

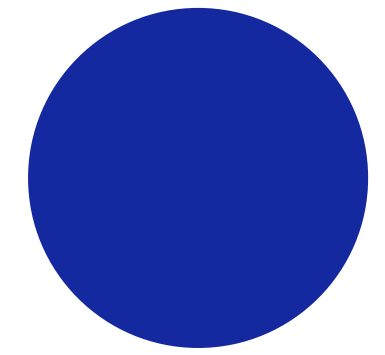
Understanding Automatic Content Recognition (ACR)

A Samsung Ads guide for advertisers

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01 What is Samsung Ads ACR

What is Samsung Ads ACR?

ACR, or automatic content recognition, is a type of data technology that identifies content played on a digital media device.

The technology enables recognition of content being played on devices, such as Smart TVs, by matching either the video visuals to a similar source. This all happens automatically via software in the TV set without any intermediary steps between what a viewer sees and what is captured. For this reason, the data is often referred to as “glass-level,” indicating that content and ads are measured at the last step on their journey to a viewer.

Samsung Ads’ proprietary ACR technology powers our insights, targeting, and measurement across millions of Samsung Smart TVs around the world.

As the world’s number one TV manufacturer, Samsung Ads has the largest continuously-growing ACR footprint globally, providing glass-level, deterministic, proprietary data collected with consumer privacy in mind (or at the forefront). In Canada alone, Samsung’s footprint of over 5 million Smart TVs translates into the largest single source of ACR data in the country.

Our ACR-powered first-party data has a number of benefits for the whole TV ecosystem — consumers, advertisers, and broadcasters. From powering discovery and customized content recommendations for our Samsung Smart TV users, to providing accurate insights into CTV viewership and enabling better targeting, measurement, and optimization for advertisers. We will explore the benefits of ACR in chapters three and four.

Goodbye, guesswork

As with many types of technology, not all ACR data is created equal.

Samsung has the industry's largest unmodelled single-source, first-party ACR dataset in Canada — that means we have access to real-time first-party data, 1:1 at a household level. Unlike many of our competitors' ACR, our data is unmodelled, meaning there's no estimation or guesswork involved. This gives us real-time insight into what the viewer was exposed to — including channels, shows, linear ads, streaming apps, game consoles and titles, and metrics including total time spent, household reach, and frequency.

Many companies with ACR data also license it out to third-party vendors for use and monetization. In contrast, **Samsung's ACR is proprietary data that we do not license out.** ACR data for Samsung TVs is only available through Samsung Ads.

ACR measures everything that is “on the glass,” providing a full picture of viewership behaviour. In contrast, data from MVPDs stops at the set-top box, and traditional linear TV networks only have viewership data from a declining portion of the population, thus providing only a piece of the puzzle. ACR's full, 360-degree view of consumer behaviour allows

advertisers to **better serve ads and enhance the viewing experience for consumers.** It also drives addressable advertising through CTV by offering the same levels of granularity in its targeting and measurement that advertisers are familiar with from the largest digital players with single-source deterministic first-party data.

Lastly, our massive device footprint in Canada means that **Samsung has more than double the ACR data scale of our nearest competitor.** For advertisers, working with Samsung Ads unlocks direct access to millions of Canadian consumers for activation to drive outcomes for your business.



02 Samsung ACR methodology

How does Samsung Ads ACR work?

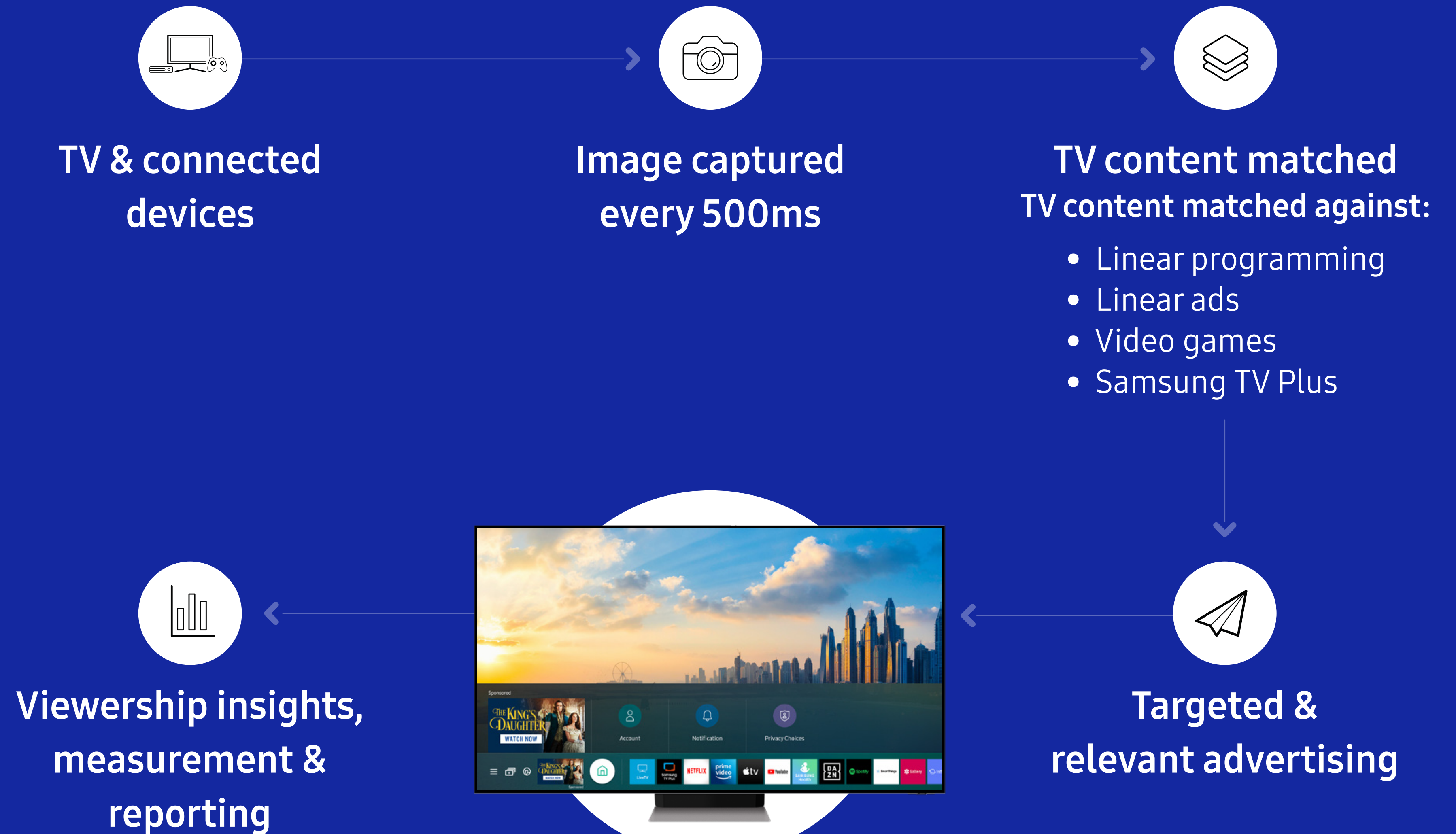
Our proprietary ACR technology takes glass-level screenshots every **500 milliseconds** on our opted-in Samsung TVs, converts them into “unique patterns,” and compares these visual snapshots against others in the matching server (library). ACR fingerprints are encoded representations of what is on screen and no human can identify what the fingerprint relates to.

Samsung Ads’ library contains many types of content across linear TV, streaming, gaming, and advertising creative.

The library is continuously reviewed and updated by Samsung Ads to ensure fidelity and accuracy.



ACR data flow diagram



03 ACR use cases and benefits for advertisers

ACR technology offers a multitude of benefits for both viewers and advertisers.

For viewers, ACR creates a truly personalized TV experience.

For advertisers, ACR offers valuable applications at each stage of the media buying process, from pre-campaign planning to activation to measurement and optimization. Utilizing the valuable insights available from ACR data, advertisers can create a smarter, more holistic cross-platform media strategy that ensures they're reaching the right audience with the right ad at the right time across platforms.

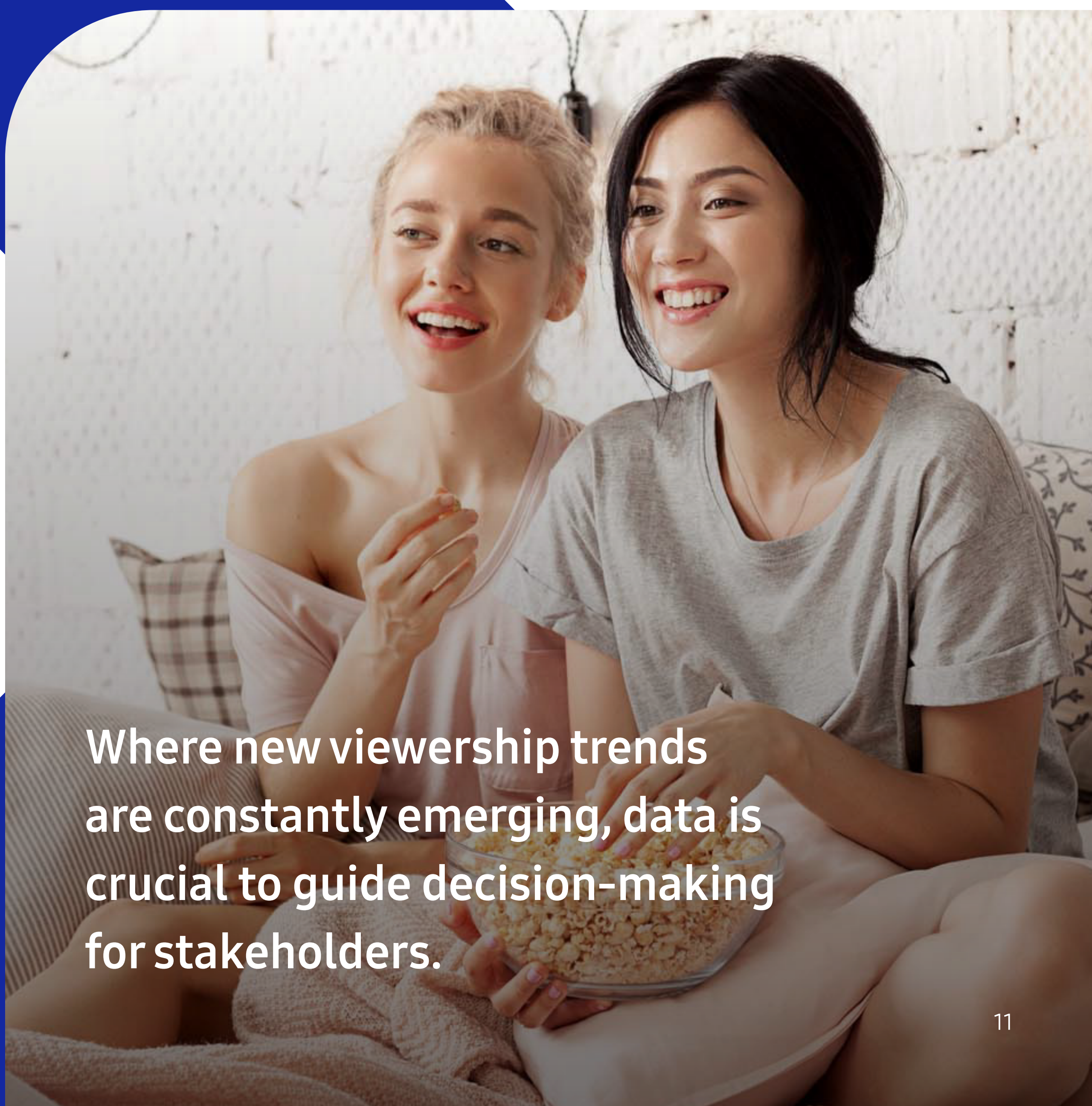


Viewership insights

Today's TV landscape is rapidly evolving — consumers watch content whenever and however they want. As trends evolve, data is crucial to guide decision-making for stakeholders.

ACR technology gives us the unique ability to understand TV usage and viewing across linear, streaming, and gaming formats — as all these behaviours happen on the same Samsung TV device.

Through a combination of proprietary device data and ACR insights, Samsung Ads provides a single source of TV data, empowering advertisers to gain a holistic view of the evolving TV viewership behaviours.

A photograph of two young women sitting on a bed, smiling and eating popcorn. The woman on the left is wearing a pink top, and the woman on the right is wearing a grey t-shirt. They are both looking towards the right side of the frame. The background is a white brick wall.

Where new viewership trends are constantly emerging, data is crucial to guide decision-making for stakeholders.

Benefits for advertisers

Let's take a look at a few examples of how ACR data can be applied at each campaign phase to make media buying more efficient and effective.

Pre-campaign planning

Audience profile building

Create a more informed audience strategy by using ACR data to build a profile of your target audience

Understanding your target share of voice

Gain insight into how well your linear campaign is breaking through the competition to reach your target audience

Incremental reach insights

Find audiences who have not been exposed to your ads on linear to drive incremental reach

Create a campaign profile

Build a cross-platform campaign profile to gain insight into how to balance your campaign reach and exposure across linear and streaming



Real-life example

Incremental reach insights

Retail case study

Objective

A leading retailer needed to increase reach around their most critical sales period: back to school

Challenge

Using ACR data, Samsung Ads provided the critical insight that the retailer's linear-only ads were failing to reach approximately 65% of Samsung Smart TV households

Solution

Samsung Ads leveraged our ACR data to help the retailer develop an incremental reach strategy that identified and targeted households not exposed to their ads on linear TV

Result

30%

incremental reach

+600K

additional households reached



Activation

Real-time campaign exposure

Identify audiences who have been under-exposed or not exposed to your ads on linear TV

Competitive conquering

Identify audiences you want to conquer that your competitors are reaching on linear

Retargeting

Target audiences who have been exposed to your ad on linear by serving them complementary ads

Precise audience targeting

Combine your first- or third-party audience segments with Samsung's ACR data to ensure you're reaching your precise audience at scale without wasting valuable impressions



Real-life example

Precise audience targeting

Theatrical case study

Objective

Drive in-person ticket sales surrounding a major theatrical release

Challenge

In a post-pandemic world, theatrical advertisers struggled to reach movie fans comfortable with returning to theaters in person

Solution

By combining Samsung's powerful ACR data with a third-party moviegoer segment, Samsung Ads successfully targeted moviegoers based on their mobile location who recently purchased a new release movie through electronic sell through (EST)

Result

4X

more moviegoers reached

+78%

incremental reach



Measurement & optimization

Reach and frequency management

Leverage ACR to manage reach and frequency across linear and streaming to make smarter media planning decisions

Incremental reach measurement

Utilize post-campaign insights from ACR to understand who was exposed to your campaign across all platforms

Measuring attribution

Connect your ad spend to your business goals (like app tune in for M&E, in-store traffic, website visitation)



Real-life example

Measuring web visitation

Auto redesign

Objective

Leading auto manufacturer needed to drive overall consideration for a newly redesigned vehicle

Challenge

Reach a precise target audience of multicultural auto-intenders and measure resulting web visitation and consideration intent

Solution

Advanced audience targeting combined Samsung ACR data with third-party data to serve ads for the auto redesign to the client's precise audience

Result

+19%

increase in consideration intent among those in-market for a new vehicle

41%

of all visits to the vehicle website were driven by viewers exposed to this campaign



04 ACR benefits for viewers

Content personalization

When it comes to content, today's viewers have unparalleled choices.

As confirmed by our recent consumer survey, Canadian TV viewers often feel overwhelmed by the sheer amount of choice and find it hard to discover new and relevant content.

Half of the consumers in our study say it's hard or very hard to find programs they would want to watch, while 80% would be interested in receiving smart content recommendations on their TV to help find shows they'd enjoy.

By tailoring content recommendations based on viewers' habits and interests, ACR can enable a truly personalized TV experience and make content discovery easier for today's overwhelmed viewers.



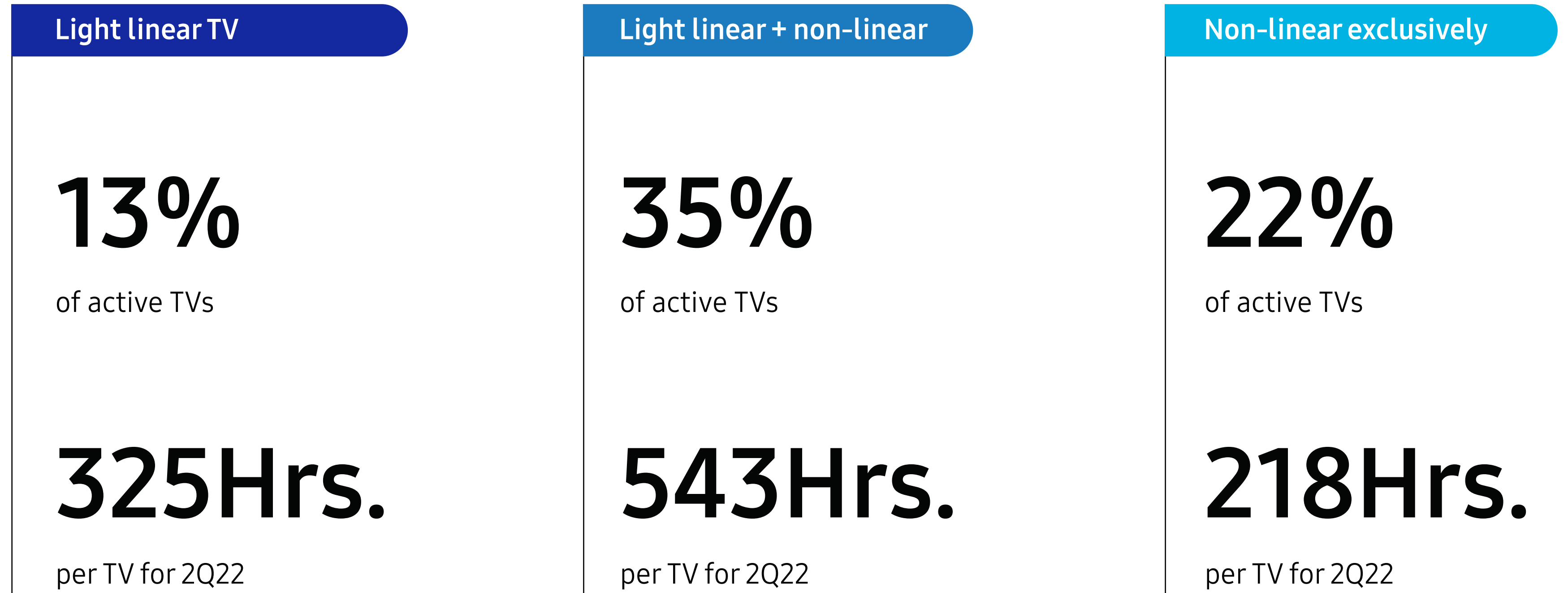
Viewership insights

Snapshot of ACR-powered viewership data

Linear and streaming snapshot

Viewership habits:

Light / medium / heavy users



Viewership insights

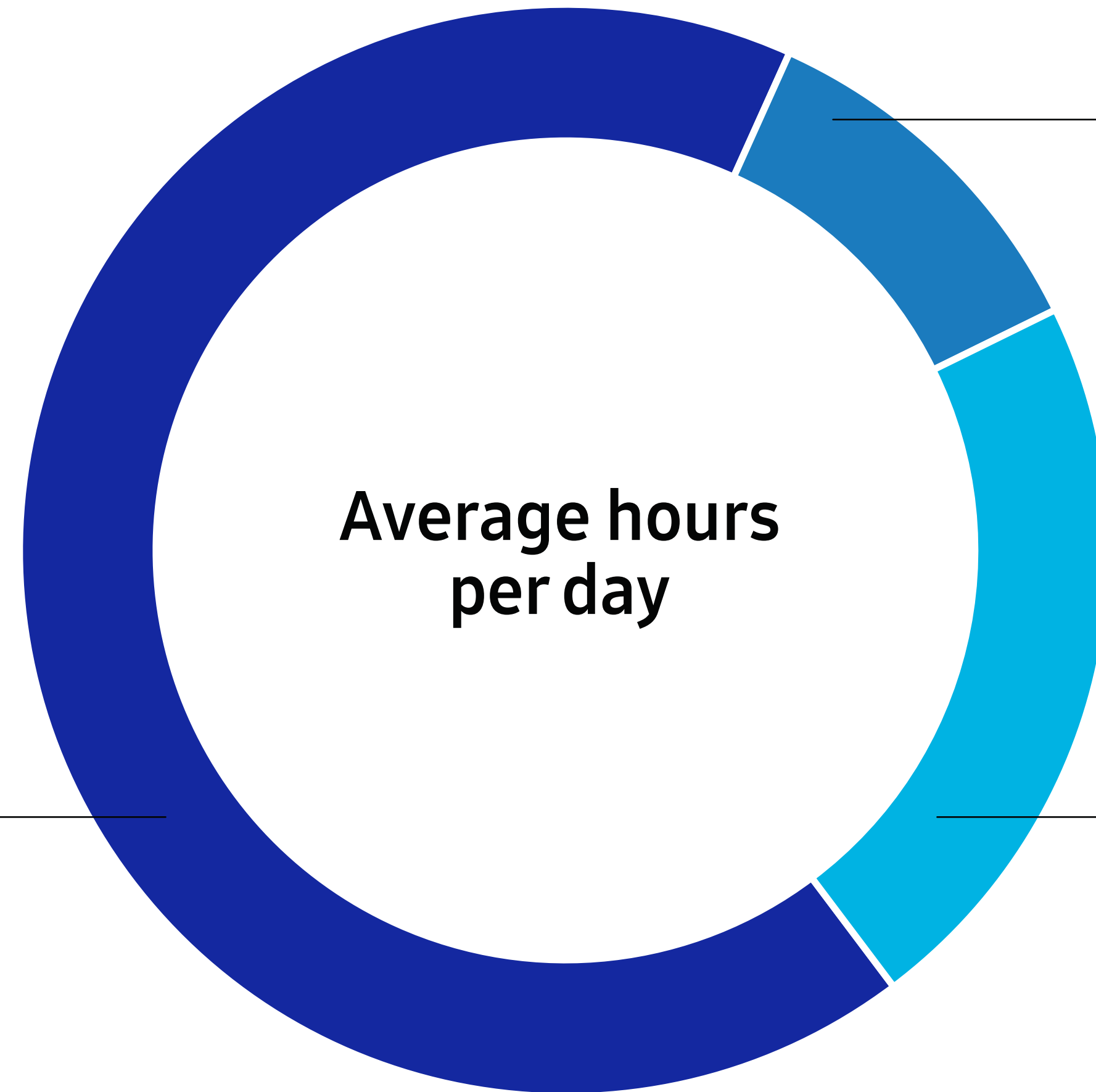
How are our viewers spending their time?

Streaming
(streaming devices + app + STVP)

4.5Hrs.

67%

of viewing time



Average hours per day

Linear

0.7Hrs.

11%

of viewing time

Gaming

1.5Hrs.

22%

of viewing time

05 Privacy & compliance

Privacy & compliance

At Samsung, privacy is at the heart of everything we do.

We handle customer data with care and help safeguard it by using strong levels of technical security and internal management procedures, as well as physical data protection measures. We collect, use, and disclose personal information in accordance with our Privacy Policy and applicable privacy and data protection laws.

As part of the initial TV setup process and before activating, Samsung TV users are given the option to choose whether they want to opt-in to various services and features, such as receiving interest-based advertising and viewing information services. Users may also opt out at any time. If a user does not opt in to these services, or if they subsequently withdraw their consent, their use of the Smart TV is not affected. However, certain features, such as interest-based advertising or recommendations, may no longer be available. This does not prevent the delivery of generic advertisements to the user's Smart TV.

These choices can easily be modified by the user at any time on the device itself.



06 About Samsung Ads

About Samsung Ads

Samsung Ads is the advertising division of Samsung Electronics, the #1 TV manufacturer globally.

Our advertising ecosystem spans millions of connected devices across smart TV and desktop. With the largest single source of TV data in the market, Samsung Ads not only has more, but we also have double the TV data scale of the next largest competitor.

Our unrivaled understanding of consumers, powered by exclusive Samsung data and insights, drives more engagement and delivers more results. With Samsung Ads, advertisers can achieve reach, scale, and precision in every connected moment.

Brands turn to our managed service and programmatic offerings to achieve incremental reach, complement linear TV campaigns, manage frequency, find difficult-to-reach audiences, and most importantly, measure outcomes.

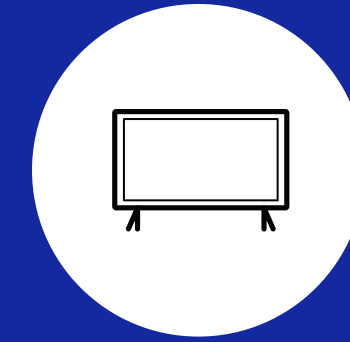


How to work with Samsung Ads

Advertisers of all sizes work with Samsung Ads to extend their reach among hard-to-reach streaming audiences using Samsung Ads' high-impact ad experiences and unique first-party data powered by ACR technology.

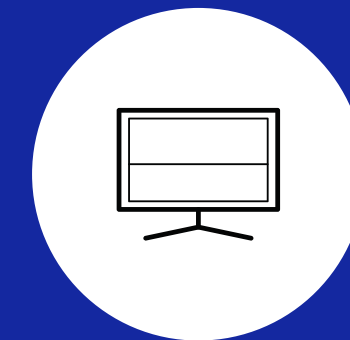
With programmatic and direct buying options available along with the Samsung DSP, Samsung Ads empowers advertisers to reach audiences on Samsung TVs and beyond while providing a brand-safe environment and invaluable insights about their audience along the way.

Get in touch to find out more: adsales@samsung.com



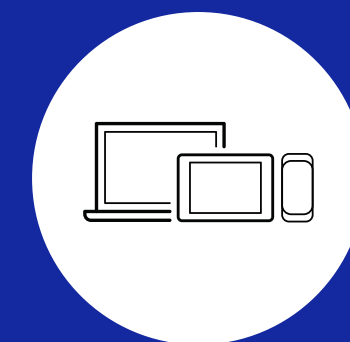
Connected TV video

Reach your audience with premium, in-stream video ads on TVs, including within our FAST service, Samsung TV Plus, and via partnerships with select OTT apps



High-impact ad experiences

Highly visible, dynamic advertising experiences that put your brand front and center



Cross-device

Surround the household by extending your reach beyond Samsung TVs to other connected devices

Samsung DSP

The power of Samsung's ACR data: at your fingertips.

Built for seamless cross-platform activation, Samsung DSP enables advertisers to:

Enhance audience strategies: easily expand and refine existing audience strategies, using Samsung's proprietary data and in-platform tooling

Access unique inventory: scale and deliver campaigns on premium inventory — including Samsung TV Plus, Samsung's free ad-supported Smart TV video service — and onboard your own private deals

Manage reach and frequency, inclusive of linear: manage household-level reach and frequency across all screens

Achieve total campaign measurement: holistically measure cross-platform campaigns, including linear buy





07 ACR glossary

AAA

In the video-game industry, AAA is an informal classification used to categorize games produced and distributed by a mid-sized or major publisher, which typically have higher development and marketing budgets than other tiers of games.

Addressable TV

Addressable TV is a form of advertising technology that enables advertisers to target relevant ads to specific audience segments during a TV show. Through addressable TV, advertisers can deliver relevant ads to specific people based on targeting criteria like geography, behaviour, interests, and demographics.

Advanced TV

Advanced TV is an umbrella term that refers to television content that is not traditional linear TV. Advanced TV includes OTT (Over the Top), Connected TV, Addressable TV, and Addressable VOD.

Opt-in

A process of saying 'yes' by actively selecting an option to allow a user to enjoy the benefits of Smart TV features and services.

Over-the-top (OTT)

Over-the-top media encompasses content distributed directly to viewers over the internet, whether it is linear streamed TV or VOD (e.g., AVOD or Broadcaster VOD) and streaming content providers (such as Netflix, Hulu, etc.)

Connected TV (CTV)

Connected TV specifically refers to televisions that have access to an internet connection and can load or stream digital content. This can include Smart TVs (where internet connection is built-in) and standard TVs that are connected to the internet via smart devices.

Smart TV

Television set with integrated internet, which allows users to access apps and stream video and music, browse the Internet and access other advanced, interactive functions.

Streamers

People who watch over-the-top content.

First-person game

In video games, the first person is any graphical perspective rendered from the viewpoint of the player's character, or a viewpoint from the cockpit or front seat of a vehicle driven by the character.

Video on demand (VOD)

Video content that people can access whenever they want.

Heavy / medium / light linear TV viewers

Tiers of Samsung TV users based on the amount of linear TV consumption by terciles. For example, light linear viewers watch less than 2–5 hours of linear TV content per month. The number of hours can vary by study period.

SAMSUNG Ads

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