

NOVEMBER 30, 2020



# TWITCH

A LOOK AT THE BUSINESS BEHIND THE POPULAR STREAMING PLATFORM

SARAH KNIGHT

POINT PARK UNIVERSITY

Business Models of SAE: DC FA20

# Table of Contents

---

<b>TABLE OF CONTENTS</b>	<b>1</b>
<b>INTRODUCTION</b>	<b>2</b>
<b>CUSTOMER SEGMENTS AND RELATIONSHIPS</b>	<b>4</b>
<b>CONTENT CREATORS</b>	<b>4</b>
<b>VIEWERS</b>	<b>5</b>
<b>VALUE PROPOSITION &amp; REVENUE STREAMS</b>	<b>6</b>
<b>DISTRIBUTION CHANNELS</b>	<b>7</b>
<b>KEY RESOURCES</b>	<b>8</b>
<b>KEY ACTIVITIES</b>	<b>9</b>
<b>KEY PARTNERSHIPS</b>	<b>10</b>
<b>COST STRUCTURE</b>	<b>12</b>
<b>SUMMARY</b>	<b>12</b>
<b>WORKS CITED</b>	<b>13</b>

# Introduction

---

---

“Twitch is where millions of people come together live every day to chat, interact, and make their own entertainment together” (Twitch)

---

According to Roland Li in his book Good Luck Have Fun, the path to Twitch started in 2005 when founders Justin Kan and Emmett Shear took a train to Boston to sell their idea of a calendar that could sync automatically with email (ch. 3). The duo was able to obtain funding for their idea through Y Combinator, a seed money investment company. Though Google released their own calendar less than a year later, Kan and Shear were able to auction their work off on eBay for \$258,100 – quite close to the initial valuation of their work at \$300,000. The novel idea of selling a business on eBay caught the attention of the media, with Kan boasting their next project would “change the way people think about the internet”.

The duo’s next project turned out to be the vid-cam hosting platform Justin.tv, which launched in 2007. The web platform was created around the idea of broadcasting Justin Kan’s life 24/7 – which attracted Y Combinator’s Robert Morris to invest \$50,000 in the project “just to see you make a fool out of yourself”(Li ch. 3). In 2008 Kan and Shear added two members to the Justin.tv team – Michael Seibel who became the CEO and Kyle Vogt their hardware expert.

---

“We’re trying to create a new genre of media. I’m only the beginning of something that could be really popular”

Justin Kan on the *Today Show* (qtd. Li ch. 3)

---

Though Justin.tv was able to grow their platform to include millions of subscribers, competition was fierce in the general streaming market. By mid-2010 it was apparent that Justin.tv was struggling to make money as fast as it was spending it, and the founders knew they needed to find a new direction to maintain growth. This coincided with the launch of the popular video game, Starcraft II – and as the founders played the game, they realized just how powerful a game streaming platform could be. In June 2011, the unique domain Twitch.tv was spun off from Justin.tv, leading to a dramatic reshaping of the gaming landscape (Taylor 3).

---

“By 2017, the site boasted 2.2-plus million unique broadcasters per month with 17,000-plus members in the Twitch Partner Program and 110,000 “creators” in the Affiliates Program [...] and about 10 million daily active users”

Watch Me Play, T.L. Taylor

---

At the beginning of the Covid-19 pandemic, Twitch saw its largest increase in viewership – According to an interview with now-CEO Emmett Shear there was “a 57% increase in for the 4 weeks post-social distancing vs pre-social distancing” (Ryssdal). Twitch is hopeful this spike in viewership will allow them to continue to expand. Market analysis by Statista.com indicates that this hope is well placed, with predictions showing Twitch growing through 2025.

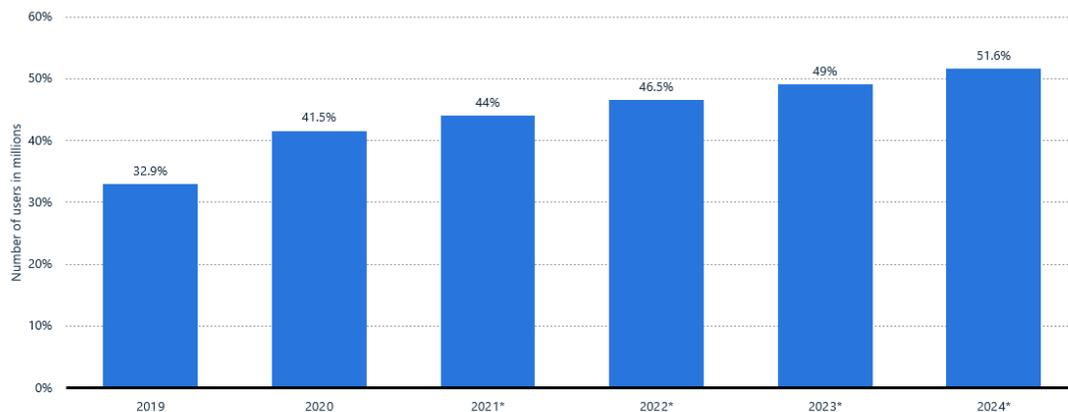
“With everyone sheltering at home we have a lot more need for our services suddenly. People need to connect online; they need to find community. I think a lot of people will find once they start using Twitch that this is a good supplement to their real-world engagement.”

Emmett Shear, interview with Marketplace (Ryssdal)

The market analysis is supported by the following look at the nine areas of the business model canvas. First, how Twitch defines their two primary customer segments - Content Creators and Viewers - and how they maintain relationships with both segments. Then a look at the value proposition provided to their segments, and how that value proposition has been transformed into a strong revenue stream. Finally, the distribution channels of Twitch, their key resources, activities, and partnerships, and the Twitch cost structure will be examined.

## Number of Twitch users in the United States from 2019 to 2024 (in millions)

Twitch users in the U.S. 2020



Note: United States; 2019 and 2020; internet users of any age who watch video content on Twitch via any device at least once per month  
Further information regarding this statistic can be found on [page 41](#).  
Source(s): eMarketer; ID 532338

Users **statista**

As one of the top three streaming platforms by viewership, and the top revenue generating streaming platform, Twitch will continue to be a top player in the online streaming market for years to come. This fact was recognized by Amazon in 2014, when they purchased Twitch for \$970 million (Ginsberg). Amazon.com has supported Twitch with “Prime Gaming” – exclusive content for Amazon Prime subscribers including free game content, one free channel subscription monthly, and other perks (Taylor 4).

## Customer Segments and Relationships

Twitch started with a focus on the niche-market of video game live streaming. Since their acquisition by Amazon in 2014, they have continued to grow within this niche market, while adding markets for other forms of content creation. Their current categories include Music, Politics, Travel & Outdoors, Just Chatting, Art, Food & Drink, and whichever popular video games are currently being played. Twitch is creating value for two key segments – the content creators on their platform, and the viewers of those content creators.

“Anybody can just sign up and start sharing their video gaming experience, or increasingly their music creation experience or cooking experience, with the world.”

Emmett Shear, interview with Marketplace (Ryssdal)

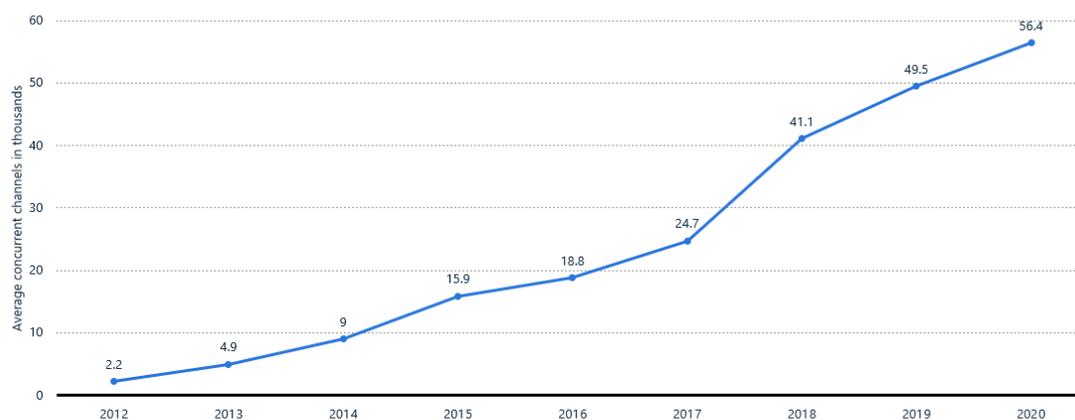
Twitch maintains its customer relationships by providing a free platform on which anyone can create and enjoy content. Content creators rely on Twitch to provide constant up-time for the website. Viewers rely on Twitch to continue to attract high-quality content and provide an easy way to search for and find creators they enjoy.

### Content Creators

Content creators are undeniably the backbone of Twitch’s success. The key to content creation is connection with an audience. By providing a platform to creators that is easy to use and popular, Twitch allows for a wide variety of content creation to occur. These channels in turn attract viewers, the second segment of Twitch’s customers. It is free to create a channel and produce content on the platform.

#### Number of average concurrent channels on Twitch worldwide from 2012 to 2020 (in 1,000s)

Average concurrent channels on Twitch worldwide 2012-2020



Note: Worldwide; 2012 to 2020  
Further information regarding this statistic can be found on [page 50](#).  
Source(s): TwitchTracker; Business of Apps; [ID 1132973](#)

Once a channel reaches a minimum amount of content, followers, and interaction the creators are eligible to participate in the Twitch Affiliate Program, which allows for monetization on the platform. Channels with significant content, followers, and interaction can be invited to join the Twitch Partner Program, which allows for increased monetization as well as higher placement in search results. According to Statista, this content-creation driving focus allows for an average of over 56 thousand concurrently broadcasting channels – allowing viewers to have their pick of content.

## Viewers

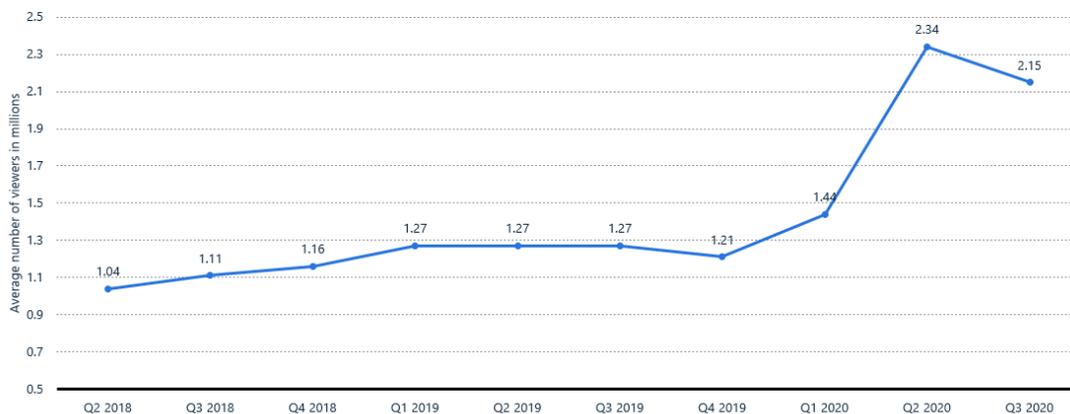
The huge array of content provided to viewers has been critical to drawing Twitch’s second primary segment to the platform. With 2.15 million concurrent viewers in Q3 of 2020, Twitch reaches a small city’s worth of people every day. To these viewers Twitch offers more than just a place to watch content – users are able to chat with other viewers directly, they can unlock emojis with subscriptions, and they can directly affect their live content creators with Twitch Bits or Channel Points.

“There’s really two ways you can really grow your channel. The first one is being maybe not the best in the world, but up there - one of the best in the world. People want to tune in to just to see someone who is that good stream. The other way you can grow your channel has not really anything to do with expertise. Maybe you’re good maybe you’re not good, but you’re entertaining. Bob Ross isn’t famous for being the best painter of all time - he’s not famous for being Matisse - he’s famous because he’s entertaining to watch and how he connects with the audience. [...] We find in the long run that engagement is the way to go.”

Emmett Shear, interview with Marketplace (Ryssdal)

Average number of concurrent viewers on Twitch from 2nd quarter 2018 to 3rd quarter 2020 (in millions)

Average number of viewers on Twitch 2020



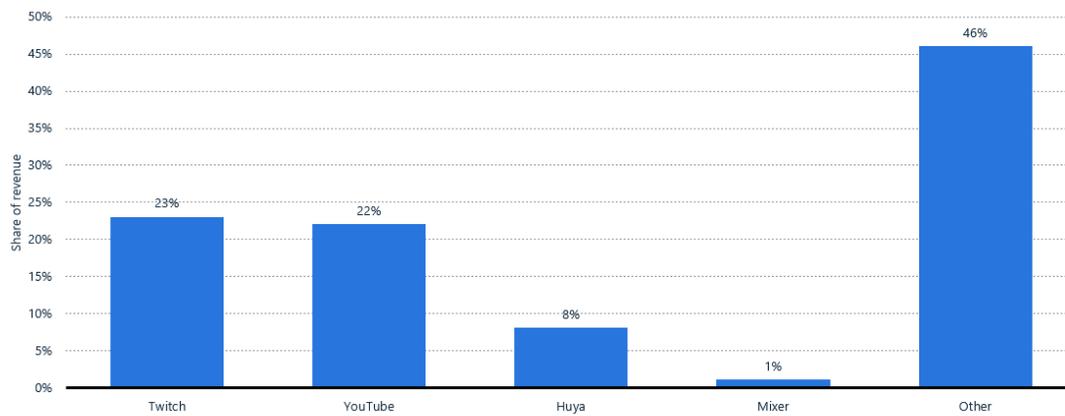
Note: Worldwide; Q2 2018 to Q3 2020  
 Further information regarding this statistic can be found on [page 47](#).  
 Source(s): Streamlabs; ID\_761122

## Value Proposition & Revenue Streams

Twitch is creating a platform on which content can be created and enjoyed by anyone and everyone. They create this value by providing a free platform for all, but with monetization strategies in place that have allowed Twitch to be one of the top revenue generating streaming platforms worldwide, with 23% of the overall market share.

### Leading platforms for viewing gaming video content worldwide in 2019, by revenue share

Leading gaming video content platforms worldwide 2019, by revenue share



Notes: United States; 2019  
Further information regarding this statistic can be found on [page 36](#).  
Source(s): SuperData Research; ID:446060

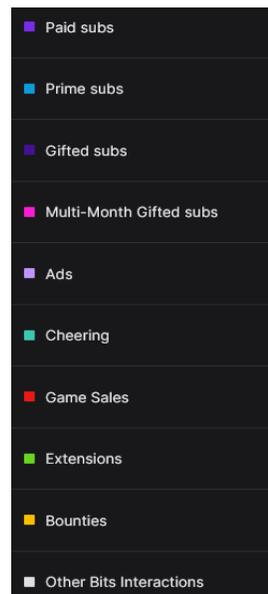
3

Content Creators benefit from streaming on twitch through a variety of monetization avenues. Each of these avenues allows for content creators to earn revenue through their creation, as well as providing a portion of revenues to Twitch. For example, a Paid Sub costs \$4.99 to purchase, but provides a streamer with approximately \$2.40 per subscription. By providing high-quality content, channels can increase subscriptions, cheering and other revenue sources to help offset the cost of content production.

According to Lucas Fortney's review of how Twitch makes money for Investopedia, though official numbers of subscription revenues have not been released by Twitch, the ten most popular streamers combined have subscribers valued at over \$400,000 to the company. It can be assumed that with over 2 million active content creators, subscriptions provide a key revenue stream.

Twitch's second primary source of revenue, Twitch Bits, provides an easy way for fans to interact with streamers. Cheering with Twitch Bits, Fortney notes has been hugely successful - "Since launching in late June 2016, users have sent more than 1 billion Bits, totaling between \$12.3 million and \$14 million."

Streaming overview **statista**



Twitch Monetization avenues  
– Courtesy of the Twitch  
dashboard for Delanakatrella

As a third revenue stream, Twitch does utilize display ads prior to loading any stream that viewers are not currently subscribed to – a very small portion of this ad revenue is provided to Twitch Affiliates and Partners. Affiliates and Partners may also opt to show additional ads during a stream to help generate revenue if they so choose. As a revenue stream this has been less successful in recent years, with Twitch not meeting anticipated revenue goals (Corliss). In his article *“Twitch Reportedly Falls Short of Ad Revenue Goal By Hundreds of Millions of Dollars”* on Game Rant, Cameron Corliss notes that ad revenue for 2019 was projected to be worth \$300 million, quite shy of the \$500-600 million goal for the company. However, this is still an increase of \$70 million over previous year projections.

In addition to the monetization methods Twitch provides to content creators, they also provide the Channel Points platform. Channel points are free “currency” that viewers collect simply by watching their favorite channels. According to Twitch’s help documentation, for channels with large audiences the use of this free currency increases viewer interaction in chat by 13% and creates an 18% increase in the time viewers spend on a channel. Rewards are set by each individual channel, but can include changing the camera background, changing the game played, reminding the streamer to stay hydrated, or even having the streamer directly answer a question posed by the chat. These redemptions provide viewers with a higher-quality entertainment experience than simply watching a TV show or professional sports game.

## Distribution Channels

---

---

*“Thank goodness this is here, I don’t even have television anymore. I just watch Twitch all day,” fans tell Lin.*

*Good Luck, Have Fun, Roland Li*

---

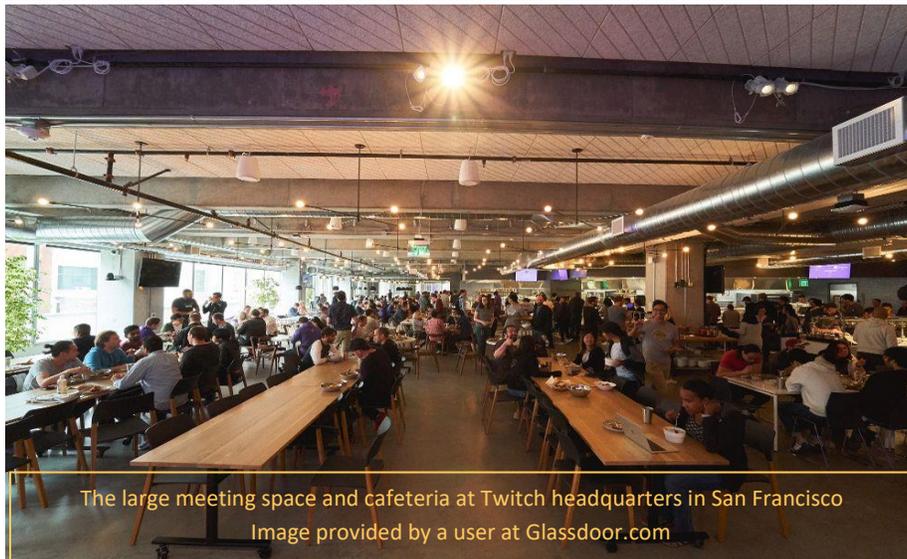
Twitch is available through multiple platforms – online at Twitch.tv, and on mobile through iOS and Android apps (Twitch Blog). According to Verto Analytics, 5.8 million users watch Twitch via a mobile-only platform in July of 2018. With mobile apps only gaining in popularity, developing a strong mobile platform is critical to success. In addition to the online and mobile viewing platforms, Twitch is also distributed through Amazon’s “Prime Gaming” platform, which helps lead viewers from the parent company website to Twitch directly. Twitch also has various integrations, including for the Amazon FireTV Xbox One, Xbox 360, and Playstation 4 (Twitch Blog). These allow for viewing of twitch channels as well as content creation.

Twitch produces an annual convention, “TwitchCon”, which was unfortunately cancelled in 2020 due to the Covid-19 pandemic (Twitchcon.com). In previous years, and one can assume future years, TwitchCon was a way for gamers, content creators, game companies and viewers to interact in person rather than virtually. With dozens of panels, tournaments, meet-and-greets with top streamers, brand interactions and more, this event attracts thousands of in-person attendees and helps build buzz around the Twitch brand (Hanlon). According to the Twitch blog, TwitchCon San Diego has hosted over 35,000 in-person attendees and over 2 million attendees at past conventions.

Twitch has an active college recruitment program for content creators and teams. This program operates around the United States and Europe. This program assists colleges with recruiting esports talent and promoting esports organizations on campus.

## Key Resources

---



The large meeting space and cafeteria at Twitch headquarters in San Francisco  
Image provided by a user at Glassdoor.com

Twitch maintains physical offices in Seattle, New York, and London in addition to their locations in California. Remote positions have become more available due to the Covid-19 pandemic, with many positions noting that they will require relocation to San Francisco following pandemic restrictions being lifted (Glassdoor). Their headquarters match many high-tech companies by having on site catered meals, massage, gym and snacks.

---

“Over the last 3 years, the number of engineers at Twitch has grown by over 800%.”

[Blog “Twitch Engineering: An Introduction and Overview”](#)

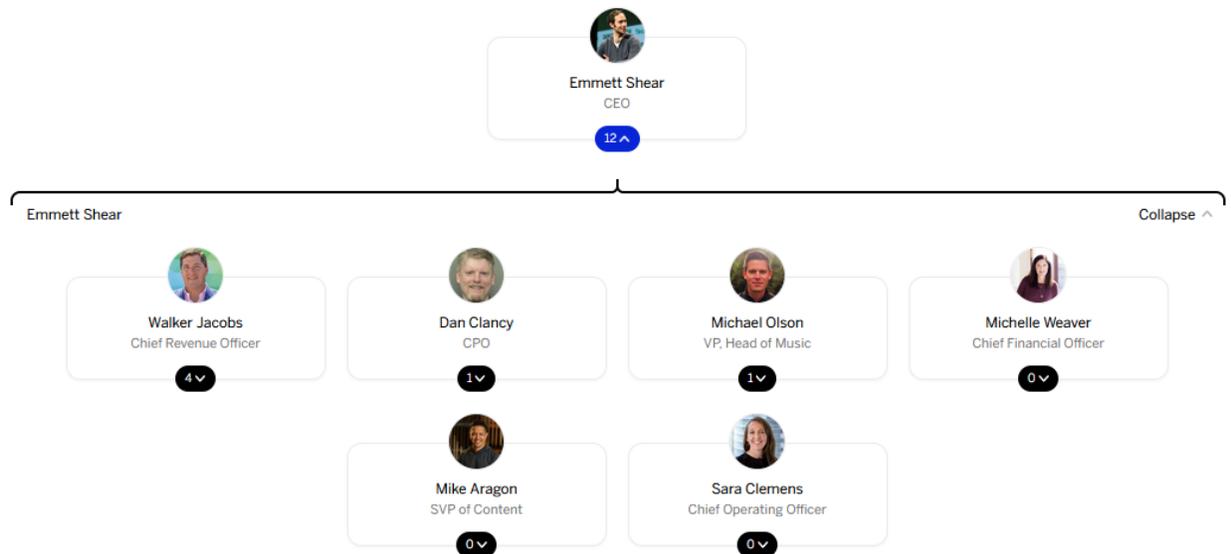
---

Digitally, Twitch maintains a significant data science infrastructure designed to help collect and analyze data collected in near real-time for broadcasters. Their technology stack includes key pieces that keep their video, chat, web analytics and API data operating at top efficiency.

In addition to their digital services Twitch does offer merchandise for sale. The infrastructure for the merchandise is maintained through amazon.com, with their warehouses providing shipment and logistics services. This merchandise includes clothing, bags, hats, water bottles and even dog toys. Merchandise managers are required to ensure that the merchandise offers stays fresh, relevant, and marketable.

According to Glassdoor.com Twitch employs over 1000 employees, in a wide range of job titles including sales, data center operations, software engineering, project managers, human resources and program coordinators. Many of these employees work from their San Francisco main office, however regional and remote positions are available. Though owned by Amazon, it is operated as a subsidiary with original co-founder Emmett Shear as their CEO.

## Twitch Organization Chart – courtesy of theorg.com



## Key Activities

It is imperative that Twitch provides a stable, easy to use platform for content creators and viewers to engage with. In response to early feedback, according to [Good Luck, Have Fun](#), Twitch developers focused on reducing latency, creating a stats-heavy user dashboard for content creators, and began their revenue sharing platform. Twitch is also responsible for continuing to advertise its platform and the top channels they support (Twitch Partners).

To support their digital platform, Twitch has increasingly been migrating their operations to Amazon Web Services – allowing them to reduce operation overhead (as they are now hosted via their parent company), as well as ensure consistent content up-time (Twitch Blog).

In addition to the digital platform upon which Twitch.com operates, they also have teams focused on recruiting top content creators, tournaments, and game developers to develop content exclusive to the Twitch platform. For example, when Riot Games was preparing their VALORANT closed beta test, they turned to Twitch as the source for obtaining the valuable digital “keys” to the content (Twitch Blog). Ensuring that Twitch remains the go-to source for new gaming content is a vital activity.

## Key Partnerships

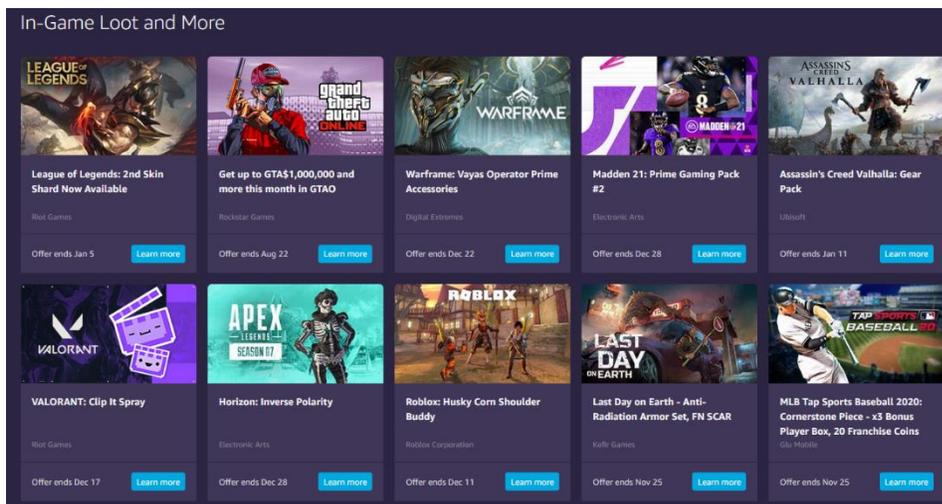
Amazon.com purchased Twitch in 2014, creating the primary key partnership for the platform. By providing Amazon Prime Subscribers with the Prime Gaming benefits, this partnership has helped drive traffic to Twitch while also providing the Twitch team with a stable source of revenue and assistance.

It gave Twitch the chance to say, “Hey, this isn’t really exactly Twitch, but we’d love to try something like this,” says Lin. “And if they like the idea ... if it makes sense, [Amazon says,] ‘We’ll fund it.’ “Sweet! It’s like doing this instead of having to raise money from VCs again,” says Lin. “There’s definitely no shortage of crazy ambitions, so it’s been a pleasure.”

*Twitch’s Kevin Lin: This is what it’s like to have Amazon buy your company, Leah Ginsberg*

Twitch also maintains relationships with game producers and designers, allowing for content creation with broadcasting in mind, as well as creating tournaments that can be enjoyed on a global scale. These partnerships allow for exclusive content release, such as the VALORANT Closed Beta. Through Prime Gaming additional content is given to subscribers. These companies include (with their top titles produced):

- ❖ Epic Games (Fortnite)
- ❖ Riot Games (VALORANT and League of Legends)
- ❖ Activision (Call of Duty: Modern Warfare)
- ❖ ElectronicArts / EA (Apex Legends)
- ❖ Valve (Counter Strike: Global Offensive)



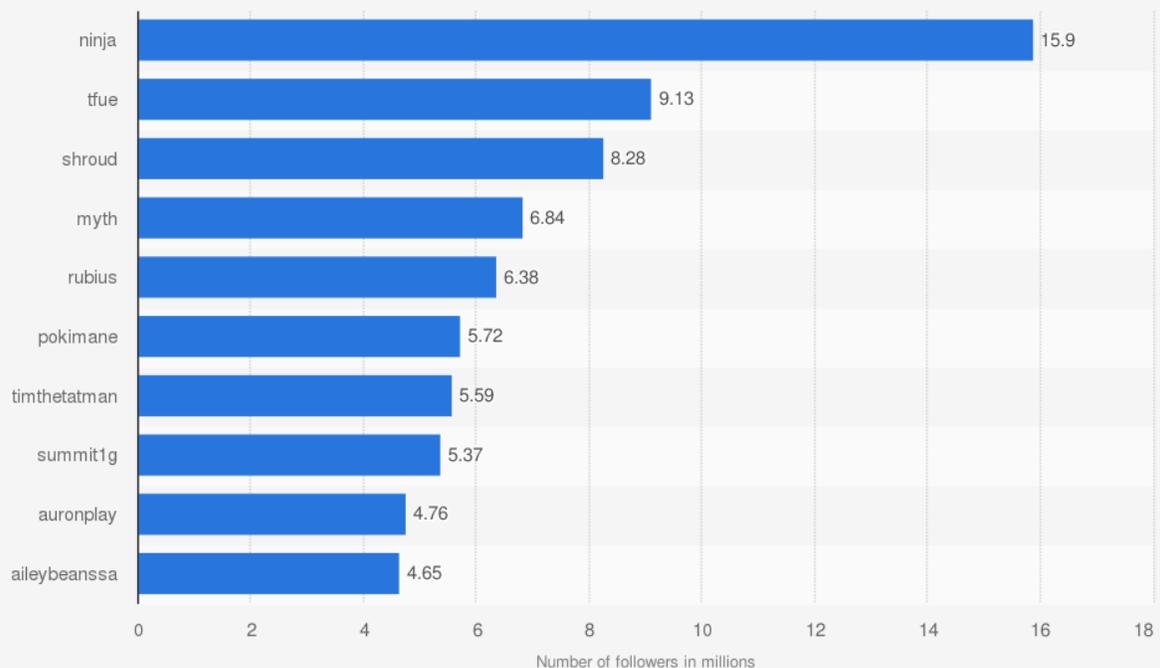
A small selection of the free content provided via the Prime Gaming Platform. Many key partnerships are illustrated, including League of Legends, Apex, and VALORANT

Screenshot courtesy of Prime Gaming

In 2020, Twitch announced a partnership with the NFL, allowing Prime Gaming members access to a certain number of NFL games streamed through the season on the Twitch platform (Fortney). This partnership illustrates the goal of Twitch to capture more than just video gaming on their platform, as well as how traditional sports organizations are beginning to utilize esports to reach a new generation of viewers.

The final key partnership for Twitch is their Twitch Partners Program. This consists of the top content creators across the Twitch Platform, many of whom are paid by Twitch to provide exclusive content specifically for the platform. According to the Twitch FAQ, only 27,000 of the current 2 million active broadcasters have achieved partner status. These top channels are a critical component of Twitch's platform, with those 27,000 partners representing a significant portion of their views and interaction.

**Most popular Twitch channels as of October 2020, ranked by number of followers (in millions)**



**Sources**  
Social Blade; Twitch  
© Statista 2020

**Additional Information:**  
Worldwide; Social Blade; Twitch; October 2020

## Cost Structure

---

The primary cost associated with Twitch is maintaining their significant digital platform and delivering the millions of concurrent hours of video to their users. In his blog post *“How much does it cost to maintain Twitch infrastructure?”* for the digital media blog Trembit, author Stanislav Zayarsky does the math – adding up to a staggering \$4-6 million in monthly digital streaming costs, and over \$750 thousand in monthly server costs. As Twitch has migrated to their parent company’s Amazon Web Services, it is likely they are not paying directly out of pocket these total costs. However, it is still a significant undertaking to provide the quantity of digital content with minimal lag, downtime, and interruption.

Additionally, with the size of the Twitch workforce, a key cost is their salaries to employees. Glassdoor salary reviews reveal that most Twitch jobs pay roughly \$100,000 annually, with senior software developers and engineers earning upwards of \$200,000 annually. With over 1,000 employees it is easy to assume that Twitch’s employees cost roughly \$150 million annually.

## Summary

---

There is no denying that Twitch is poised to capture a significant portion of the revenue to be made in video game streaming and esports. With over 1000 employees, and over 2 million active content creators, they provide a valuable resource for persons interested in participating in the esports market. Twitch is not focused entirely on video game streaming – they have recently added music and other content categories to their collection, becoming the place where people can come together “every day to chat, interact, and make their own entertainment together” (Twitch). Though they are the third most popular video streaming platform behind Youtube and Facebook, they have the best monetization strategy, controlling the largest share of the video game streaming revenue. Through the Covid-19 pandemic they have been able to expand viewership, interest and amount of content provided. Alongside ownership by Amazon, Twitch has been able to create the popular Prime Gaming platform which allows access to free content from numerous game producing partners. The future is bright for Twitch and all their key investors, customers and employees.

## Works Cited

---

- "Amazon Prime Gaming." *Amazon*, 2020, [gaming.amazon.com/home](https://gaming.amazon.com/home).
- Business of Apps. "Number of Average Concurrent Channels on Twitch Worldwide from 2012 to 2020 (in 1,000s)." Statista, Statista Inc., 23 Jun 2020, <https://www.statista.com/statistics/1132973/average-concurrent-channels-twitch/>
- Corliss, Cameron. "Twitch Reportedly Falls Short of Ad Revenue Goal By Hundreds of Millions of Dollars." *Game Rant*, 10 Jan. 2020, [gamerant.com/twitch-ad-sales-goal-miss/](https://gamerant.com/twitch-ad-sales-goal-miss/).
- "Creator Dashboard - Delanakatrella." Twitch, [dashboard.twitch.tv/u/delanakatrella/channel-analytics](https://dashboard.twitch.tv/u/delanakatrella/channel-analytics).
- eMarketer. "Number of Twitch Users in The United States from 2019 to 2024 (in Millions)." Statista, Statista Inc., 3 Sep 2020, <https://www.statista.com/statistics/532338/twitch-viewing-frequency-usa/>
- "Making the Most of Channel Points." Customer Support, [help.twitch.tv/s/article/making-the-most-of-channel-points?language=en\\_US](https://help.twitch.tv/s/article/making-the-most-of-channel-points?language=en_US).
- Fortney, Lucas. "How Amazon's Twitch Platform Makes Money." Investopedia, Investopedia, 28 Aug. 2020, [www.investopedia.com/investing/how-does-twitch-amazons-video-game-streaming-platform-make-money/](https://www.investopedia.com/investing/how-does-twitch-amazons-video-game-streaming-platform-make-money/).
- Ginsberg, Leah. "Twitch's Kevin Lin: This Is What It's like to Have Amazon Buy Your Company." CNBC, CNBC, 16 June 2017, [www.cnbc.com/2017/06/16/twitch-coo-kevin-lin-what-its-like-to-have-amazon-buy-your-company.html](https://www.cnbc.com/2017/06/16/twitch-coo-kevin-lin-what-its-like-to-have-amazon-buy-your-company.html).
- Hanlon, Patrick. "What To Expect At TwitchCon." This Is the Epidemic Sound Blog | Epidemic Sound, This Is the Epidemic Sound Blog | Epidemic Sound, 26 Aug. 2019, [www.epidemicsound.com/blog/what-to-expect-at-twitchcon/](https://www.epidemicsound.com/blog/what-to-expect-at-twitchcon/).
- Li, Roland. *Good Luck Have Fun: the Rise of ESports*. Skyhorse Publishing, 2017.
- Ryssdal, Kai, and Sean McHenry. "Twitch CEO Emmett Shear: 'People Need to Connect Online.'" Marketplace, 14 May 2020, [www.marketplace.org/2020/05/12/twitch-ceo-emmett-shear-people-need-to-connect-online/](https://www.marketplace.org/2020/05/12/twitch-ceo-emmett-shear-people-need-to-connect-online/).
- Streamlabs. "Average Number of Concurrent Viewers on Twitch from 2nd Quarter 2018 to 3rd Quarter 2020 (in Millions)." Statista, Statista Inc., 7 Oct 2020, <https://www.statista.com/statistics/761122/average-number-viewers-on-youtube-gaming-live-and-twitch/>
- Social Blade. "Most Popular Twitch Channels as of October 2020, Ranked by Number of Followers (in Millions)." Statista, Statista Inc., 2 Oct 2020, <https://www.statista.com/statistics/486914/most-popular-twitch-channels-ranked-by-followers/>
- SuperData Research. "Leading Platforms for Viewing Gaming Video Content Worldwide in 2019, by Revenue Share." Statista, Statista Inc., 17 Jan 2020, <https://www.statista.com/statistics/446060/gaming-video-content-platforms-revenue-share/>
- Taylor, T. L. *Watch Me Play: Twitch and the Rise of Game Live Streaming*. Princeton University Press, 2018.

"That's a Wrap on TwitchCon 2016!" Twitch Blog, [blog Twitch/en/2016/10/12/thats-a-wrap-on-twitchcon-2016-39f9063afb83/](https://blog.twitch/en/2016/10/12/thats-a-wrap-on-twitchcon-2016-39f9063afb83/).

Twitch, [www.twitch/](https://www.twitch/).

"Twitch Engineering: An Introduction and Overview." Twitch Blog, [blog Twitch/en/2015/12/18/twitch-engineering-an-introduction-and-overview-a23917b71a25/](https://blog.twitch/en/2015/12/18/twitch-engineering-an-introduction-and-overview-a23917b71a25/).

"Twitch - Org Chart." *THE ORG*, [theorg.com/org/twitch/org-chart](https://theorg.com/org/twitch/org-chart).

TwitchCon, [www.twitchcon.com/](https://www.twitchcon.com/).

Verto Analytics. "Most Popular Video Streaming Services in The United States as of July 2018, by Mobile Only Users (in Millions)." Statista, Statista Inc., 30 Aug 2018, <https://www.statista.com/statistics/910887/us-most-popular-video-streaming-services-by-mobile-only-users/>

"We're Teaming up with Riot for the VALORANT Closed Beta." Twitch Blog, [blog Twitch/en/2020/04/01/were-teaming-up-with-riot-for-the-valorant-closed-beta/](https://blog.twitch/en/2020/04/01/were-teaming-up-with-riot-for-the-valorant-closed-beta/).

"Working at Twitch." Glassdoor, [www.glassdoor.com/Overview/Working-at-Twitch-EI IE639426.11,17.htm](https://www.glassdoor.com/Overview/Working-at-Twitch-EI IE639426.11,17.htm).

Zayarsky, Stanislav. "How Much Does It Cost to Maintain Twitch Infrastructure?" Trembit, 2019, [trembit.com/blog/how-much-does-it-cost-to-maintain-twitch-infrastructure/](https://trembit.com/blog/how-much-does-it-cost-to-maintain-twitch-infrastructure/).