

EBOOK | 2025

# NOW BUFFERING:

How to Solve the Top Hurdles Fans  
Face in Streaming Live Sports

Since the [first televised broadcast of a baseball game](#) between Columbia and Princeton Universities in 1939, live sporting events have been a central pillar of both the broadcast (and later digital) media landscape. From the rise of color television and the introduction of instant replay to the first high-definition broadcasts and today's real-time mobile streaming, live sports broadcasting has consistently pushed the boundaries of what's technically possible.

## Over 80 years later, live sports remain a key driver of industry innovation, and fans' methods for tuning in are changing faster than ever.

While fans may still be comfortable watching cable and broadcast TV, they have also proven willing to seek out new platforms that can provide a smooth experience for their favorite new sports. As they do, the lines between niche, regional, and global sports are continuing to blur. [U.S.-based fans now follow Premier League soccer](#) and F1, while [NBA fandom is thriving globally](#), even as sports like [pickleball explode in popularity](#).

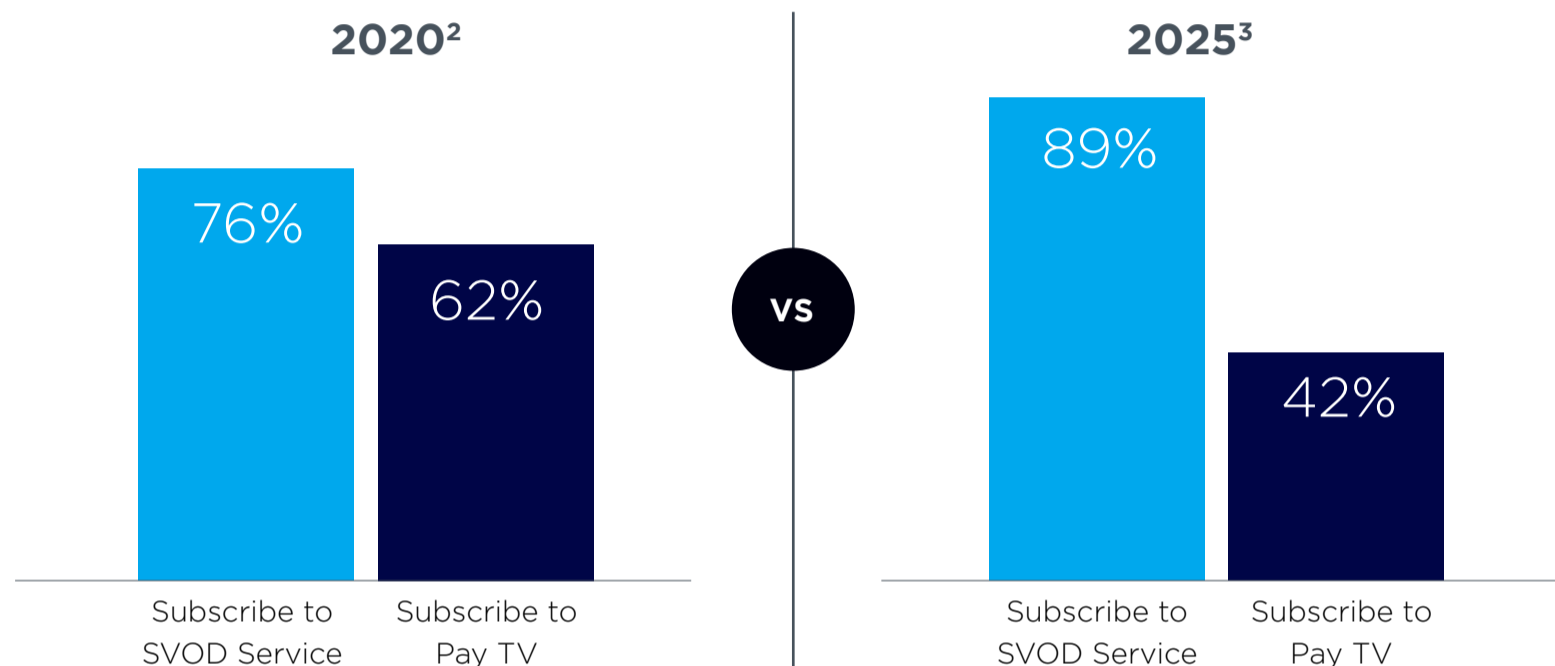
**As viewers gain more options for where and how they can tune in, sports leagues, content service providers, and tech companies will need to work together to create a seamless playback experience on every device.**

In this eBook, we explore the key forces behind the shift to streaming, the technical challenges that threaten user experience, and the solutions that can help leagues and service providers deliver next-generation sports experiences at scale.

# WHY SPORTS ARE MOVING TOWARD STREAMING



The shift to streaming for live sporting events is part of a broader trend in media consumption: consumers are increasingly dropping traditional pay TV service as streaming services become a new standard. Since 2020, the number of US internet households paying for a traditional pay TV service has dropped by 20 points<sup>1</sup>, even as subscription video on demand (SVOD) services become more embedded in US households.



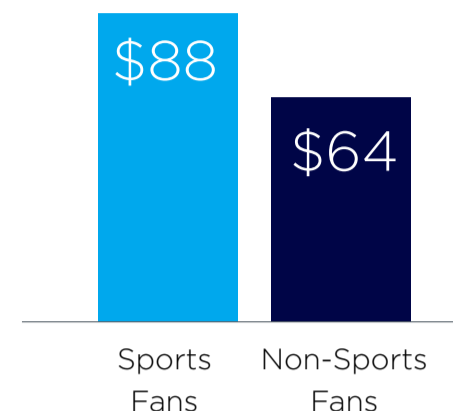
As part of this shift, consumers are showing a willingness to subscribe to multiple services to achieve their preferred mix of content: on average, **over half (55%) subscribe to 5 or more SVOD services<sup>4</sup>.**

While today's self-classified sports fans remain a hybrid audience, streaming-only viewers are an increasingly salient audience segment: **40% say that they only watch sports via streaming services**, while another 30% watch sports content via both streaming and broadcast/traditional pay TV providers<sup>5</sup>.

## Why are sports viewers a high-value audience segment?

Sports viewers are a uniquely compelling media consumer segment: **they watch frequently, spend more, and increasingly place live bets.**

- Sports fans spend an average of \$88 per month on streaming services compared to \$64 per month for consumers who avoid sports content<sup>6</sup>.
- 84% of sports viewers watch at least one live game per week<sup>7</sup>.
- With the continued expansion of legalized sports betting in key markets, [30% of Americans now bet on sports as of 2024](#).



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## How do sports streamers consume content?

Sports streaming watchers tap into a mix of both multi-category and sports-specific services, while also retaining a willingness to use traditional broadcast sources to find the right live events.

**45%**

subscribe to top-tier streaming services<sup>8</sup>

**+32%**

subscribe to sports-specific D2C streaming<sup>9</sup>

**38%**

use traditional pay TV<sup>10</sup>

Consumers who are willing to pay for sports-specific D2C content spend an average of \$111 per month on all streaming subscriptions, well above the \$88 monthly average for broader sports streamers<sup>11</sup>. **This highlights the dual value of sports fans: they can drive revenue for specialty services or serve as a high-engagement audience that boosts broader platform attraction and retention.**

# THE TOP FOUR CHALLENGES VIEWERS FACE - AND HOW TO SOLVE THEM



Despite the proliferation of sports streaming platforms, technical issues remain a persistent friction point, especially during live events. Major broadcasts attract massive, often unpredictable traffic, while niche or regional games may run on infrastructure that's less robust or outdated. In both cases, the stakes are high. **It only takes one or two hiccups to turn an otherwise flawless experience into a frustrating one, particularly if issues cause fans to miss a game-changing play.**

**31% of sports viewers aged 18-24 cited poor video quality, insufficient bandwidth for high-quality streaming, and lag as common problems when streaming sports<sup>12</sup>.**

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## **Sports Streaming Challenge One: Latency**

Generally, latency refers to the delay between when an event occurs in real time and when the viewer actually sees it on their screen. Because of the nature and excitement of live sports, even a minor interruption can cause outsized frustration.

Fans often follow games while checking social media or texting friends, and no one wants to receive a score update or excited message before they've seen the moment unfold for themselves. **Streaming viewers don't want to feel like they're behind the action.**

Latency not only degrades the viewing experience, but also limits key monetization opportunities. For example, live in-game betting depends on split-second timing: the next pitch, snap, or possession may trigger a bet.



## 2

### **Sports Streaming Challenge Two: Buffering**

Just about every streaming viewer is familiar with buffering, the brief but disruptive pauses that occur when video playback catches up to the available data stream, leaving the viewer with a spinning wheel or frozen frame that signals a lag between your device and the content source.

For live sports, buffering poses a much greater challenge because the content is unfolding in real time, so the data isn't available to pre-load. That means any disruption, no matter how brief, can cause fans to miss critical plays or fall out of sync with the moment. In a live sports context, buffering breaks immersion and undermines the sense of urgency that makes these events so compelling.

### 3

## Sports Streaming Challenge Three: Scalability

Games like the Super Bowl or the World Cup Final are more than just sporting events. They're global cultural phenomena that can draw hundreds of millions of simultaneous viewers. While most platforms are built to manage routine levels of traffic, these major events push infrastructure to its limits.

A sudden surge in demand (whether from a tense fourth quarter finish, unexpected upset possibility, or a spike in in-game betting) can overwhelm even well-designed systems. When traffic outpaces capacity, viewers experience delays, buffering, or outages, undermining trust in the platform right when engagement is at its peak.



## 4

## Sports Streaming Challenge Four: Device Compatibility

Cross-device compatibility plays a major role in the sports streaming experience, especially as viewers increasingly move between smartphones, tablets, smart TVs, and gaming consoles.

With so many different apps, platforms, and operating systems in play, ensuring consistent performance across devices is no small feat. Fans expect a seamless experience no matter how they tune in, and any breakdown in playback quality, lag in load times, or app-level glitches can quickly lead to frustration.

**The connected TV ecosystem is highly fragmented:** about **25% of viewers use Roku** as their primary platform<sup>13</sup>, the single largest share, and there are at least nine major device platforms and services in play. No provider dominates the space, making it difficult to standardize performance across devices.



# HOW NEXT GENERATION VIDEO CODECS WILL IMPROVE QUALITY AND DELIVERY

While improvements to infrastructure, delivery protocols, and adaptive streaming techniques each play a role in optimizing performance, **video codecs address the streaming challenge at its foundation: the way we compress and decompress video data.**

Every stream, no matter how well it's delivered, depends on the efficiency of its underlying codec. The more efficiently video can be compressed, the faster and more reliably it can be streamed, especially in high-demand live environments. Critically, older, less efficient codecs lead to larger file sizes and higher bandwidth requirements. This directly increases the likelihood of buffering, lag, and inconsistent playback.

Codecs have evolved over time to keep pace with innovation in content quality while providing a more stable platform for live events.

- **AVC (Advanced Video Coding)**, introduced in 2003, remains widely supported and efficient in low-bandwidth scenarios. However, its performance in high-motion content like live sports is more limited and can result in noticeable lag or quality degradation.
- **HEVC (High Efficiency Video Coding)** gained broad adoption starting in 2017, particularly after Apple added support across iOS 11, tvOS 11, and macOS High Sierra. Offering roughly **25–50% better compression than AVC**, HEVC supports higher image quality at lower bitrates and is well-suited to 4K and 8K content, including HDR. However, it still faces challenges around device compatibility and requires more processing power, which can limit its performance on lower-end hardware.

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Looking ahead, as viewer expectations shift toward 4K, 8K, HDR, and high-resolution mobile streaming, the need for the successor to HEVC becomes clear: **VVC (Versatile Video Coding)**.

VVC offers a true step-change in performance: **up to 50% better compression than HEVC**, meaning the same video quality can be delivered with half the data. It supports ultra-high resolutions and offers significant efficiency gains in file size, bandwidth usage, and storage cost. These improvements make it especially effective for streaming high-resolution content over mobile networks and broadcasting in Ultra HD, where delivery constraints are tighter and viewer expectations are higher.

Because VVC reduces data volume without sacrificing quality, it can help resolve both buffering and latency challenges at once, providing a smoother, more reliable experience for sports fans across devices and networks.

**Up to  
50%**

better compression  
than HEVC

# SOLVING VIEWER CHALLENGES IS KEY TO UNLOCKING REVENUE

Emerging technologies, especially next-generation video codecs, can help solve core content delivery challenges at scale, but their value goes beyond smoother playback. Looking forward, they will also enable the kinds of premium, interactive experiences that sports viewers are increasingly coming to expect.

Today's streaming sports audience is already highly engaged. Over half (53%) use multiview features, and 27% say they're motivated to purchase merchandise directly within the app<sup>14</sup>. With ultra-low latency in place, platforms can support live in-game betting, AI-driven personalization, and AR-enhanced content, each creating new opportunities for revenue, loyalty, and differentiation.

Unlocking these models starts with delivering a seamless stream. From the infrastructure that powers it to the codecs that deliver it, the path to the next phase of fan engagement runs through technical excellence.

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