement should help marketers and agencies operate efficiently, not add complexity

Finally, measurement solutions should meet marketer needs efficiently. In 2023, there are two main issues impacting actionability.

First is the lack of consistency across planning, buying, and measurement datasets. Inconsistent measurement datasets make it difficult for marketers and agencies to accurately forecast, optimize, and assess their investment. While some of this is due to technical and methodology challenges, renewed focus from data providers and third party measurement companies can help accelerate progress towards a cohesive solution that serves marketers and agencies' use cases.

Second, while the explosion of measurement solutions can provide additional choice to the market, it risks causing unprecedented complexity. Each measurement provider promotes their own unique approaches to methodology with conflicting metrics. This places an increasing burden on marketers and agencies to evaluate options and navigate costly change management programs.

In light of these challenges, how can we reduce complexity and make solutions actionable? In our opinion, the answer is to enforce a common set of requirements and principles, like the ones we've outlined. This will not only help reduce complexity across providers, but also help accelerate progress towards a more seamless plan, buy and measure ecosystem, while developing new cross-channel capabilities.



Advertisers have expressed their 'North Star' needs from cross-media measurement. The WFA is working with the ANA and ISBA to translate this into real-world technology solutions available globally. Whether this approach or another is adopted by a market, naturally it makes sense to align around advertiser needs. **Innovation in measurement is key,**but not at the expense of being useful and accurate.





- Stephan Loerke, Chief Executive Officer World Federation of Advertisers



WHAT CAN MARKETERS AND AGENCIES DO TODAY?

A principle-based approach will help marketers and agencies select 3P providers and solutions that will serve their needs, and help the industry evolve. A simple framework for bringing this to life includes:

- → ADOPT CLEAR PRINCIPLES. Define a set of principles to evaluate your partners and adopt them in your measurement processes. We hope the principles we've outlined here will be a helpful starting point for discussion.
- → QUESTION. Evaluate whether your current partners offer solutions that meet those principles by asking highly detailed questions. Where there are gaps, request clear explanations and mitigations. YouTube has created a <u>checklist</u> based on our principles you can use today.
- → MAKE MEASUREMENT A PRIORITY WITH PARTNERS. Where appropriate, leverage your power as media buyers to support partners who provide and participate in solutions that meet your principles.
- → SPEAK AS A UNIFIED VOICE. A unified marketer voice, representing the needs of marketers and agencies, is critical to driving progress on this subject.

YOUTUBE'S COMMITMENT

YouTube is committed to helping marketers achieve their brand and business objectives, while improving the consumer experience. To that end, we will continue to evaluate partners and solutions marketers rely on, using these principles. For partners and solutions that do meet these core principles, YouTube WILL:

Invest to ensure YouTube is accurately and efficiently measured	Directly contribute to solutions (or subsidize access) where appropriate
Contribute privacy-centric data, open source technology and innovative methods for use by providers	Build an ongoing body of research and case studies to demonstrate the value and impact of good measurement, and advance best practices

While specific requirements and the measurement landscape may evolve, we believe these principles will ensure that third party cross-media video audience measurement solutions serve the interests of marketers and consumers. We are committed to partnering with the industry to see these principles come to life and welcome discussion with all those who share our vision of a comprehensive, fair and comparable, privacy-centric, independent and trustworthy, and actionable future!