



# Digital media trends

How streaming video services can tackle subscriber churn

# About the Deloitte Center for Technology, Media & Telecommunications

Deloitte's Center for Technology, Media & Telecommunications (TMT) conducts research and develops insights to help business leaders see their options more clearly. Beneath the surface of new technologies and trends, the center's research will help executives simplify complex business issues and frame smart questions that can help companies compete—and win—both today and in the near future. The center can serve as a trusted adviser to help executives better discern risk and reward, capture opportunities, and solve tough challenges amid the rapidly evolving TMT landscape.

## Connect

To learn more about the Center for Technology, Media & Telecommunications and to stay up to date on our latest research and insights, please visit [www.deloitte.com/us/tmtcenter](http://www.deloitte.com/us/tmtcenter).

## Subscribe

To receive TMT email communications, please subscribe at <https://my.deloitte.com/subscriptions.html> and select your areas of interest.

## Engage

Follow us on Twitter at: [@DeloitteTMT](https://twitter.com/DeloitteTMT).

# Contents

Consumers won the streaming wars	3
What we're seeing: Choice and churn	4
Why are subscribers leaving?	8
What could keep them?	11
Streaming can unlock new forms of value	13
Questions executives should be asking	14
Endnotes	15



ALTHOUGH THE SHIFT to streaming video services may seem inevitable, the media and entertainment industry is facing significant changes to more than just distribution and engagement. One of the most profitable business models appears to be fading. For decades, cable and satellite-based pay TV have enjoyed margins typically reserved for energy companies.<sup>1</sup> In recent years, however, more of their audiences have been cutting the cord and subscribing to paid streaming video services. In the process, the historic margins sustained by pay TV subscriptions and advertising revenues have been challenged and may not survive the next generation of media and entertainment.<sup>2</sup>

It will not be easy for media and entertainment companies to navigate this change. Launching a streaming video service is only the first step toward engaging, acquiring, and retaining audiences—and finding revenues to support it all. In this article, we focus on the evolution of streaming video services that rely on subscribers for most or all of their revenue. Paid subscriptions are the dominant business model for streaming video services in the United States, although competition from free ad-supported services is growing. With more

competition and subscriber churn, how can streaming video providers better understand where the industry is going and how to unlock enduring value?

In the near term, providers may need to spend more to make less, building the foundation for the new era of video entertainment. Their investments could also unlock new kinds of value, however; providers may be able to learn more about their customers, meet more of their diverse needs, and predict when they might leave. Content will always be king. But with the rising costs of producing TV and movies and the prevalence of “hit and run” subscribers who watch the hits then run for the door, streaming services may need more than great content.

How can streaming video services attract, and most important, *retain* subscribers when consumers have so many choices and can so easily switch services? Beyond great content, focusing on providing additional benefits to retain their customers could be key. If providers can treat their subscribers more like valued members of a club, they may be able to deliver more value and create more loyalty with privileges and personalization.

# Consumers won the streaming wars

IN OUR OCTOBER 2020 *Digital media trends* pulse survey of US consumers,<sup>3</sup> we saw a maturing market for streaming video: 76% of respondents said they subscribe to at least one paid service, a 21% jump since 2018. Remarkably, consumers who subscribe to a paid streaming video service now hold an average of five subscriptions—up from three just before the COVID-19 pandemic. Between stay-at-home norms and the launch of new premier services, the pandemic has amplified subscriber growth, not only for paid services but also for more ad-supported options. The use of free, ad-supported video has grown substantially since the start of the year, and free trials and discounts have boosted subscriber counts while driving up acquisition costs.<sup>4</sup> Competition is stronger, the landscape is more dynamic, and consumers have more options to discover content and find value.

Paid streaming video services have become the new normal for most US consumers. In 2020, the “streaming wars” accelerated, with most major pay TV players deploying their own direct-to-consumer subscription services and spending heavily on content—and customers. Deloitte estimates customer acquisition costs for several top streaming video services by analyzing marketing expenses and net subscriber additions over time. This approach does not capture all expenses for acquiring customers, including the escalating costs of developing strong original content. But it gives us a ballpark estimate for understanding how much streaming video services spend on marketing to attract new subscribers. Depending on the service, providers can spend US\$200 per year on marketing to acquire a single subscriber.<sup>5</sup>

To recoup that investment, providers must draw monthly subscription rates from a new subscriber for

up to 15 months, depending on the subscription tier and cost. When consumers join a service that is offering free trials or discounts, or join to watch a specific show and leave, streaming services are likely losing money. Consumers are enjoying the fruits while providers must continually work to attract and retain them. With so many *a la carte* offerings—and little friction between viewing and cancelling—consumers are shuffling services with greater gusto, grabbing free trials, chasing original content, mining ever-shifting back catalogs, and balancing their costs between paid, premium, and ad-supported options. Perhaps more than ever, consumers are in command and providers are facing a harder fight to retain them.

But now, almost a year into the COVID-19 pandemic, some US consumers are carrying greater economic burdens. In our October pulse survey, 29% of respondents reported a decrease in household income since the start of the crisis. In one promising sign, this number has dropped from 39% in May, suggesting some economic recovery for households. Yet, more are seeking ad-supported and free services, and more are reducing their paid services to find the most value for the least cost.

The pandemic has also impacted streaming video providers’ ability to lure consumers with original content. New original content is a major attraction for subscribers, but many productions have stalled due to COVID-19, making it harder for streaming services and the studios they rely upon to keep audiences engaged. Streaming services also face greater competition from other media. To paraphrase the CEO of a top paid streaming video service, providers are competing not just with each other, but with social media and video gaming.<sup>6</sup>

# What we're seeing

## Choice and churn

**D**ELOITTE FIELDLED THREE surveys of US consumers throughout 2020 to better understand ongoing trends in media and entertainment, particularly under the influence of the COVID-19 pandemic.<sup>7</sup> Overall, the trends we've seen in recent years have continued in 2020; in fact, some have been greatly accelerated by the crisis.

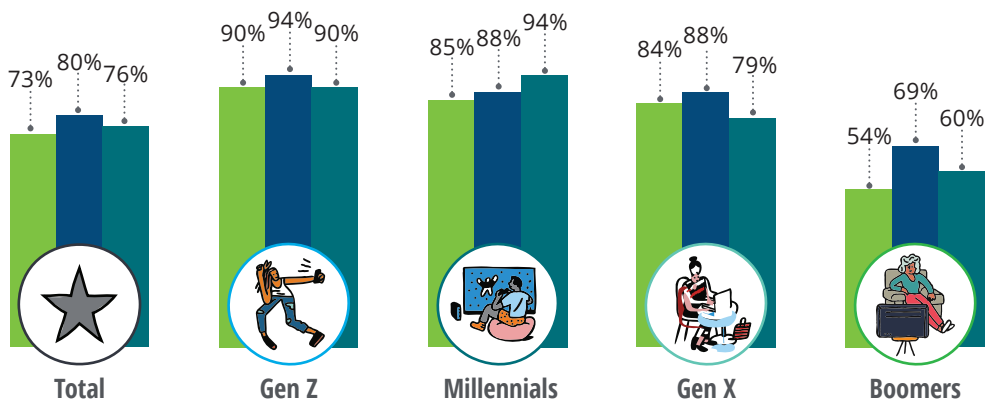
At the very start of 2020, US consumers subscribed to an average of three paid streaming video services. By October, that number rose to five (figure 1). On the surface, this looks like good news for providers.

FIGURE 1

### Paid streaming video penetration has dropped since May, but the average subscriber has more services

Percentage of US households with at least one paid streaming video subscription

■ January 2020 ■ May 2020 ■ October 2020



Note: Streaming penetration derived from number of paid services respondents subscribed to.

Sources: Digital media trends survey, January 2020; Digital media trends COVID-19 pulse survey, May 2020; Digital media trends COVID-19 pulse survey, October 2020.

**5** Average number of paid streaming video subscriptions among people who subscribe

Up from  
**3**  
pre-COVID-19

Sources: Digital media trends survey, January 2020; Digital media trends COVID-19 pulse survey, May 2020; Digital media trends COVID-19 pulse survey, October 2020.

But consumers are also cutting services more frequently. While they have more paid subscriptions than ever, they may not keep the same services for very long. In our January 2020 survey, only 20% of respondents who subscribed to a streaming video service had cut a service in the previous 12 months, but by October, 46% had cut at least one in just the previous six months. This may be partly driven by economic pressures.

However, consumers are adding services as well, suggesting a much more dynamic nature to the streaming video landscape. In May, 23% of respondents had added a streaming video service since the start of the pandemic, and 9% had added and cancelled services. By October, 34% had both added and cancelled streaming video services (figure 2). The early part of 2020 saw greater acquisition, but the second half has been characterized by churn. While COVID-19 appears to have accelerated streaming video subscriptions, the dynamism we now see is likely

the emerging characteristic of a more mature and competitive market.

## While COVID-19 appears to have accelerated streaming video subscriptions, the dynamism we now see is likely the emerging characteristic of a more mature and competitive market.

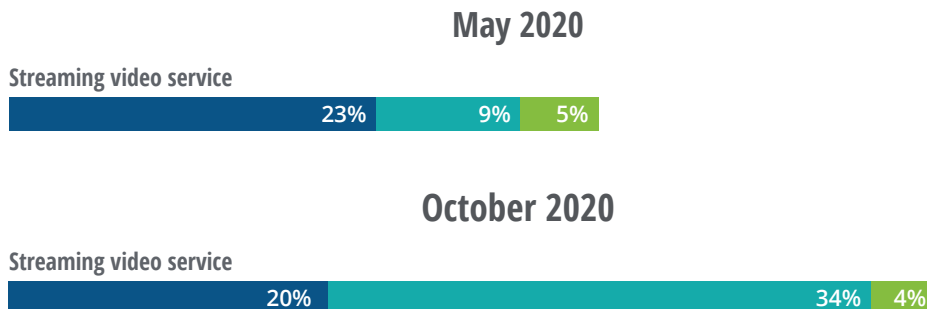
Certainly, a handful of top providers have established a strong foothold in US households, emerging as the most favored streaming video services in our survey, well beyond the rest. If streaming is an analogy, these are the mighty rivers. They may be debt financed or leveraging other lines of business to subsidize their streaming

FIGURE 2

### Consumers now have more streaming video subscriptions, but there's been more churn since COVID-19 began

Changes made to paid subscriptions since the COVID-19 pandemic began

■ Added ■ Both added and cancelled ■ Cancelled



Sources: Digital media trends COVID-19 pulse survey, May 2020; Digital media trends COVID-19 pulse survey, October 2020.

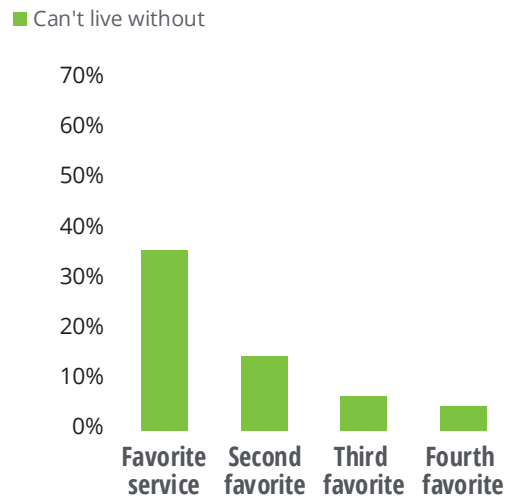
efforts, but can afford to spend more to acquire subscribers and to offer discounts and free trials. Notably, we found that less than one-quarter of their subscribers are on free trials, and among those who are, many say they would pay full price for the service after the trial ended. To further incentivize subscribers, some providers are offering bundles with other entertainment options in their portfolios or inking partnerships with telecoms to offer free trials with wireless subscriptions.<sup>8</sup>

Leading providers may be positioned to continue delivering the clearest value to their subscribers, but they shouldn't become complacent. Most of their subscribers say that they could live without their services, and a full 19% say they don't feel strongly about any of their services<sup>9</sup> (figure 3). Consumers have many entertainment choices and are more empowered than ever to regularly reassess the value they receive for their time and money. This challenges all providers to know their audiences well enough to keep delivering value.

FIGURE 3

### Consumers may love a service and still leave: Less than half of respondents consider their favorites "must haves"

Among your top three favorite services, which can you not live without?



Source: Digital media trends COVID-19 pulse survey, October 2020.





Throughout 2020, the recipe for engaging subscribers has mostly stayed the same. They want a broad range of shows and movies, and new and original content unavailable on other services. More also want ad-free experiences: Around 35% to 40% of respondents said they prefer ad-free options. By October, 27% of respondents subscribed to a new service because it offered an

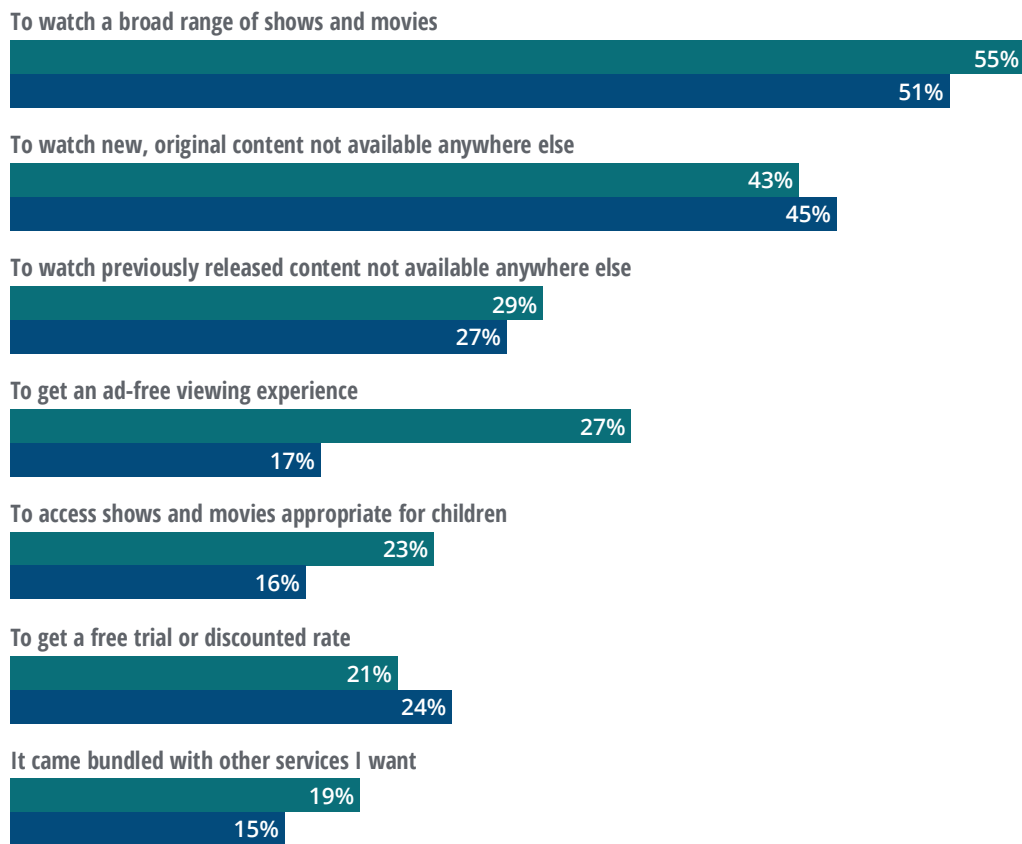
ad-free viewing experience, up from 17% in May. However, more are also seeking subsidized and free ad-supported offerings. These are becoming less mutually exclusive as consumers add more varying kinds of streaming video services—at varying costs—to their personal baskets of entertainment (figure 4).

FIGURE 4

### Content is still king, but bundles join free trials as an incentive to subscribe

Why did you subscribe to a specific streaming service(s)?

■ October 2020 ■ May 2020



Note: Question was asked only to streaming video subscribers.

Sources: Digital media trends COVID-19 pulse survey, May 2020; Digital media trends COVID-19 pulse survey, October 2020.

# Why are subscribers leaving?

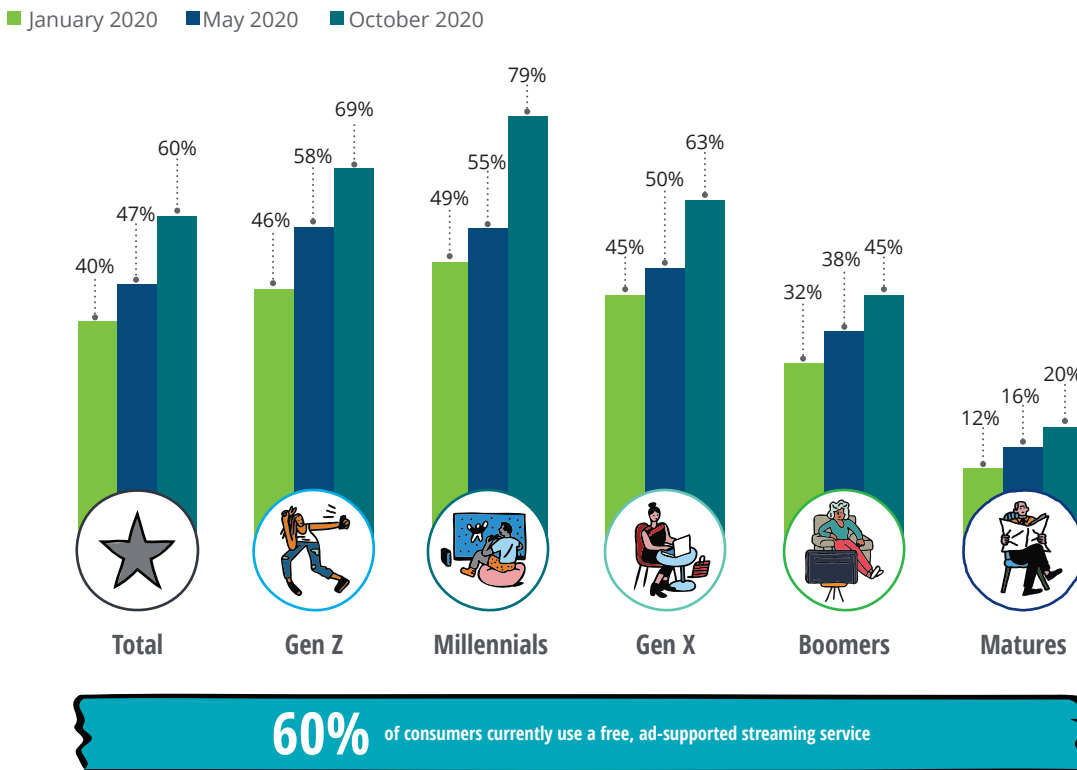
**C**ONTENT IS STILL king, but cost may be the new queen. Among the reasons for cancelling services, the ability to access content on other free services rose from 14% in May to 23% in October. In 2020, the number of US consumers subscribing to at least one free

ad-supported service grew considerably, from 40% in January to 60% by October (figure 5). In some cases, this may be due to cost sensitivities. Or it could be that more consumers are becoming aware of free ad-supported services.

FIGURE 5

## Since COVID-19, ad-supported services—and audiences—have grown

Percentage of respondents who use at least one free, ad-supported service



Sources: Digital media trends survey, January 2020; Digital media trends COVID-19 pulse survey, May 2020; Digital media trends COVID-19 pulse survey, October 2020.

As more providers seek to grow ad revenues from young streaming services, finding the balance between ad load and content may be critical to retention. If ad loads are reasonable, most consumers are willing to watch ads in exchange for entertainment. Our respondents say that about seven minutes of ads per hour are “just right.” Pay TV, on the other hand, may load 14 to 20 minutes of ads per hour. Some free, ad-supported video on demand (AVOD) services understand this, and limit ads to five minutes per hour.<sup>10</sup>

While a handful of premium streaming video services have gathered the bulk of US subscribers, we found that consumers with AVOD services are much more evenly distributed across the top 13 free services. As they manage their own baskets of streaming video services, they may commit to a couple of premium services, juggle more niche or ad-supported offerings, and keep a selection of free AVOD services.

US consumers are maturing and finding ways to maximize the value they get from an array of entertainment options. Among respondents who cut a streaming service since the start of the pandemic, 62% had signed up to watch a specific show and then cancelled once they were done. And they did it quickly: 43% cancelled the same day they decided they no longer wanted the service. This leaves streaming video services with little time to respond. How can providers know more about their subscribers to better match content to their

segments and to predict who might churn *before* they leave?

**62% had signed up to watch a specific show and then cancelled once they were done.**

**43% cancelled the same day they decided they no longer wanted the service.**

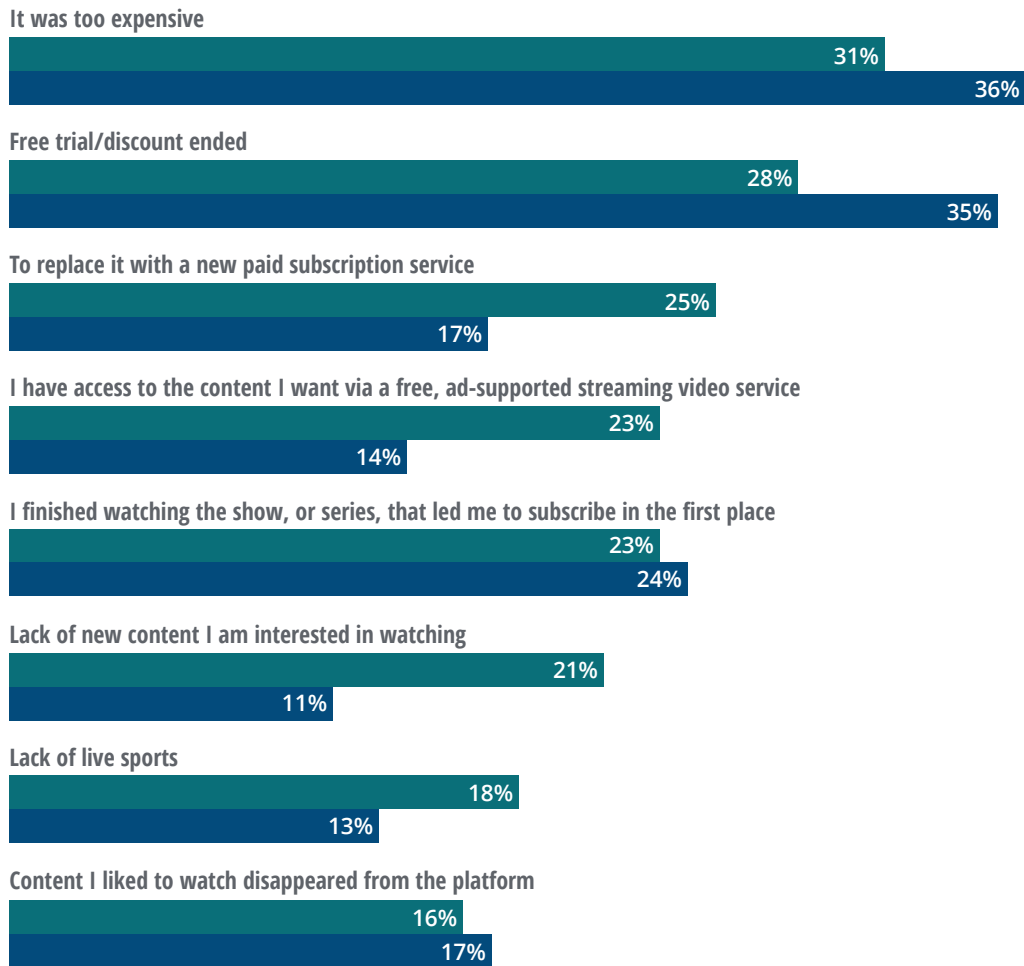
Overall, data from May to October suggests that providers may be getting better at demonstrating value to consumers. Those who cancelled due to cost fell from 36% to 31%, and those who left after a free trial or discount ended also decreased from 35% to 28% (figure 6). At the same time, 2020 was somewhat unique; more major providers launched new services with flagship shows and content catalogs. By October, 25% of subscribers had cancelled a service and replaced it with another new service, up from 17% in May. When all the major services are established, what will keep audiences engaged?

FIGURE 6

### Why do consumers cancel? Cost, lack of value, and lots of options for content

Respondents cited the following reasons for cancelling a service

■ October 2020 ■ May 2020



Note: Question was asked to consumers who cancelled a service.

Sources: Digital media trends COVID-19 pulse survey, May 2020; Digital media trends COVID-19 pulse survey, October 2020.

# What could keep them?

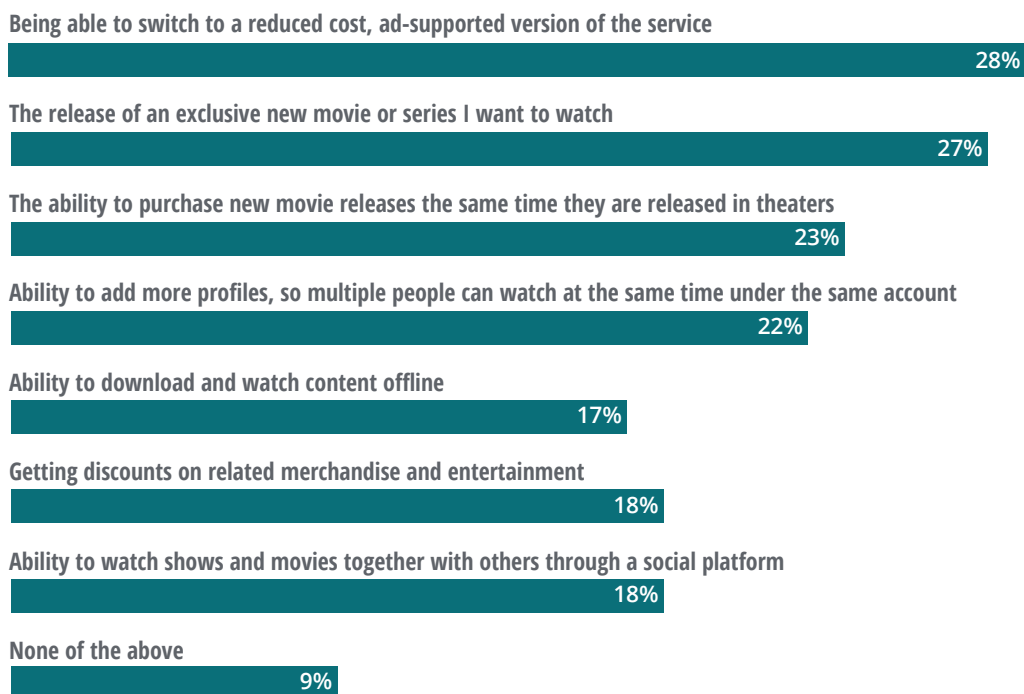
**C**ONTENT AND COST: It's a simple formula hiding a bedeviling complexity. Content development is expensive, especially for premium stories and talent in a highly competitive market, with massive spending from apex acquirers. The formula for hits continues to evolve and fragment into innumerable niches, putting pressure on content development. Meanwhile, audiences are increasingly finding value in ubiquitous online content, social streaming, and video games. Streaming subscriptions are relatively inexpensive, but customer acquisition is costly and streaming services have yet to draw the advertising revenues that have buoyed pay TV.<sup>11</sup>

When we asked subscribers what would keep them from cancelling a paid streaming service, 27% would stay to see an exclusive new movie or series they were interested in, and 28% said they would stay if they could switch to a reduced cost, ad-supported tier of the service (figure 7). With climbing costs to develop or acquire content, it may be simpler for streaming providers to offer tiered pricing and then upsell with offers featuring more exclusive services. For example, 23% of respondents said they would stay if they could purchase new movie releases the same day they are released to theaters.

FIGURE 7

## What could keep them? Ad-supported tiers, exclusive hits, and VIP treatment

If you were about to cancel a paid streaming video service, which of the following would most likely make you change your mind?



Note: Respondents could choose up to two answers.

Source: Digital media trends COVID-19 pulse survey, October 2020.

Theaters have been hit hard by the pandemic, and most have endured venue shutdowns and delayed productions of big releases. With consumers at home, some studios have tried to recover losses by releasing directly to streaming services. In May 2020, 22% of US consumers paid to stream a newly released movie at home. Of those who didn't, cost was the biggest factor. Some consumers bristled at having to pay an additional fee on top of their monthly subscriptions. But by October, 35% had paid for a first-release movie at home. Overall, 90% of respondents who paid to watch new movie releases at home said they would likely do so again.

**90% of respondents who paid to watch new movie releases at home said they would likely do so again.**

Combining tiered pricing models and access to exclusives could expand audiences while enabling more to feel like members, rather than subscribers. If providers can get to know their audiences better and tailor options to segments, they may be able to show more value and drive retention. They could

use the cost lever to attract and retain more subscribers looking for the most value for their dollars, and they could use exclusives to retain members seeking a VIP experience. Like retailers, streaming providers could embrace stronger customer relationship management enabling them to focus more on retaining their high-value customers, potentially lessening acquisition costs.

For providers with other assets across the media and entertainment landscape—or the means to assemble a cross-industry asset through thoughtful M&A—membership tiers could include discounts and exclusives among their properties. Such brands could offer lifestyle services that extend existing franchises and brand loyalty beyond their streaming video services. Consumers may be unwilling to return to the long-term contracts of pay TV, but providers could experiment with other ways to retain them, like rewards programs that lift lower-tier subscribers into premium content and experiences. For providers without such portfolios, direct-to-consumer distribution can help them better understand and anticipate their users' needs. In each of these cases, accessing the data that digital services offer can help providers lower their own risk and better meet the needs of more of their customer segments.

# Streaming can unlock new forms of value

**S**TREAMING VIDEO PROVIDERS have an opportunity to develop systems that can get them much closer to their audiences. Data analytics can enable greater experimentation while lowering risk, helping providers make smarter decisions when developing or acquiring content. For example, they can better predict which combination of stories and actors will resonate with specific audience segments, then develop targeted marketing to get the content in front of those subscribers. Providers that improve modeling of subscriber segments can do a better job matching more relevant advertising to specific audiences, which could help them predict churn with more accuracy and detail. One of the largest and most mature paid streaming video services has used these tactics to effectively drive growth and retention.<sup>12</sup> While streaming video providers work

to better understand their audiences, they can also extend more targeted options, exclusives, and VIP experiences and, ultimately, provide more value to members.

In the internet age, the landscape of media and entertainment is inherently both networked and fragmented. Consumers may never aggregate the way they did with pay TV, and the industry may never recover their historic margins with the same formula that served them in previous decades. However, the shift to streaming and direct-to-consumer distribution can unlock new kinds of value that were not available before. It can help providers better understand differences among audience members and find ways to keep more of them engaged and entertained.

# Questions executives should be asking

**T**HE DISRUPTIONS DRIVEN by the streaming media revolution have mostly settled into the new playing field. As the market matures, leaders will likely be able to leverage new capabilities to help their companies succeed and grow. These are some of the questions they should consider:

- How much do you know about your existing subscribers? How can you better retain existing subscribers rather than paying to reacquire them after they churn?
- Are some customers leaving before you recover acquisition costs? If so, who are they? How might you better anticipate churn?
- Do you understand why those subscribers are leaving? Are there other ways to retain them, potentially leveraging your portfolio, that aren't so dependent on content development?
- Do you have a data strategy in place that would allow you to get closer to your subscribers and better match content—and advertisers—to specific segments of your audience? What is your customer relationship strategy, especially for high-value customers?
- Do you have a clear path to profitability for your service?
- Are you exploring ways to make more of your subscribers feel like they are members in a club, such as offering access to exclusives and VIP experiences?



## Endnotes

1. Doug Shapiro, "One clear casualty of the streaming wars: profit," *TheStartup*, Medium, October 28, 2020.
2. Alex Sherman, "Media executives are finally accepting the decline of cable TV as they plot a new path forward," *CNBC*, October 27, 2020.
3. Kevin Westcott et al., *Digital media trends survey, 14th edition: COVID-19 accelerates subscriptions and cancellations as consumers search for value*, 2020. This is the fourteenth edition of research commissioned by Deloitte's Technology, Media & Telecommunications (TMT) practice. Focusing on five generations, the survey provides insight into how consumers ages 14 and older are interacting with media, products and services, mobile technologies, the internet, their attitudes and behaviors toward advertising, and social networks. Three separate US surveys were conducted by an independent research firm employing an online methodology.
  - 2,103 US consumers from December 2019 to January 2020
  - 1,101 US consumers in May 2020
  - 1,100 US consumers in October 2020All data is weighted back to the most recent census data to give a representative view of what consumers and other respondents are doing. For meaningful changes, we look for differences in year-over-year tracking and generations of at least five percentage points.
4. Timothy Green, "Here's why Netflix's marketing costs exploded," *The Motley Fool*, April 21, 2019.
5. Deloitte calculated this range by dividing "marketing" expense by "net subscriber adds" for three major streaming services. Using the same calculation, J.P. Morgan estimates Netflix's customer acquisition costs for the following years: 2018: \$82.81; 2019: \$95.31; 2020: \$67.89. See also: Green, "Here's why Netflix's marketing costs exploded."
6. John Archer, "Netflix reveals that its biggest threat is ... 'Fortnite'," *Forbes*, January 17, 2019.
7. Three surveys: December 2019 to January 2020; May 2020; October 2020. Understand the rapid evolution of consumer preferences and behavior since the COVID-19 pandemic.
8. Chris Welch, "Verizon now including full Disney Plus, Hulu, and ESPN Plus bundle with some unlimited plans," *The Verge*, August 17, 2020.
9. Out of consideration for Deloitte's clients we've removed the names of these four leading providers from this report.
10. Alison Weissbrot, "What NBCU's Peacock is pitching as it opens up to more advertisers," *AdExchanger*, September 2, 2020.
11. *Ibid*; Shapiro, "One clear casualty of the streaming wars: profit."
12. FierceCable, *Subscriber acquisition and retention in an OTT world*, August 2017.

## Acknowledgments

The authors would like to thank **Kevin Downs** and **Shashank Srivastava** for their knowledge and support developing this research.

## About the authors

### **Chris Arkenberg | [carkenberg@deloitte.com](mailto:carkenberg@deloitte.com)**

Chris Arkenberg is a research manager with the Deloitte Center for Technology, Media & Telecommunications. He has 20 years of experience focusing on how people and organizations interact with transformational technologies. Arkenberg is also an avid video game enthusiast, stomping the virtual grounds since the days of the 2600.

### **Danny Ledger | [dledger@deloitte.com](mailto:dledger@deloitte.com)**

Danny Ledger is a principal and US leader for Digital Offerings within Deloitte Consulting LLP serving the Technology, Media & Telecommunications industry. Ledger is a key architect and thought leader on digital marketing and digital content solutions. As part of the Deloitte Digital team, his primary focus is helping clients achieve growth objectives by reaching and engaging customers across digital touchpoints.

### **Jeff Loucks | [jloucks@deloitte.com](mailto:jloucks@deloitte.com)**

Jeff Loucks is the executive director of the Deloitte Center for Technology, Media & Telecommunications, Deloitte Services LP. In his role, he conducts research and writes on topics that help companies capitalize on technological change. An award-winning thought leader in digital business model transformation, Loucks is especially interested in the strategies organizations use to adapt to accelerating change. His academic background complements his technology expertise. Loucks has a bachelor of arts in political science from The Ohio State University, and a master of arts and PhD in political science from University of Toronto.

### **Kevin Westcott | [kewestcott@deloitte.com](mailto:kewestcott@deloitte.com)**

Kevin Westcott is a vice chairman and leads the US Technology, Media & Telecommunications (TMT) practice of Deloitte; as well as serves as the global Telecommunications, Media & Entertainment (TME) practice leader. Westcott has more than 30 years of experience in strategic and operational planning, as well as implementing global business change and technology projects for major telecom and media organizations. His industry experience spans film, television, home entertainment, broadcasting, over-the-top content, publishing, licensing, and games. Westcott is an author of Deloitte's Digital Media Trends survey, a coauthor of Deloitte's Digital Media Maturity Model, and speaks regularly on media consumption trends.

## Contact us

*Our insights can help you take advantage of change. If you're looking for fresh ideas to address your challenges, we should talk.*

### Industry leadership

#### **Jeff Loucks**

Executive director | The Deloitte Center for Technology, Media & Telecommunications | Deloitte Services LP  
+1 614 477 0407 | [jloucks@deloitte.com](mailto:jloucks@deloitte.com)

Jeff Loucks is the executive director of Deloitte's Technology, Media & Telecommunications (TMT) center. In his role, he conducts research and writes on topics that help companies capitalize on technological change.

#### **Kevin Westcott**

TMT national industry leader | Principal | Deloitte Consulting LLP  
+1 310 480 8089 | [kewestcott@deloitte.com](mailto:kewestcott@deloitte.com)

Kevin Westcott is a vice chairman and leads the US Technology, Media & Telecommunications (TMT) practice of Deloitte; as well as serves as the global Telecommunications, Media & Entertainment (TME) practice leader. Westcott has more than 30 years of experience in strategic and operational planning, as well as implementing global business change and technology projects, for major telecom and media organizations.

# Deloitte.

## Insights

Sign up for Deloitte Insights updates at [www.deloitte.com/insights](http://www.deloitte.com/insights).



Follow @DeloitteInsight

### **Deloitte Insights contributors**

**Editorial:** Karen Edelman, Sayanika Bordoloi, and Nairita Gangopadhyay

**Creative:** Victoria Lee, Jaime Austin, and Ruchi Thakur

**Promotion:** Hannah Rapp

**Cover artwork:** Josh Cochran

### **About Deloitte Insights**

Deloitte Insights publishes original articles, reports and periodicals that provide insights for businesses, the public sector and NGOs. Our goal is to draw upon research and experience from throughout our professional services organization, and that of coauthors in academia and business, to advance the conversation on a broad spectrum of topics of interest to executives and government leaders.

Deloitte Insights is an imprint of Deloitte Development LLC.

### **About this publication**

This publication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or its and their affiliates are, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your finances or your business. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

None of Deloitte Touche Tohmatsu Limited, its member firms, or its and their respective affiliates shall be responsible for any loss whatsoever sustained by any person who relies on this publication.

### **About Deloitte**

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see [www.deloitte.com/about](http://www.deloitte.com/about) to learn more about our global network of member firms.