

ACTIVATE TECHNOLOGY & MEDIA OUTLOOK 2022



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14 Takeaways from the Activate Technology & Media Outlook 2022

Consumer Spend: Increased consumer time spent with technology and media has been sustained coming out of the pandemic. As the entire growth curve has shifted upwards, more consumer time will lead to new opportunities to grow and build businesses.

Cryptocurrency: There will be a massive runway ahead as the number of consumers trading crypto will double in the next 12 months. Consumers will move from buying cryptocurrency for investment to using cryptocurrencies for payments and transfers. Although Bitcoin and Ethereum dominate, innovation will take place in Altcoins. Crypto will power a broad set of sectors including eCommerce, video gaming, data, and NFTs.

NFTs: NFTs create a unique value proposition for owners of digital assets, with a broad set of applications. Buying, collecting, and trading non-fungible tokens will become a mainstream behavior. Many industries are creating NFTs, including art, fashion, sports, video games, and consumer products. Every technology and media company will need an NFT strategy.

Video Games: Video games are the next technology paradigm, leading to the metaverse. Most digital activities (e.g. search, social, shopping, events, banking) will increasingly take place inside of video games. The major technology platforms have recognized the importance of video games and will build out their presence in the gaming stack. We expect a wave of mergers in the sector.

Metaverse: Games are the most viable path to the metaverse as they already have many of the foundational elements (e.g. social and non-game experiences, users as creators, VR/AR functionality, in-game economies). Pursuit of the metaverse will drive technology and media companies to make extensive technology and experience investments, while impacting the full set of digital and physical activities into the future.

Super Users: Not all users are equal in terms of focus for technology and media companies. Super Users – 26% of all users – account for the majority of time and money spent on eCommerce, VR, music, and video games, and super-serving them will be critical to drive growth.

eCommerce: New technologies are breaking down barriers for even the most expensive and complicated categories to move online. By 2025, 10% to 15% of all automobiles will be sold online, adding over \$150B a year to eCommerce revenues. Other expensive categories, such as jewelry and furniture, will also accelerate their moves online.

14 Takeaways from the Activate Technology & Media Outlook 2022

Video: Social and streaming growth will reshape the video landscape. Competition among streaming services will intensify as the average subscriber will pay for almost six services by 2025 and 47M homes in the U.S. will have broadband without Pay TV.

Sports and Sports Tech: Following the pandemic, fans are returning to sports, but their modes of experiencing sports will now be different, as an even greater number of games move to streaming platforms. New rights deals for 2022-23 will increase the availability of games on streaming. Sports technology innovation will deliver new digital sports experiences and deepen fan engagement.

Sports Betting and iGaming: Sports betting and iGaming will bring considerable new revenues to technology and media companies, as legalization continues to spread to more states. Betting operators will forge partnerships with media companies, while technology innovators enter the space. iGaming will boom in the U.S.

Esports: By 2025, over 700M people will watch esports, up from 550M today. Most importantly, esports will be the gateway to a full set of technology and media experiences, including VR/AR, cryptocurrency, podcasts, sports gambling, and video games.

Audio: Audio will continue to be one of the fastest growing media behaviors, driven by digital audio. Consumers are increasing the number of music services they use, both paid and free. TikTok's impact on music discovery will be profound. Social/live audio will become a mainstream behavior and social platforms and streaming services will follow Clubhouse's lead. Podcasts will grow to reach 166M users in the U.S.

Digital Consumer Finance: Digital consumer finance is at the inflection point as investing, borrowing, and online-only payment methods will become dominant digital behaviors. Consumers will increasingly see financial solutions embedded in consumer goods, retail, and technology offerings.

Data Solutions and Enterprise Automation: A set of new companies, delivering infrastructure, tools, and applications, will enable all enterprises to operate and innovate as if they were major technology companies.

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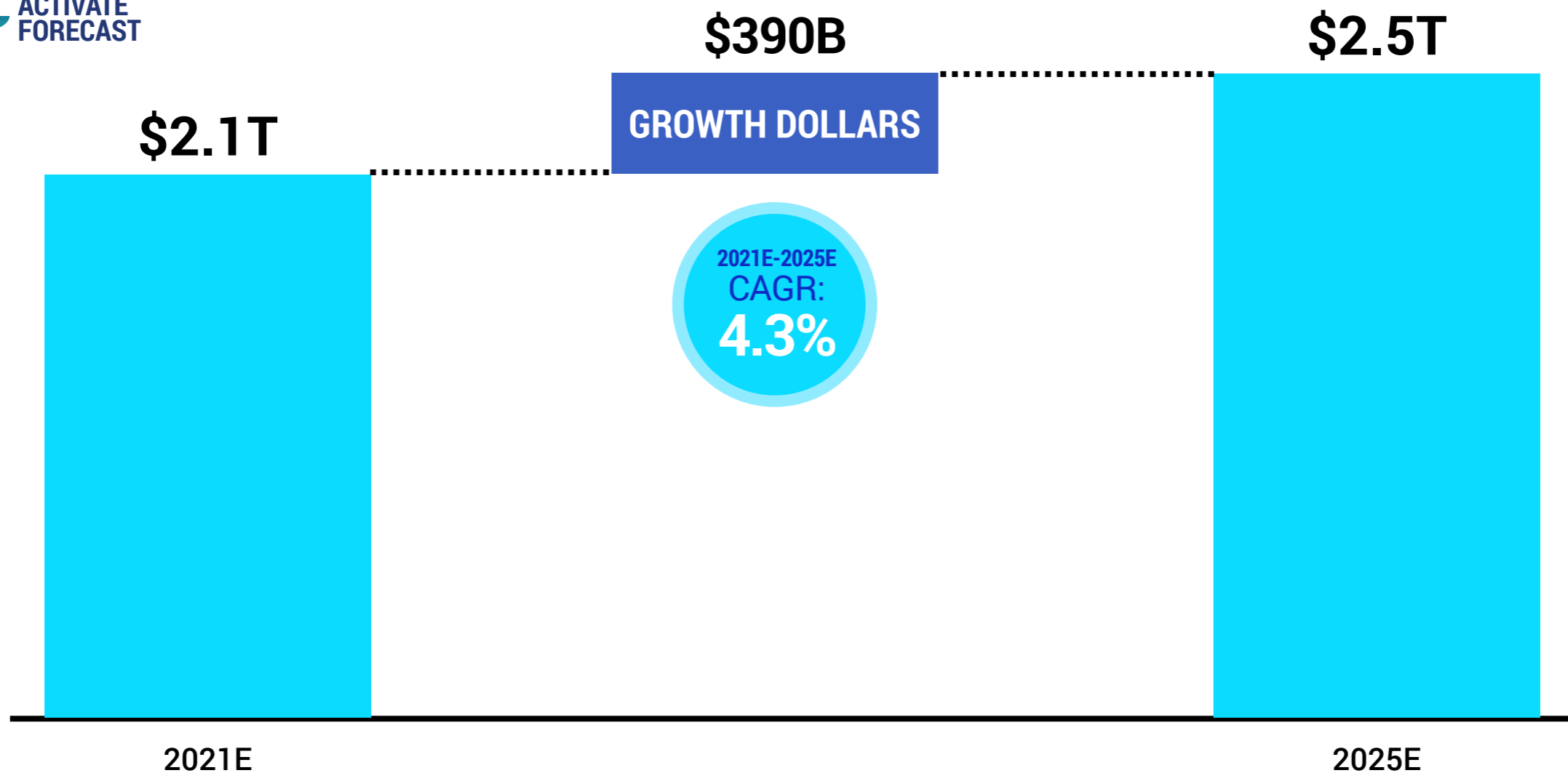
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We forecast significant growth ahead for global internet and media businesses, which will add almost \$400B growth dollars between 2021 and 2025

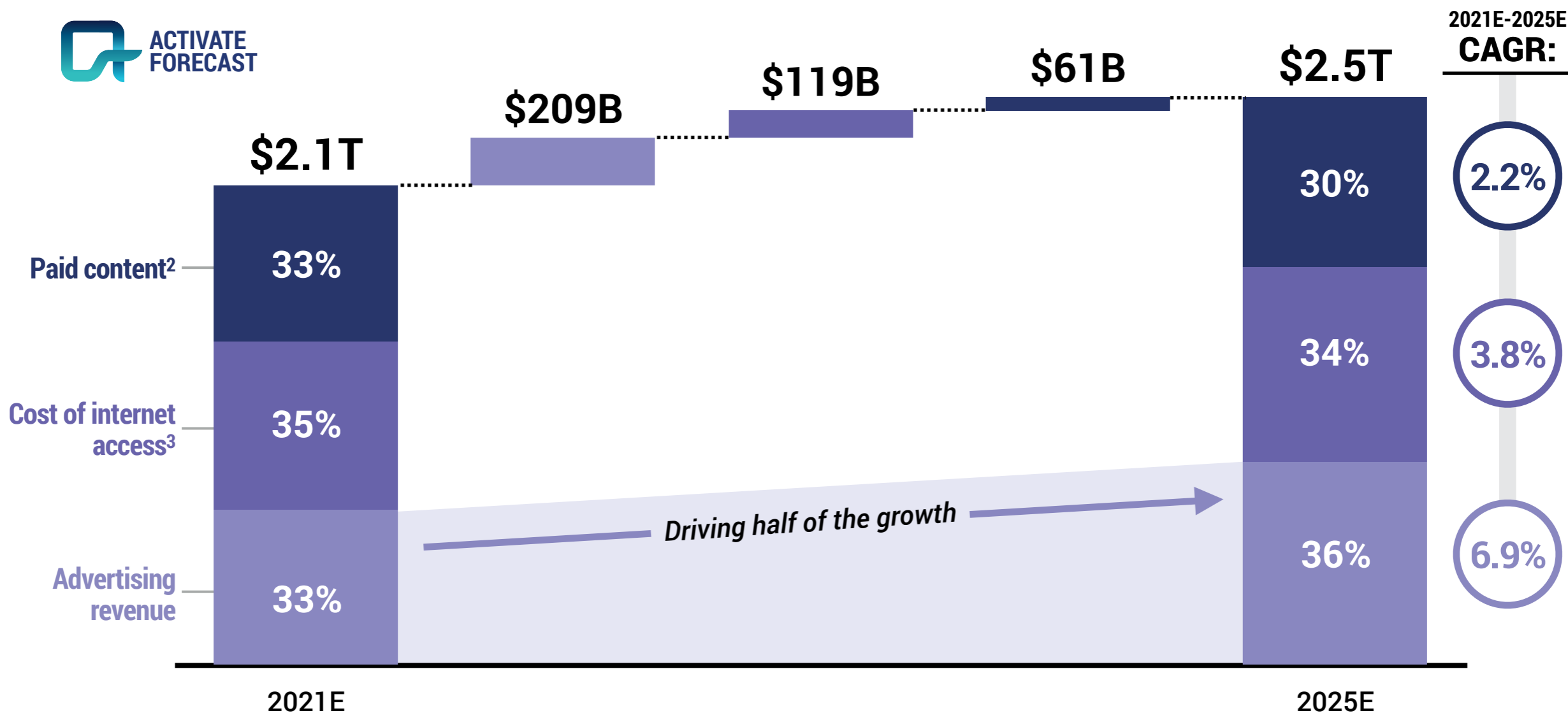
INTERNET AND MEDIA REVENUES¹, GLOBAL, 2021E VS. 2025E, USD



1. "Internet and media revenues" include radio subscription and licensing fees, recorded music, magazine publishing, newspaper publishing, video games, filmed entertainment, book publishing, TV subscription and licensing fees, internet access, digital advertising, and traditional advertising on these platforms.
 Sources: Activate analysis, Dentsu International, eMarketer, GroupM, IBISWorld, Newzoo, Omdia, PricewaterhouseCoopers, Statista, Zenith Media

Global advertising will be the primary driver of growth

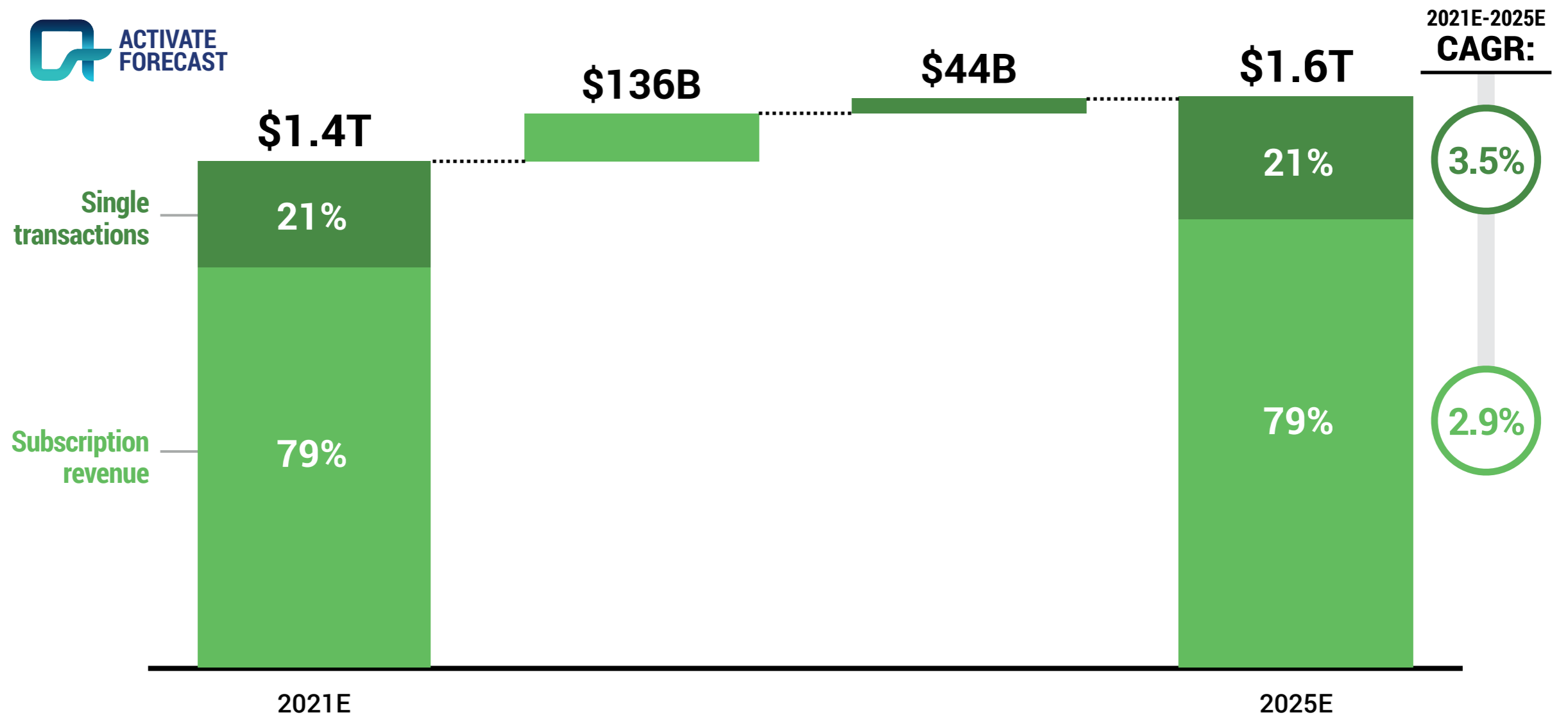
INTERNET AND MEDIA REVENUE GROWTH BY SEGMENT¹, GLOBAL, 2021E VS. 2025E, USD



1. "Internet and media revenues" include radio subscription and licensing fees, recorded music, magazine publishing, newspaper publishing, video games, filmed entertainment, book publishing, TV subscription and licensing fees, internet access, digital advertising, and traditional advertising on these platforms. Figures do not sum due to rounding. 2. "Paid content" includes radio subscription and licensing fees, recorded music, magazine publishing, book publishing, newspaper publishing, video games, TV subscription and licensing fees, and filmed entertainment. 3. "Internet access" includes fixed broadband, wireless, and mobile internet access.
 Sources: Activate analysis, Dentsu International, eMarketer, GroupM, IBISWorld, Newzoo, Omdia, PricewaterhouseCoopers, Statista, Zenith Media

In terms of global consumer spending, subscriptions will add \$136B growth dollars and single transactions will add \$44B

CONSUMER INTERNET AND MEDIA REVENUE GROWTH BY REVENUE MODEL¹, GLOBAL, 2021E VS. 2025E, USD



1. "Consumer internet and media revenue" includes radio subscription and licensing fees, recorded music, magazine publishing, newspaper publishing, video games, filmed entertainment, book publishing, TV subscription and licensing fees, and internet access.

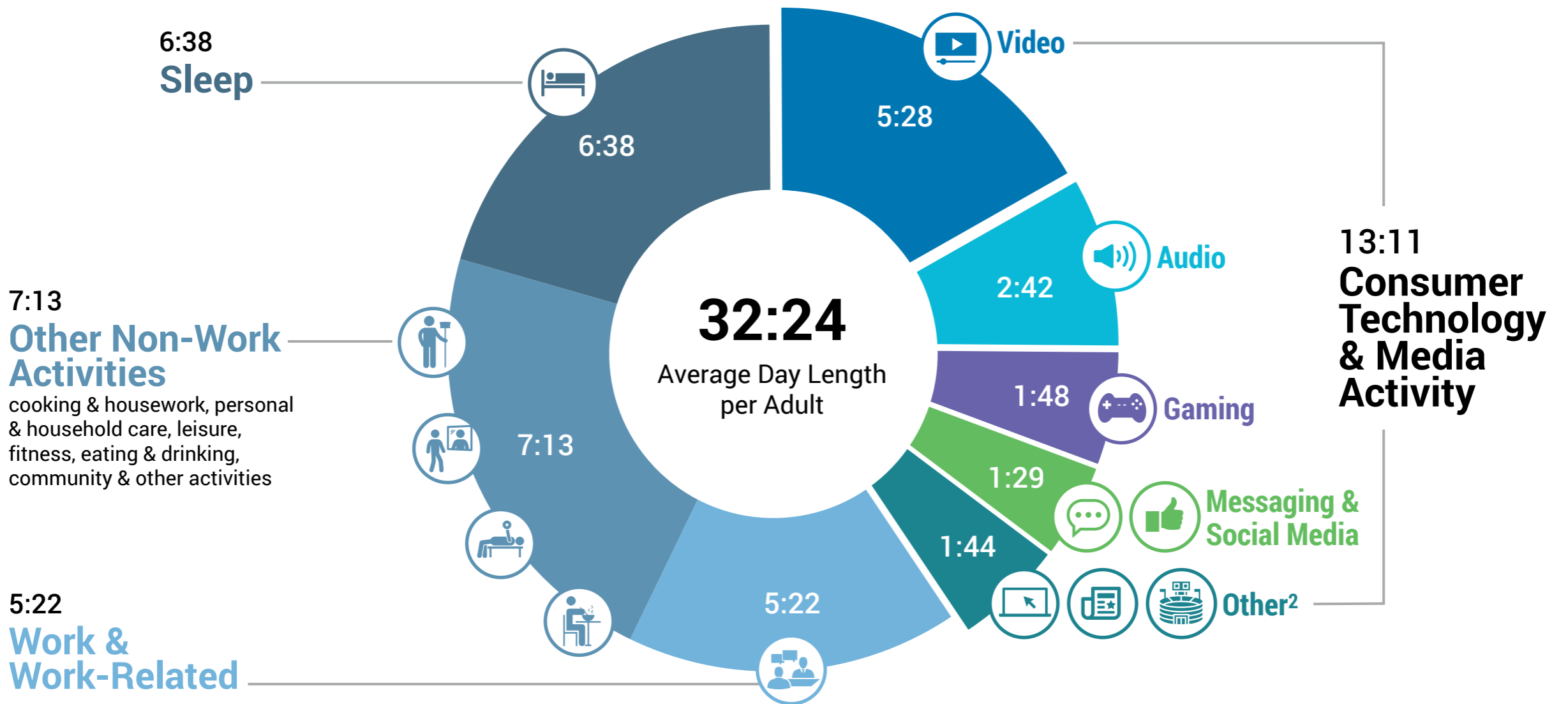
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Activate's Attention Clock: Our analysis of consumer technology and media activity shows that multitasking leads to a 32-hour day for the average American; over 13 hours are spent using technology and media

 AVERAGE DAY BY ACTIVITY PER ADULT AGED 18+1, U.S., 2020, HOURS:MINUTES



1. Behaviors averaged over 7 days. 2. "Other" includes media activities outside of listed categories, such as browsing websites, reading, and attending live events.

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), AudienceNet, CareerBuilder, Edison Research, eMarketer, Gallup, GWI, Interactive Advertising Bureau, National Sleep Foundation, Nielsen, Pew Research Center, PricewaterhouseCoopers, U.S. Bureau of Labor Statistics, YouGov

Video – at 5.5 hours a day – continues to dominate consumers' time spent with technology and media

 AVERAGE DAILY TECHNOLOGY AND MEDIA ATTENTION PER ADULT AGED 18+¹, U.S., 2020, 15-MINUTE INTERVALS

An average 13-hour technology and media day in 15-minute intervals

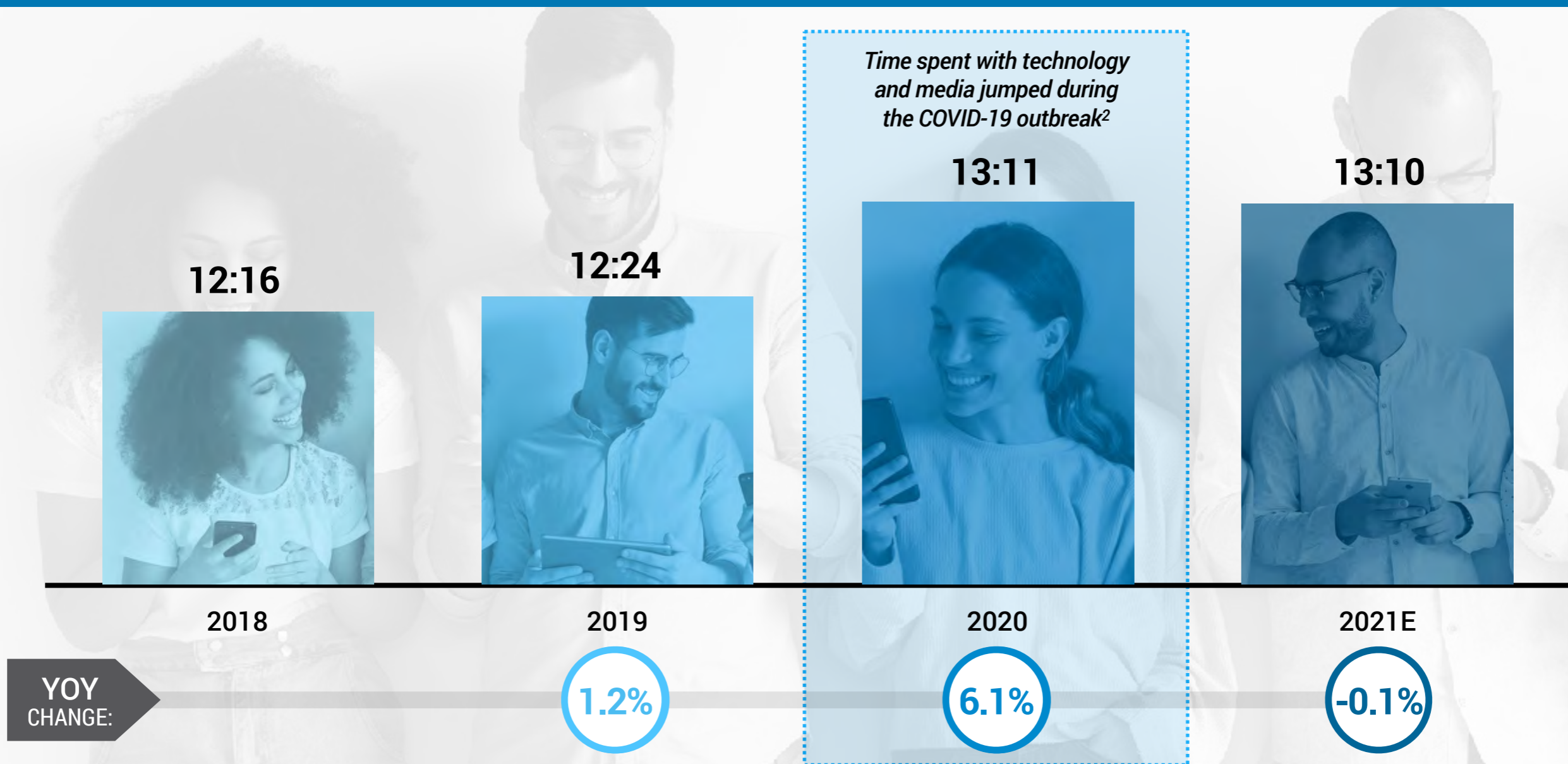


1. Behaviors averaged over 7 days. 2. "Other" includes media activities outside of the listed categories, such as browsing websites, reading, and attending live events.

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), AudienceNet, Edison Research, eMarketer, GWI, Music Business Association, Nielsen, Pew Research Center, PricewaterhouseCoopers, U.S. Bureau of Labor Statistics

During the COVID-19 outbreak, consumers significantly increased their time with technology and media, adding over 45 minutes a day; we expect that this growth will be largely sustained

AVERAGE DAILY TECHNOLOGY AND MEDIA ATTENTION PER ADULT AGED 18+¹, U.S., 2018-2021E, HOURS:MINUTES

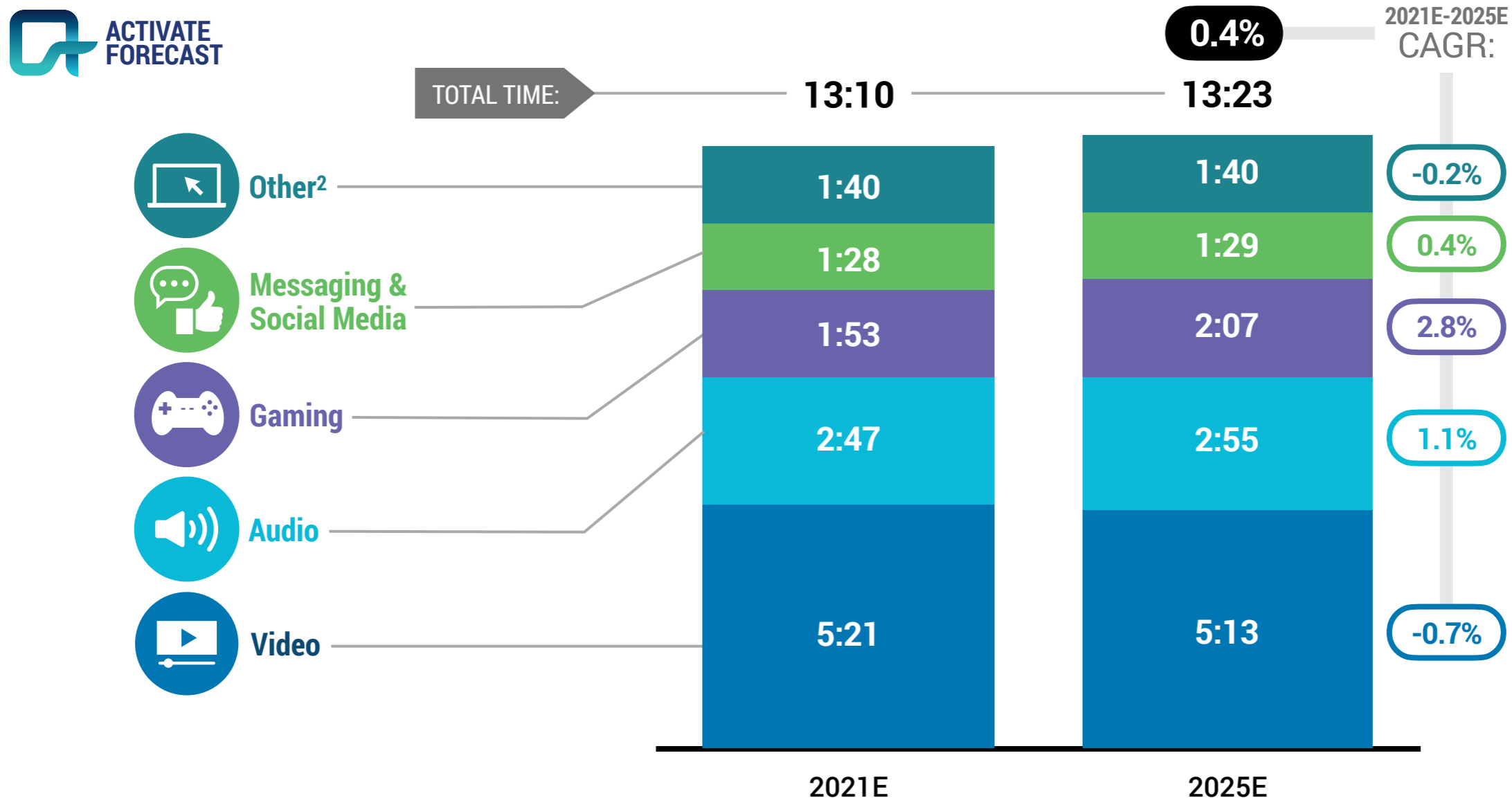


1. Behaviors averaged over 7 days. 2. "During the COVID-19 outbreak" refers to the period since the start of the COVID-19 outbreak and subsequent social distancing measures (i.e. since Mar. 2020).

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), AudienceNet, Edison Research, eMarketer, GWI, Music Business Association, Nielsen, Pew Research Center, PricewaterhouseCoopers, U.S. Bureau of Labor Statistics

We forecast that gaming and audio will together add over 20 minutes a day of user time and attention over the next four years

AVERAGE DAILY TECHNOLOGY AND MEDIA ATTENTION PER ADULT AGED 18+, U.S., 2021E VS. 2025E, HOURS:MINUTES



1. Behaviors averaged over 7 days. 2. "Other" includes media activities outside of the listed categories, such as browsing websites, reading, and attending live events.

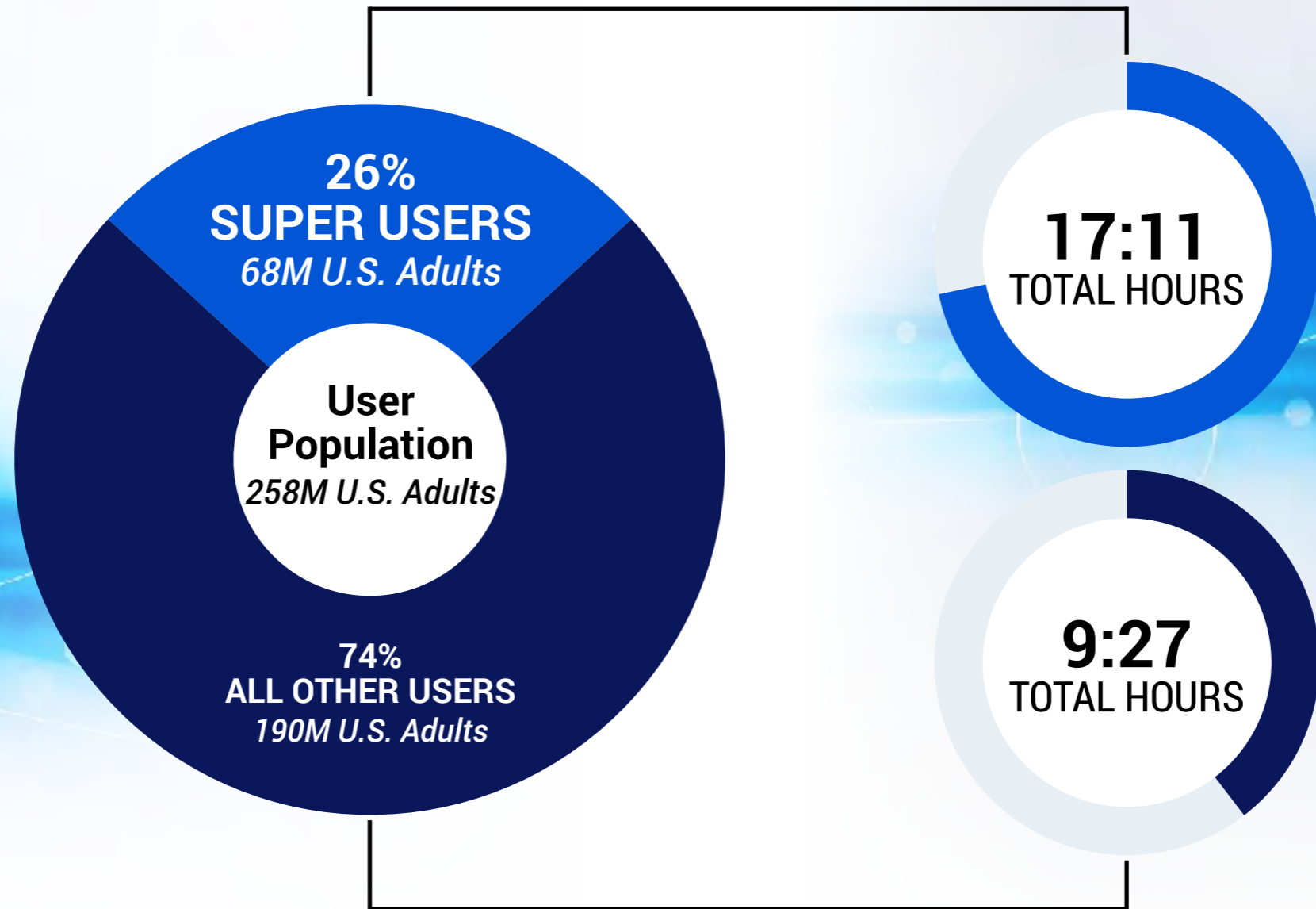
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), AudienceNet, Edison Research, eMarketer, GWI, Music Business Association, Nielsen, Pew Research Center, PricewaterhouseCoopers, U.S. Bureau of Labor Statistics

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Our consumer research shows that Super Users spend over 7 more hours per day consuming technology and media than all other users

AVERAGE DAILY TIME SPENT WITH MEDIA PER USER¹, U.S., 2021E, % ADULTS AGED 18+ / HOURS:MINUTES



1. Includes time spent watching video, playing video games, listening to music, listening to podcasts, and using messaging / social media services. Does not account for multitasking.

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), AudienceNet, Edison Research, eMarketer, GWI, Music Business Association, Nielsen, Pew Research Center, PricewaterhouseCoopers, U.S. Bureau of Labor Statistics

Time: Super Users spend significantly more time with media – across all formats – than all other users

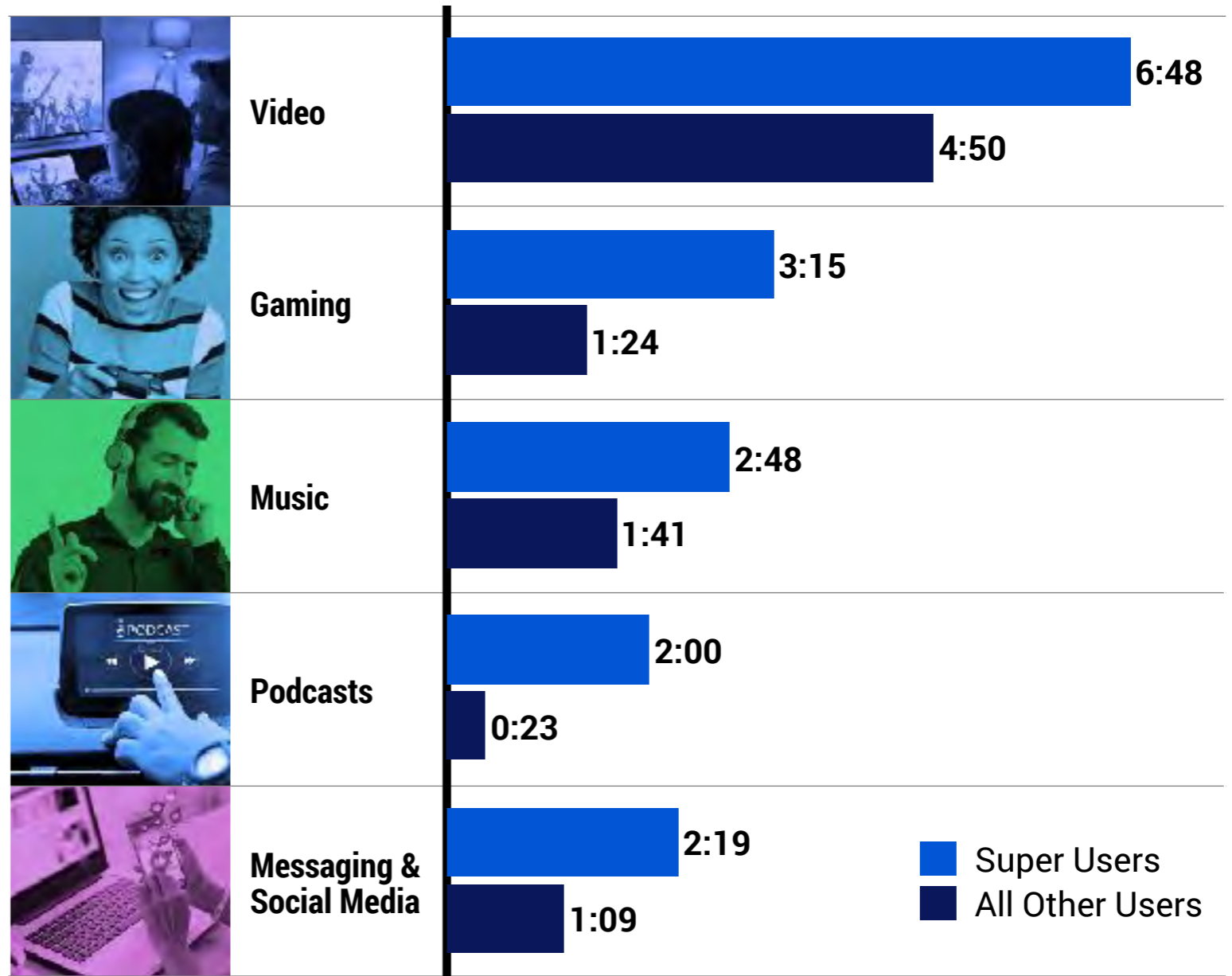
AVERAGE DAILY TIME SPENT PER USER BY MEDIA TYPE, U.S., 2021E, HOURS:MINUTES

Super Users

17:11
Total Hours¹

All Other Users

9:27
Total Hours¹



1. "Total hours" do not account for multitasking. Figures do not sum due to rounding.

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), AudienceNet, Edison Research, eMarketer, GWI, Music Business Association, Nielsen, Pew Research Center, PricewaterhouseCoopers, U.S. Bureau of Labor Statistics

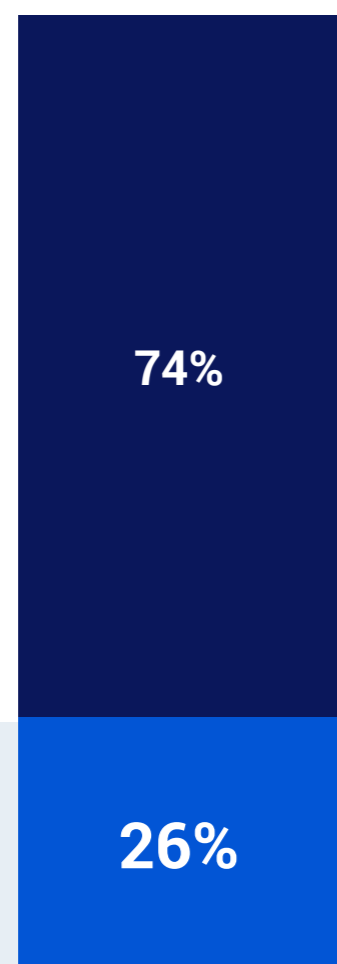
Super Users consistently spend more dollars on technology and media than all other users; in gaming and audio, Super Users account for the vast majority of all spend

MONTHLY DOLLAR SPEND BY MEDIA TYPE, U.S., 2021E, % ADULTS AGED 18+ / % TOTAL SPEND BY MEDIA TYPE / USD PER USER

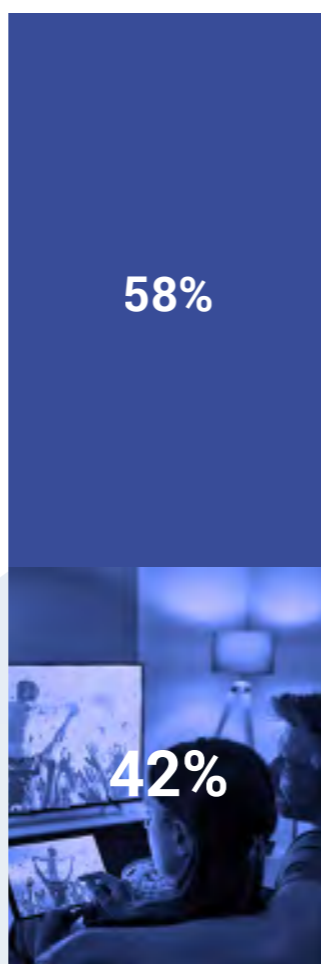


ALL OTHER USERS

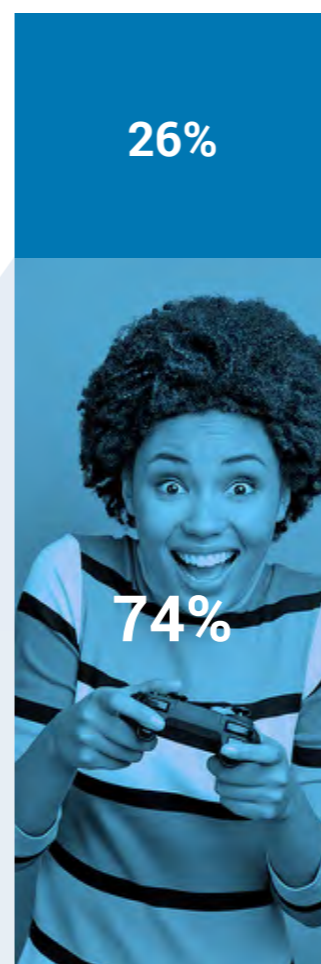
SUPER USERS



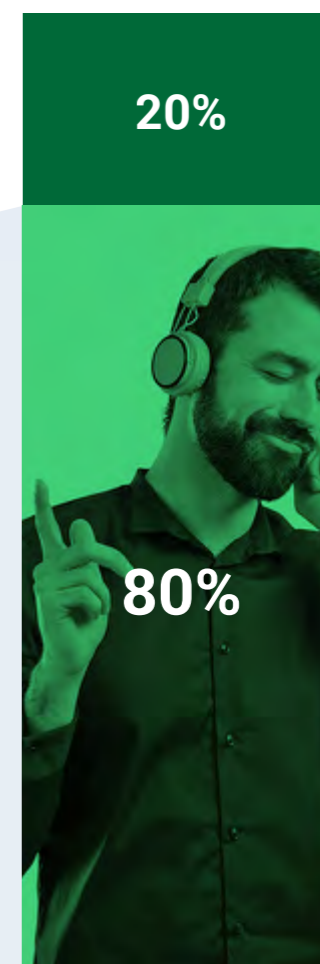
User Population



Total Video Spend¹



Total Gaming Spend²



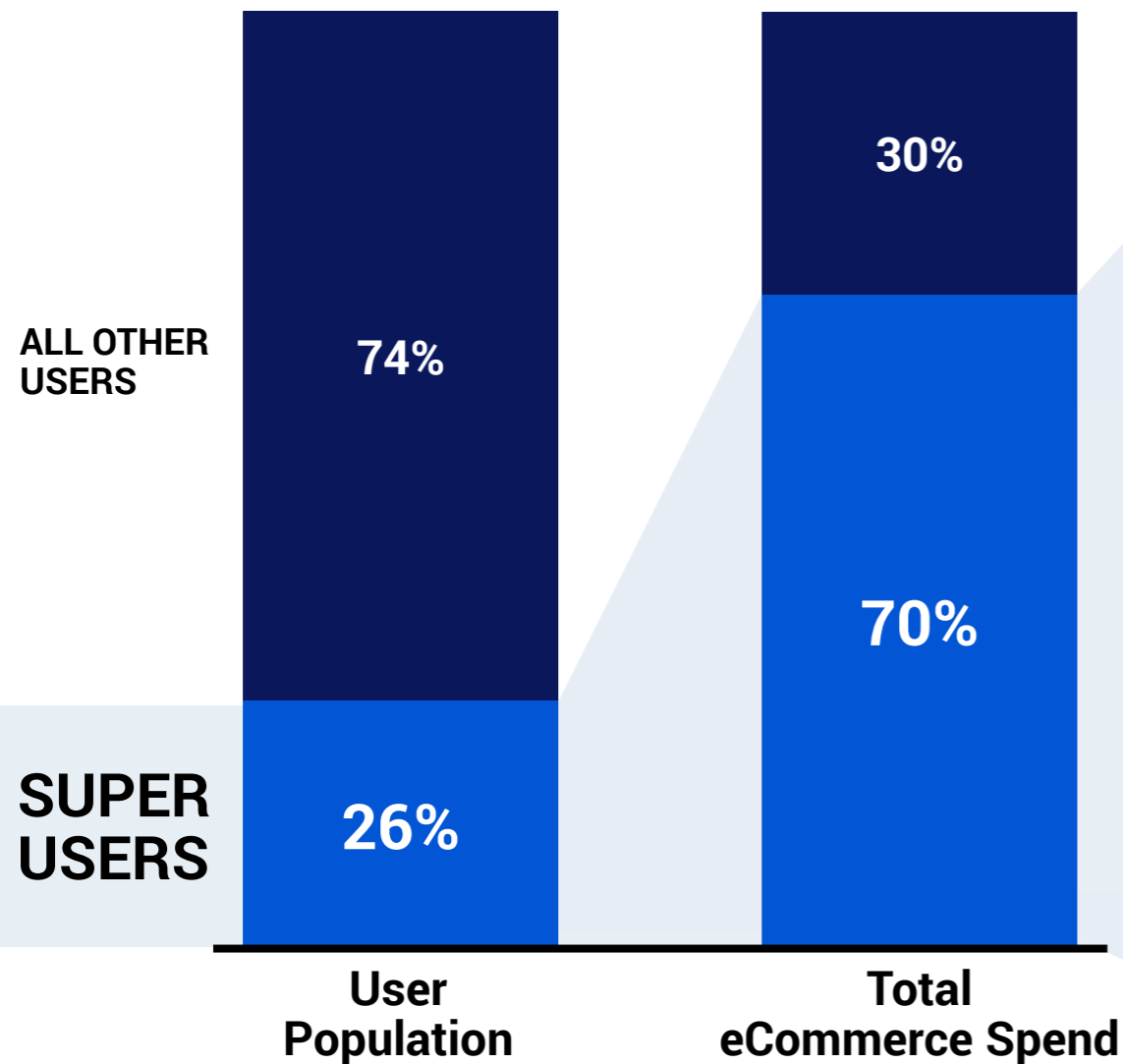
Total Music & Podcast Spend³

1. Includes money spent on all videos and video services, including traditional/virtual Pay TV, video streaming subscription services, and from video stores / rental services. 2. Includes money spent on video games and other video gaming purchases (e.g. in-app purchases) across all devices. 3. Includes money spent on music, music services, podcasts, and podcast services (excluding donations).

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), BMO Capital Markets, eMarketer, Newzoo, PricewaterhouseCoopers, U.S. Census Bureau

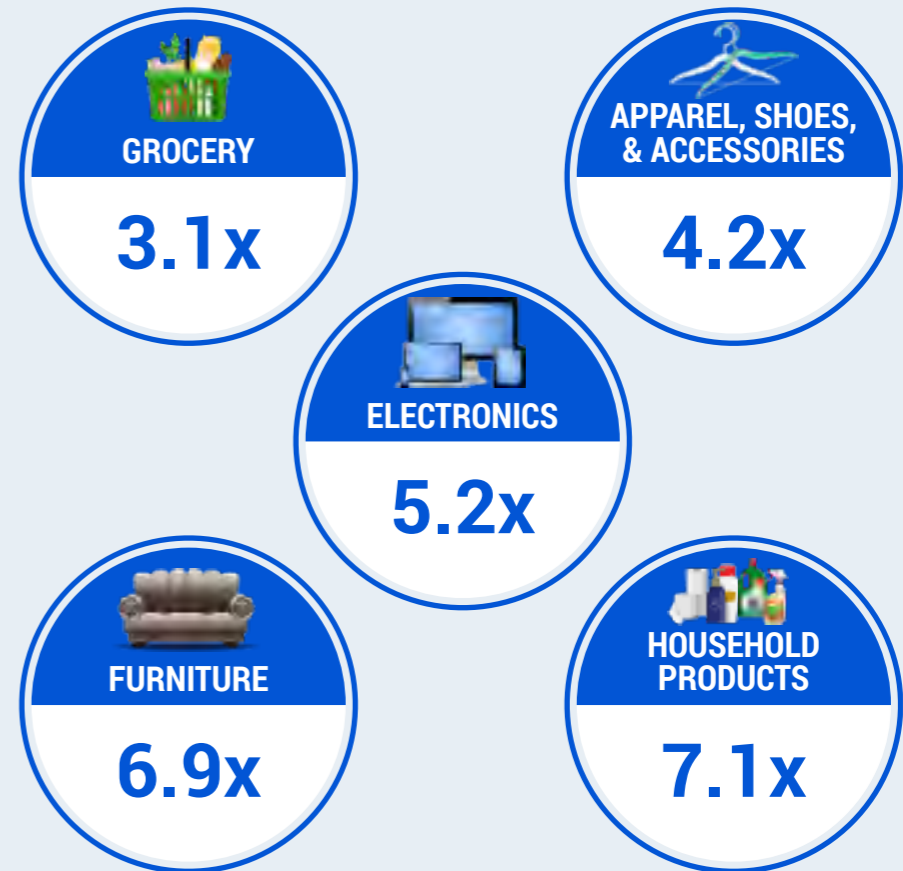
In eCommerce, Super Users account for the great majority of total spend, heavily over-indexing on all major consumer categories

ECOMMERCE SPEND, U.S., 2021E,
% ADULTS AGED 18+ / % TOTAL ECOMMERCE SPEND



ECOMMERCE SPEND COMPARISON
BY CATEGORY, U.S., 2021E, SUPER USERS
INDEXED TO ALL OTHER USERS

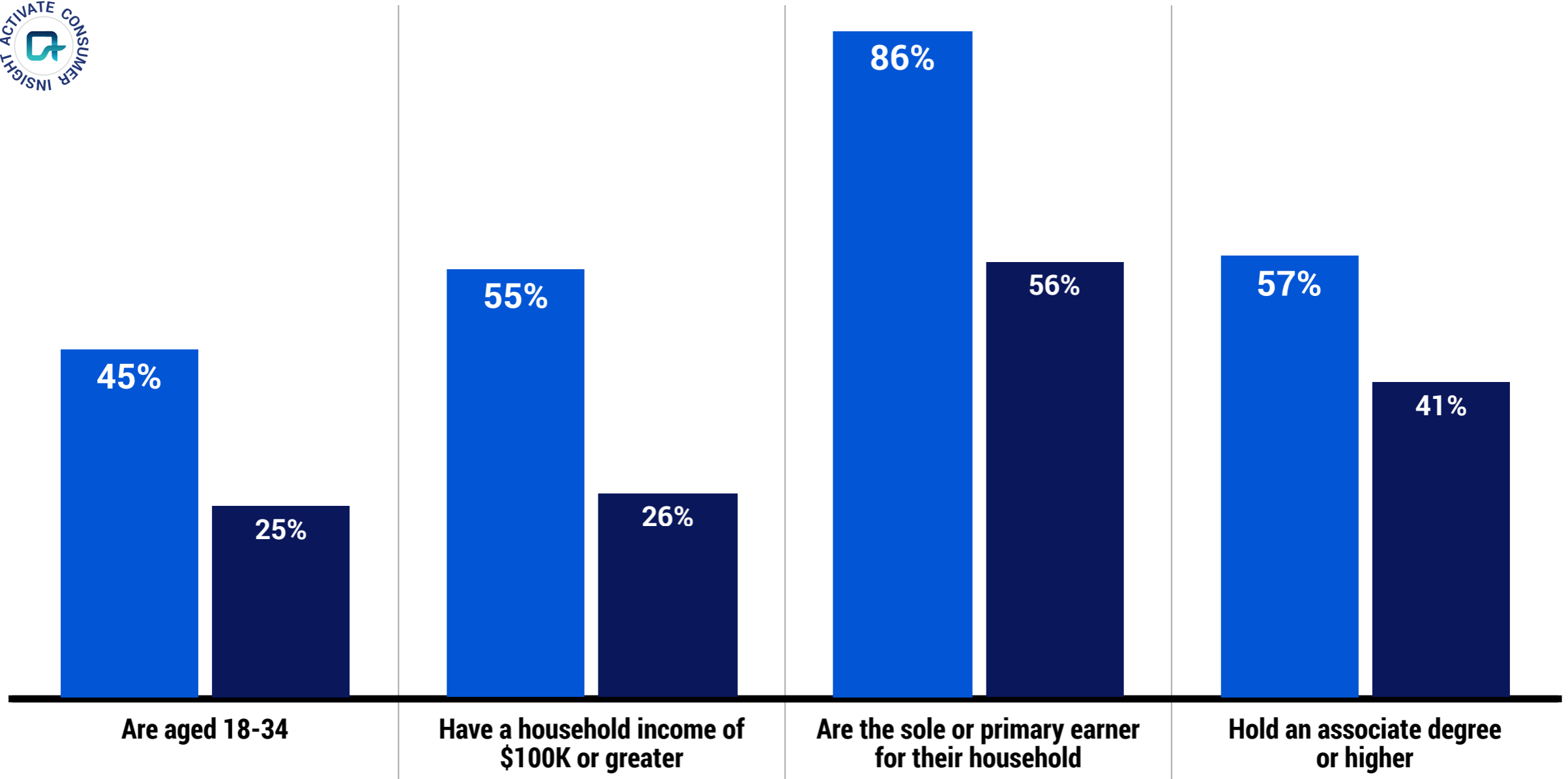
Super Users over-index on eCommerce spend across a number of key categories



Super Users are younger and more affluent, with a higher level of education

USER DEMOGRAPHICS, U.S., 2021, % ADULTS AGED 18+

■ % Super Users ■ % All Other Users



Connectivity: The vast majority of Super Users subscribe to unlimited mobile data plans

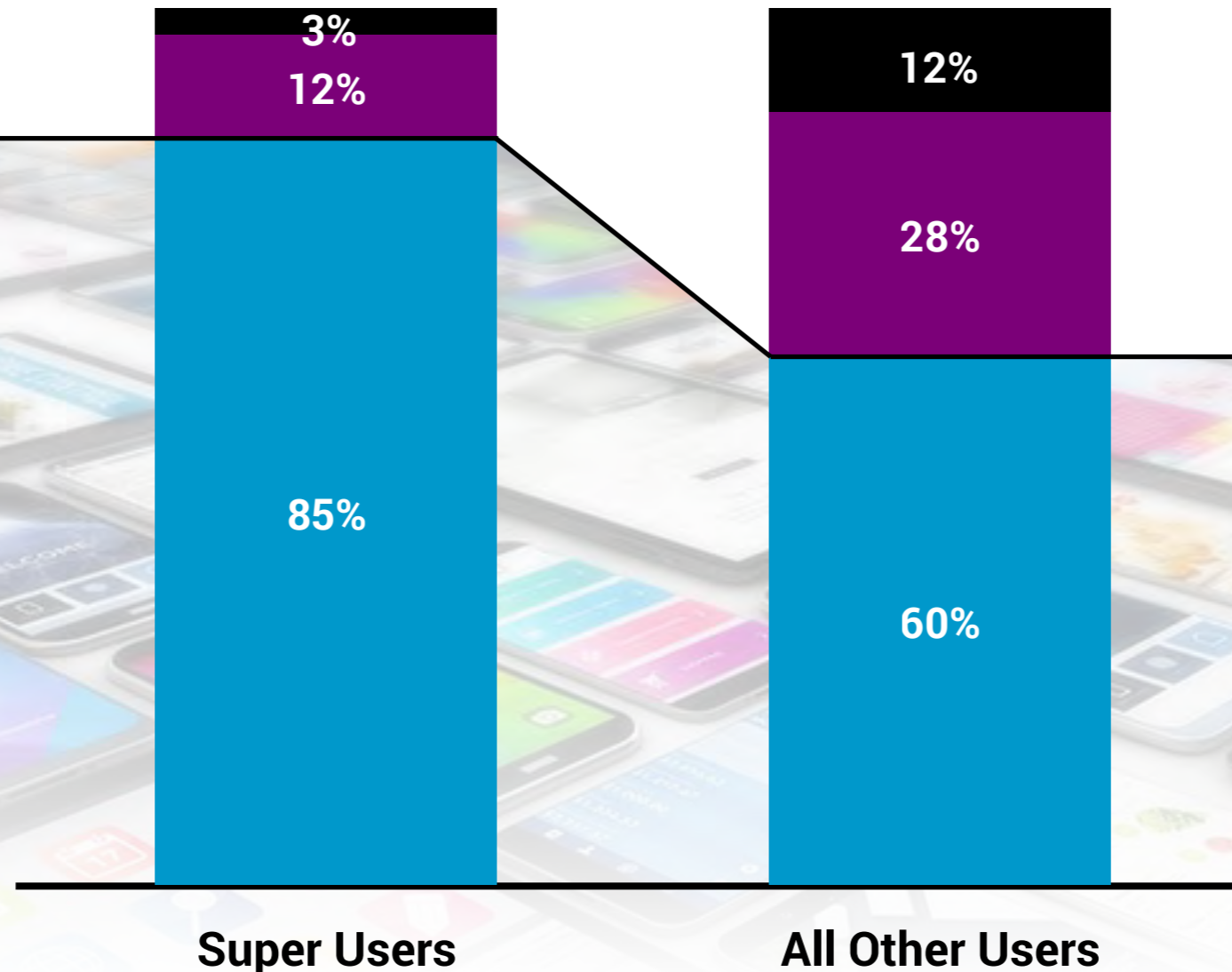
MOBILE DATA PLAN ACCESS, U.S., 2021, % ADULTS AGED 18+



No mobile data plan

Mobile data plan with data limit

Unlimited¹ mobile data plan



Early Adopters: Super Users are significantly more likely to be early adopters; they buy and use products and services before anyone else and are up to date on trends in technology and media

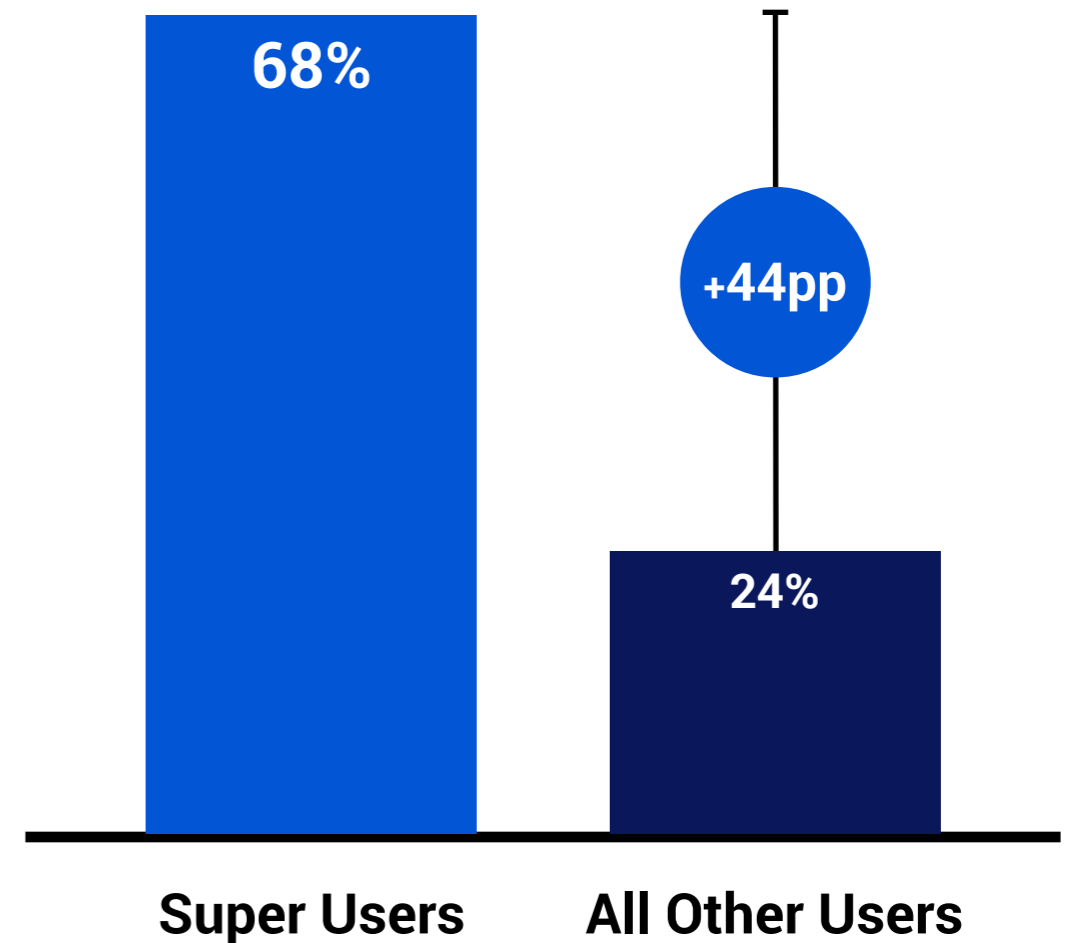
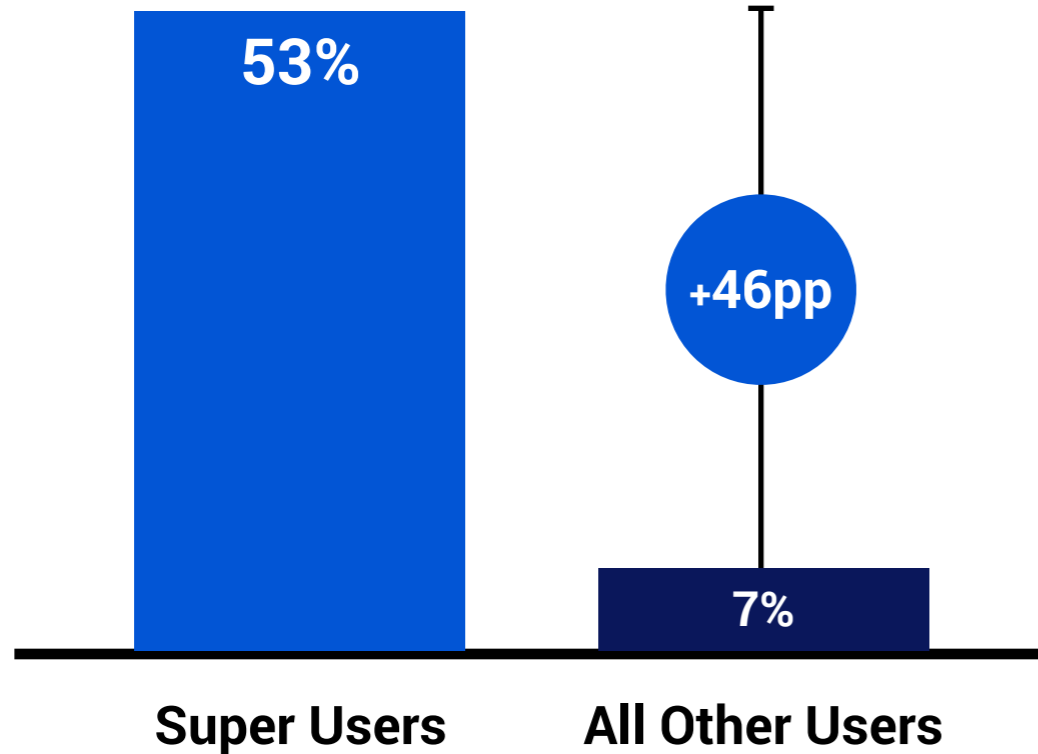
TENDENCY TO BUY/USE NEW SERVICES/DEVICES/ TECHNOLOGIES BEFORE ANYONE ELSE, U.S., 2021, % ADULTS AGED 18+

TENDENCY TO ALWAYS OR OFTEN KEEP INFORMED ON NEWS ABOUT THE LATEST TECHNOLOGY AND MEDIA PRODUCTS/SERVICES, U.S., 2021, % ADULTS AGED 18+

Buying/using new services and devices before anyone else



Keeping informed on news about the latest products and services



Advocacy: Super Users are significantly more likely to be brand amplifiers, sharing their experiences with technology and media and recommending products and services

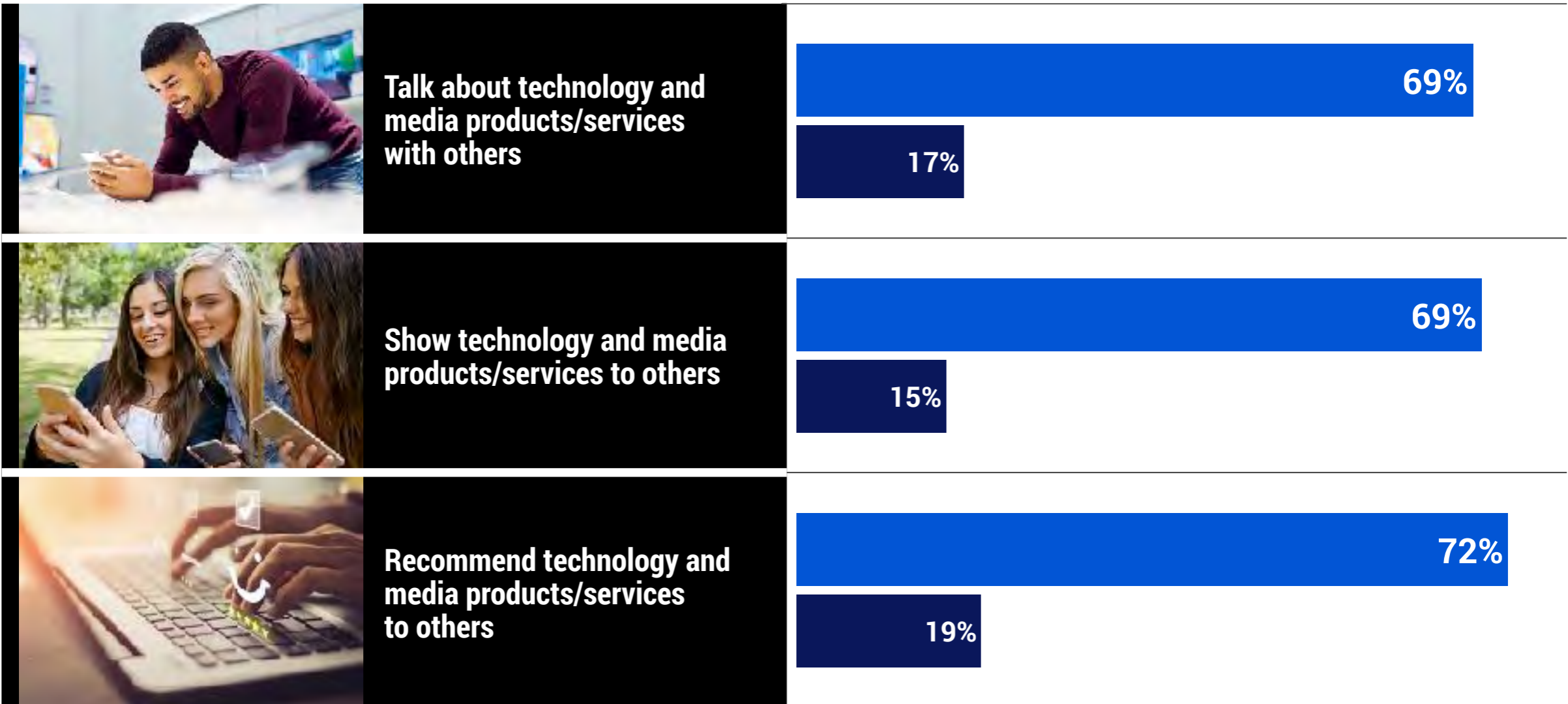
TENDENCY TO AMPLIFY EXPERIENCES WITH TECHNOLOGY AND MEDIA PRODUCTS/SERVICES, U.S., 2021, % ADULTS AGED 18+



ALWAYS OR OFTEN...

■ % Super Users

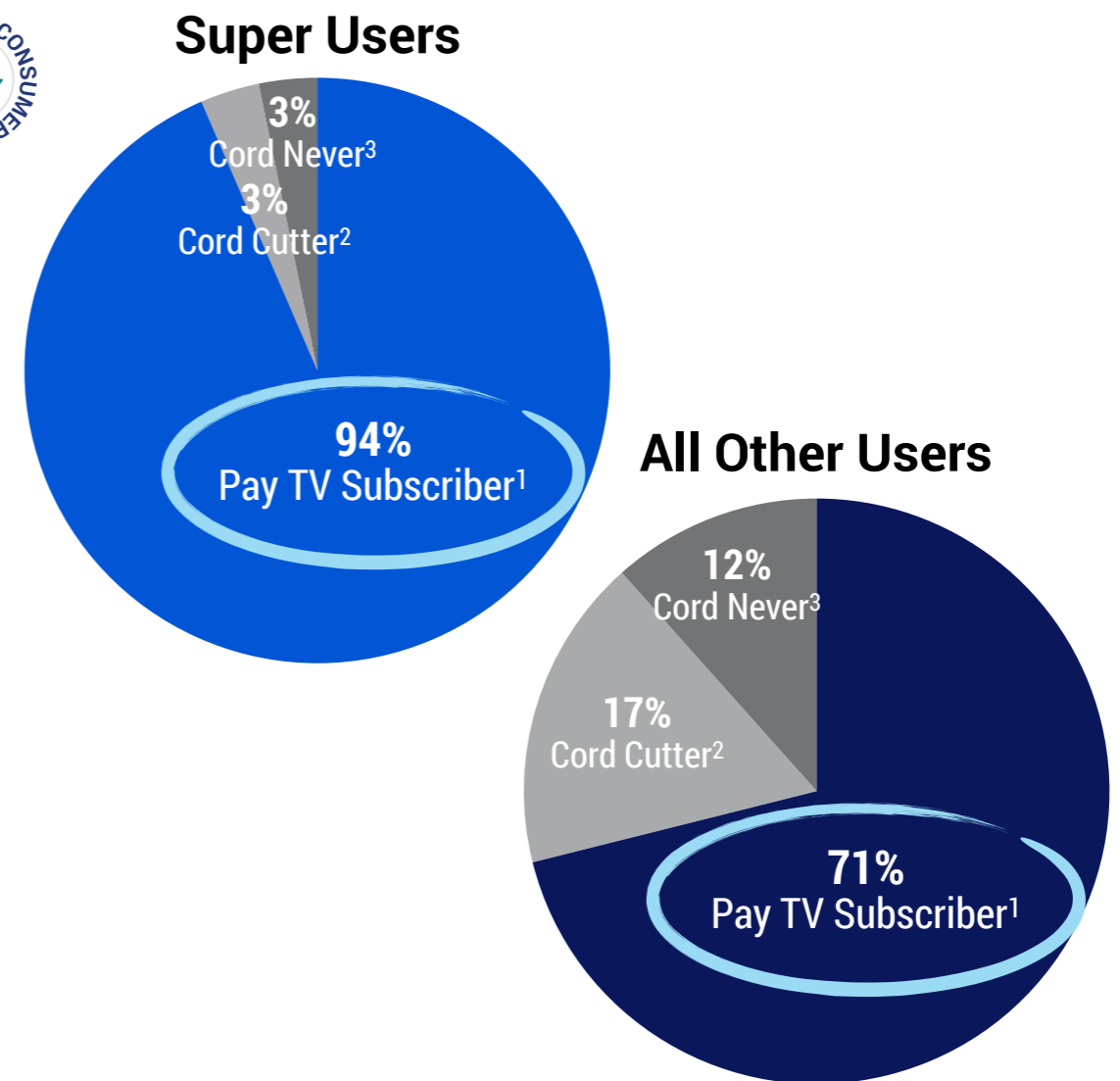
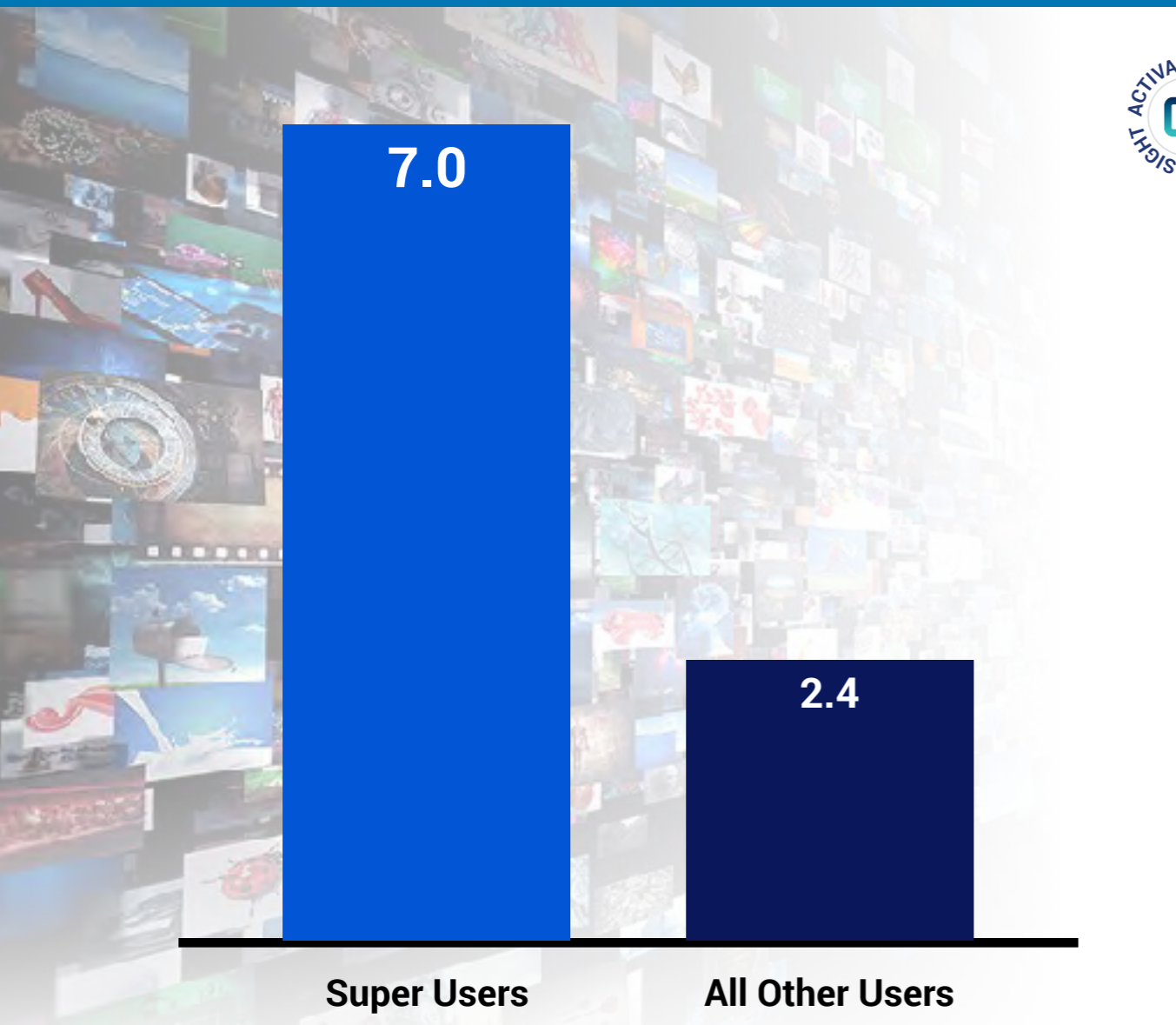
■ % All Other Users



Video: Super Users subscribe to more video streaming services while maintaining their Pay TV subscriptions

AVERAGE NUMBER OF PAID VIDEO STREAMING SUBSCRIPTIONS OWNED PER USER, U.S., 2021, # SUBSCRIPTIONS

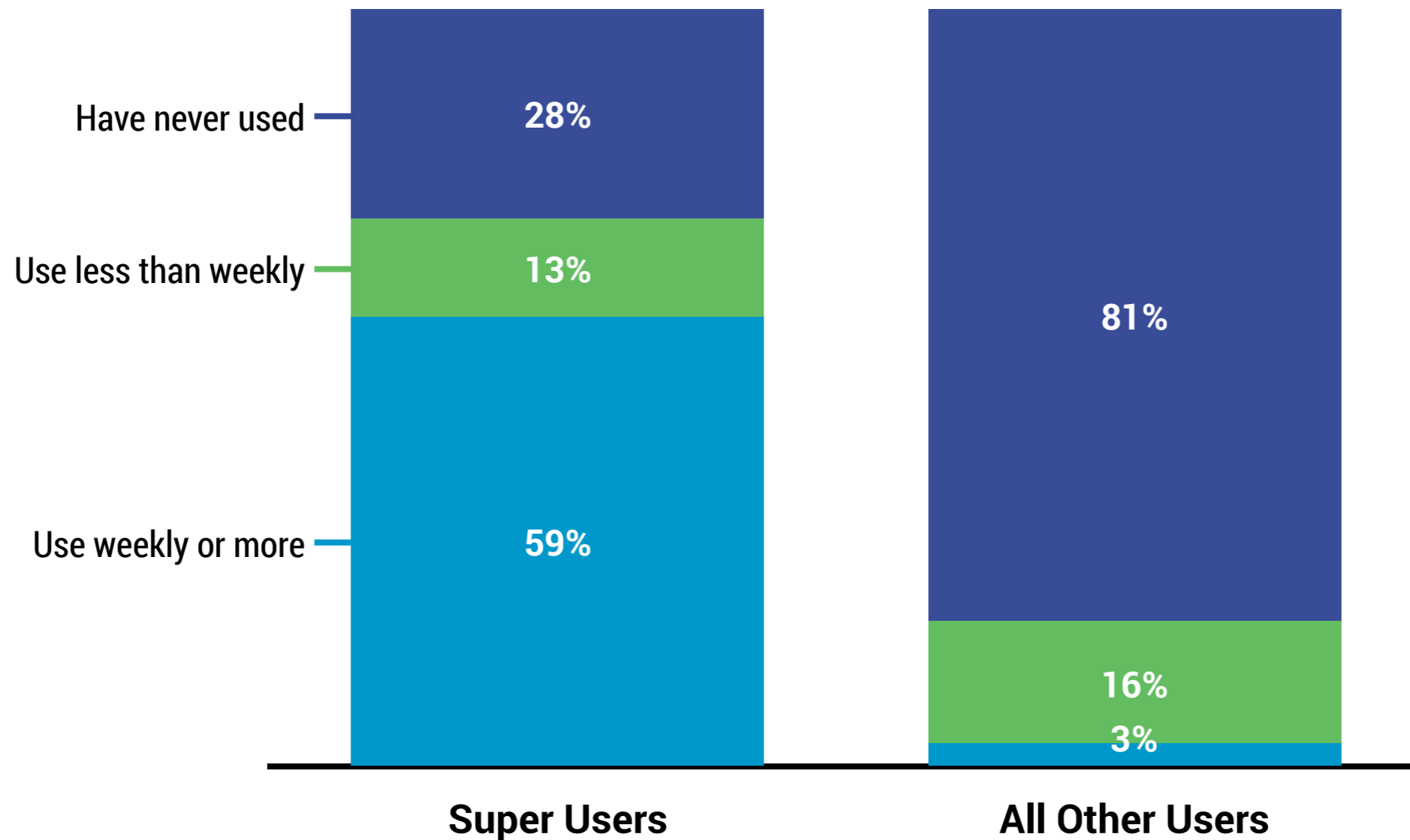
PAY TV SUBSCRIBER¹ STATUS, U.S., 2021, % ADULTS AGED 18+



1. "Pay TV subscriber" is defined as an adult aged 18+ whose household has a traditional/virtual Pay TV subscription. 2. "Cord cutter" is defined as an adult aged 18+ whose household used to have a traditional/virtual Pay TV subscription and no longer does. 3. "Cord never" is defined as an adult aged 18+ whose household has never had a traditional/virtual Pay TV subscription. Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Activate 2021 Consumer Video Research Study (n = 2,014)

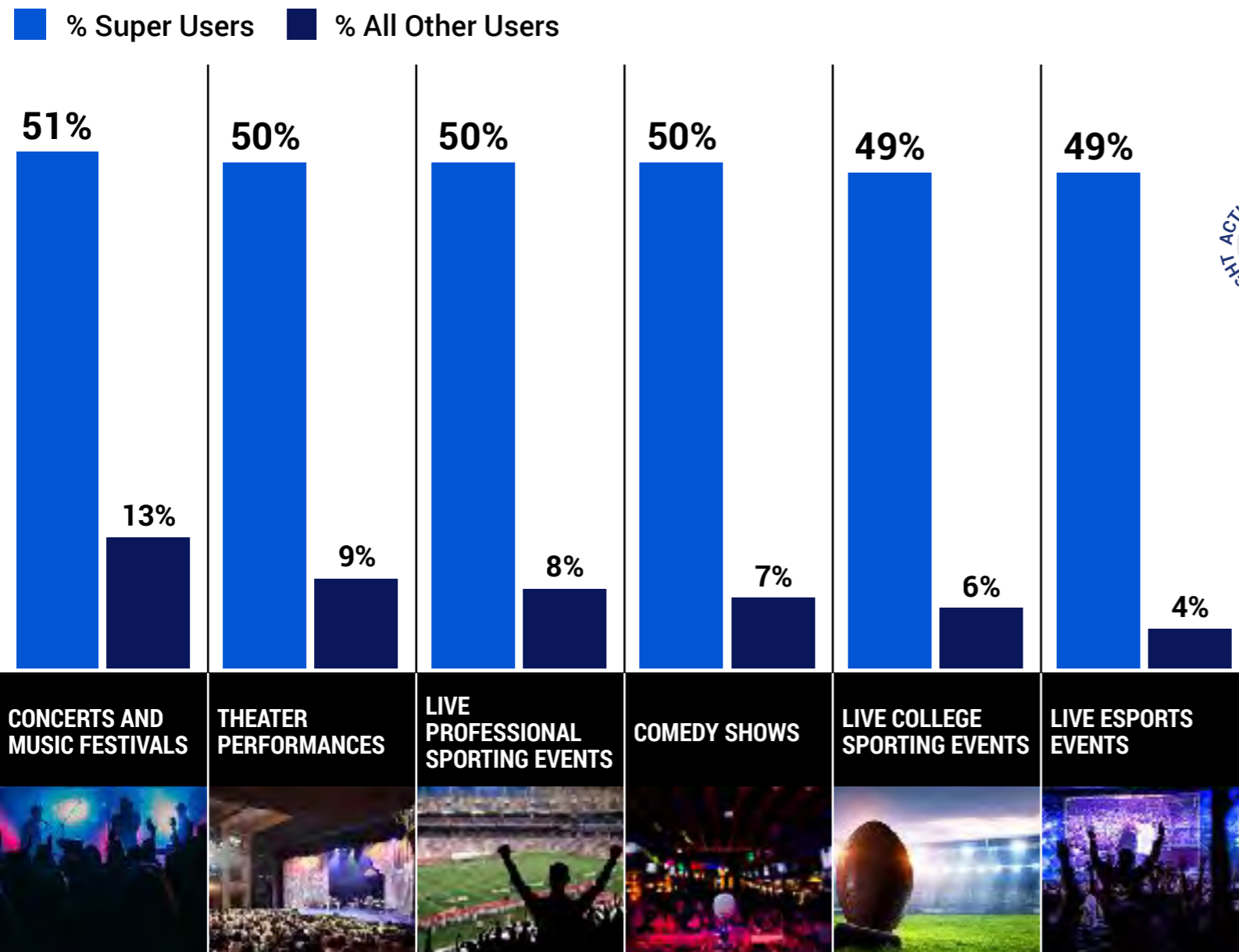
Virtual Reality: Super Users are massive users of Virtual Reality and will lead the way with new VR headsets and VR experiences

VIRTUAL REALITY USAGE, U.S., 2021, % ADULTS AGED 18+



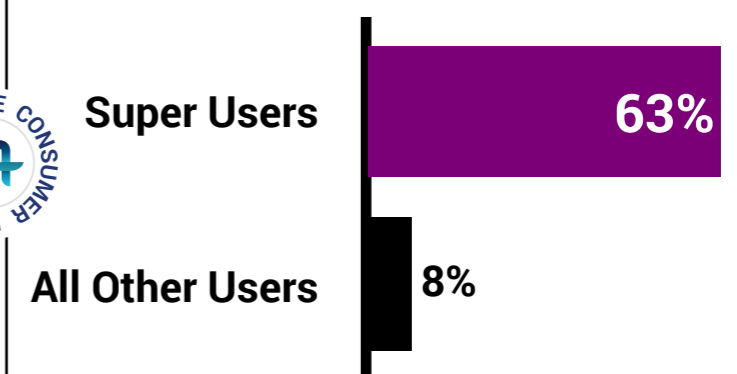
Live Events: Super Users will lead the charge back to in-person live events and have already attended significantly more virtual live events

INTENT TO ATTEND MORE LIVE EVENTS¹ IN THE NEXT 12 MONTHS THAN BEFORE THE COVID-19 OUTBREAK², U.S., 2021, % ADULTS AGED 18+

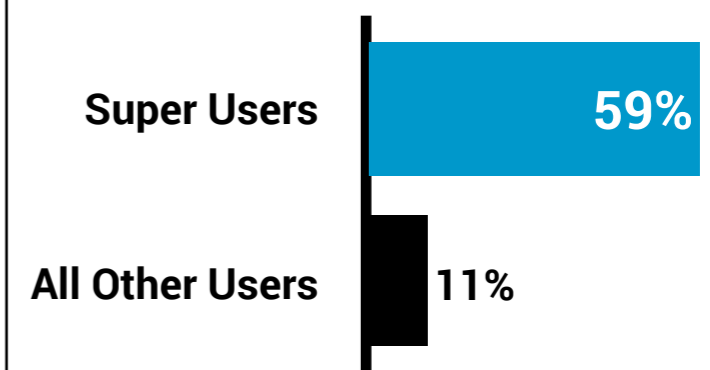


ONLINE CONCERT ATTENDANCE, U.S., 2021, % ADULTS AGED 18+

IN THE LAST 12 MONTHS

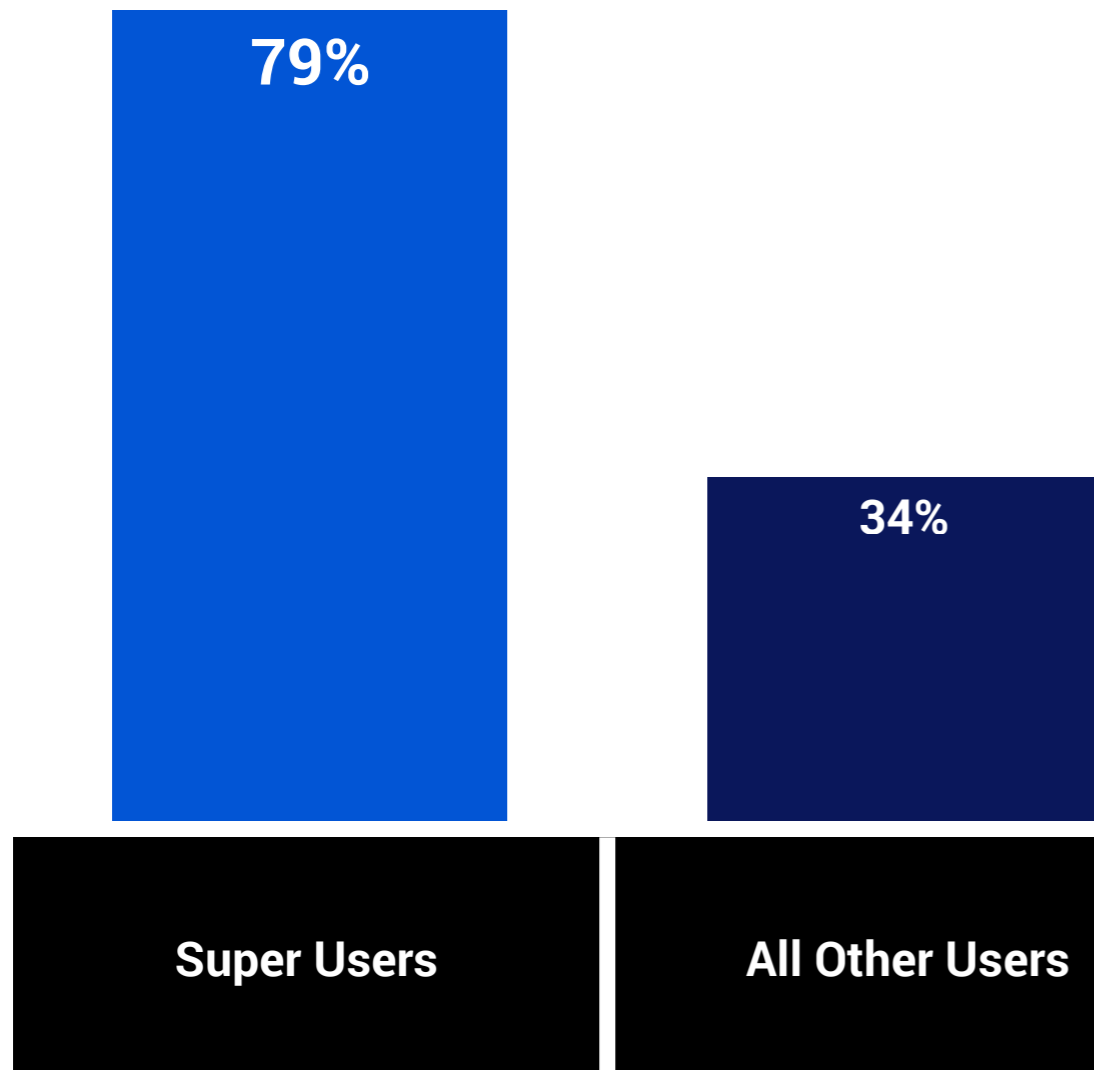


EXPECTED IN THE NEXT 12 MONTHS



Super Users have led the move to telemedicine and will continue to prefer digital access to healthcare versus in person

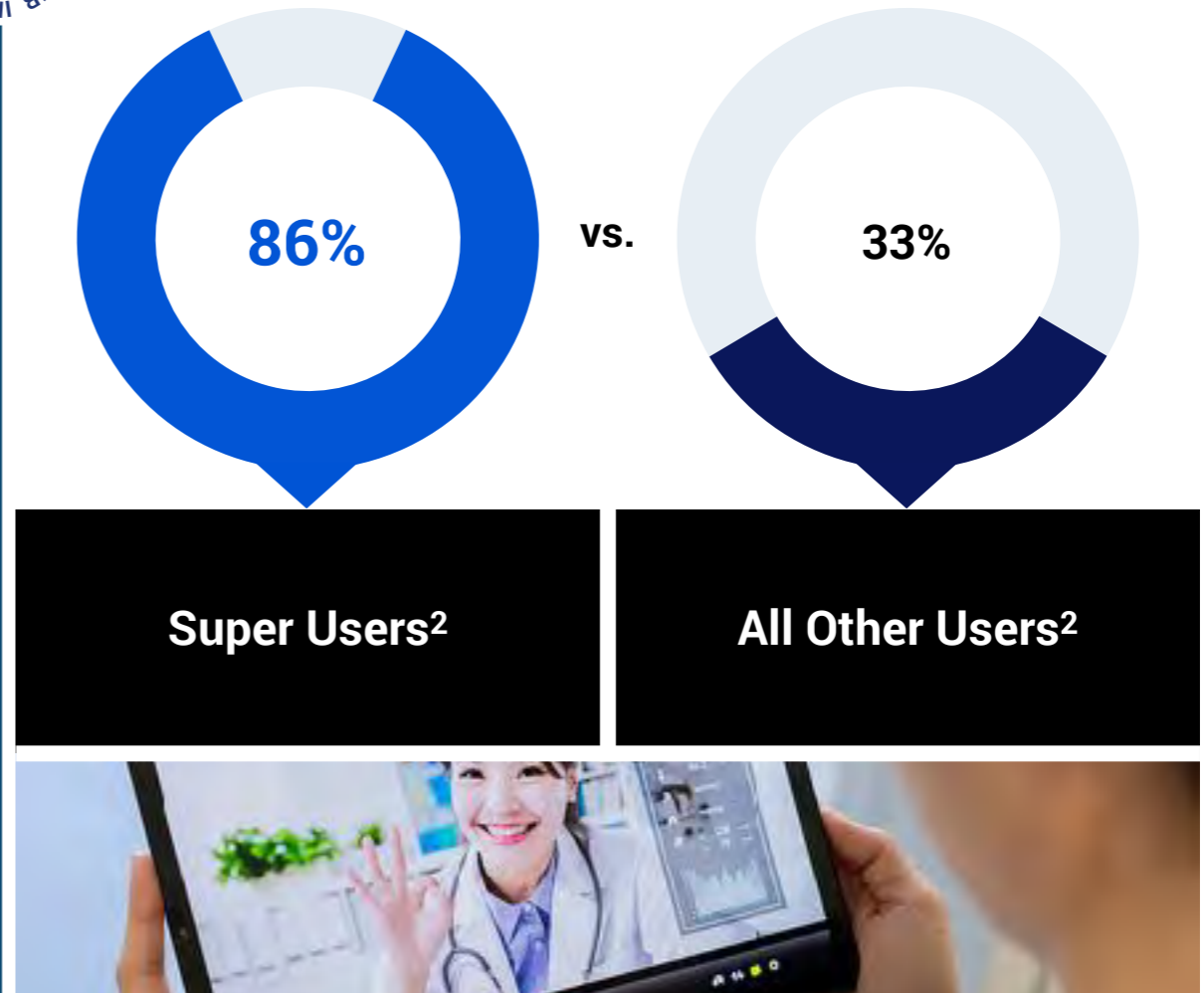
TELEMEDICINE¹ USAGE IN THE LAST 12 MONTHS, U.S., 2021, % ADULTS AGED 18+



PREFERENCE FOR TELEMEDICINE¹, U.S., 2021, % ADULTS AGED 18+ WHO HAVE USED TELEMEDICINE¹ IN THE LAST 12 MONTHS

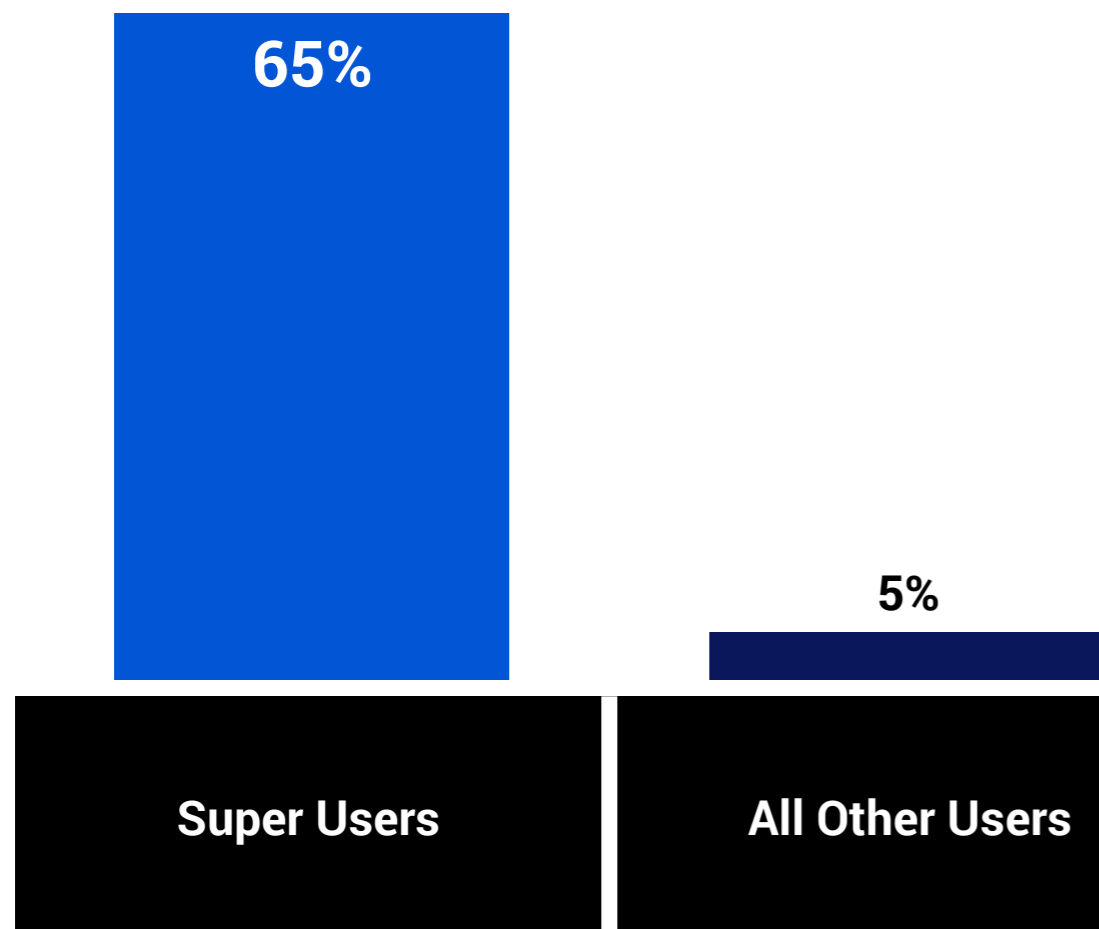


PREFER USING TELEMEDICINE¹ TO SEEING A HEALTHCARE PROVIDER IN PERSON



The overwhelming majority of Super Users use and prefer connected fitness devices versus going to a gym

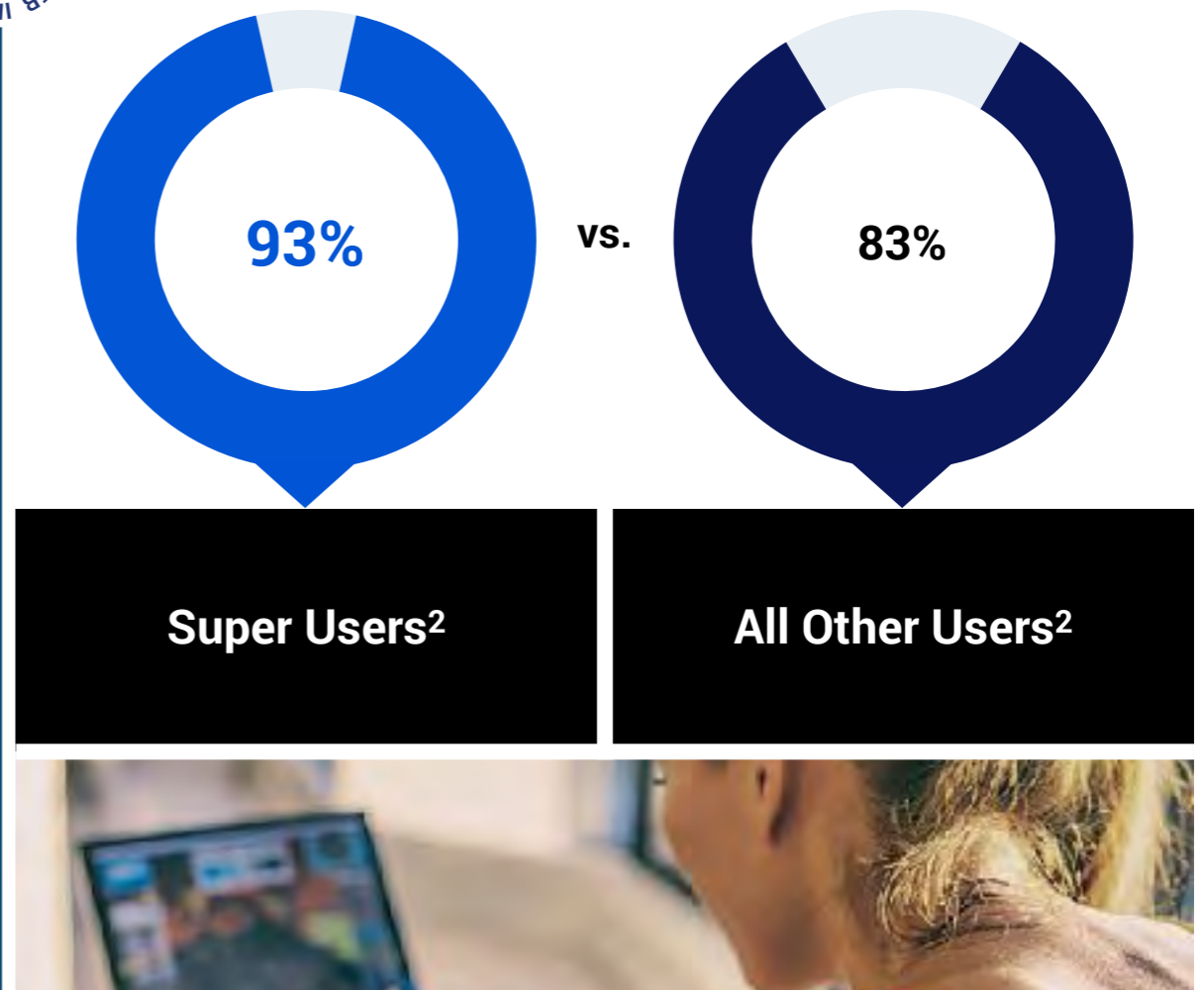
CURRENT AT-HOME CONNECTED FITNESS EQUIPMENT¹ USAGE, U.S., 2021, % ADULTS AGED 18+



PREFERENCE FOR AT-HOME CONNECTED FITNESS EQUIPMENT¹, U.S., 2021, % ADULTS AGED 18+ WHO USE AT-HOME CONNECTED FITNESS EQUIPMENT¹



PREFER USING AT-HOME CONNECTED FITNESS EQUIPMENT¹ TO GOING TO THE GYM IN PERSON

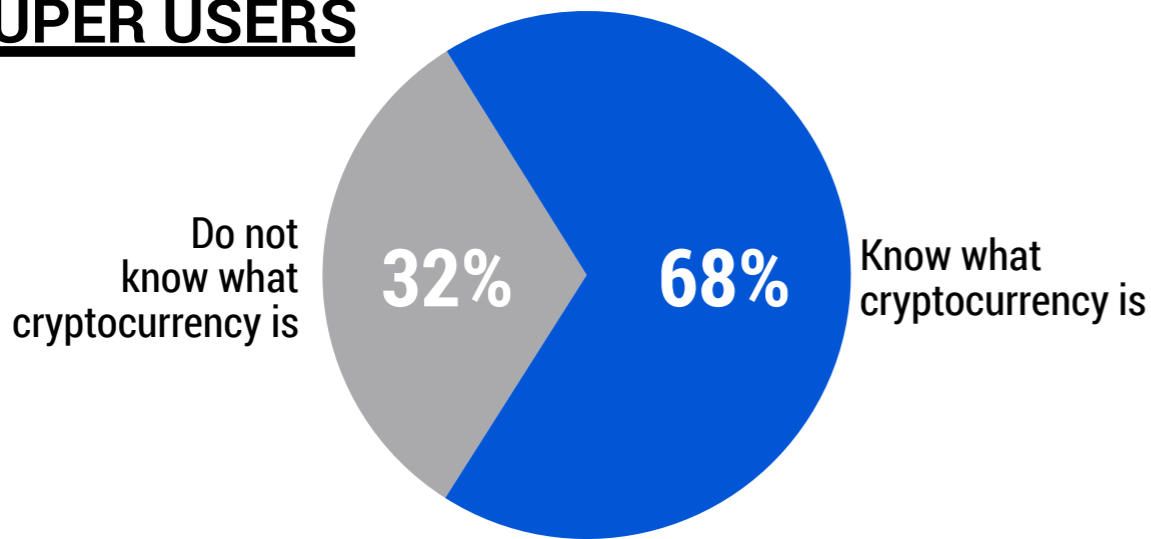


Cryptocurrency: Super Users are early adopters of cryptocurrency

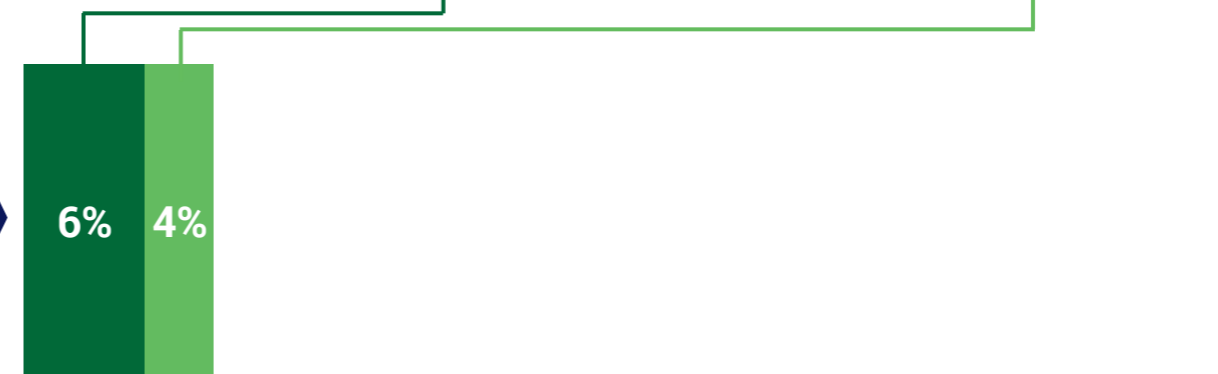
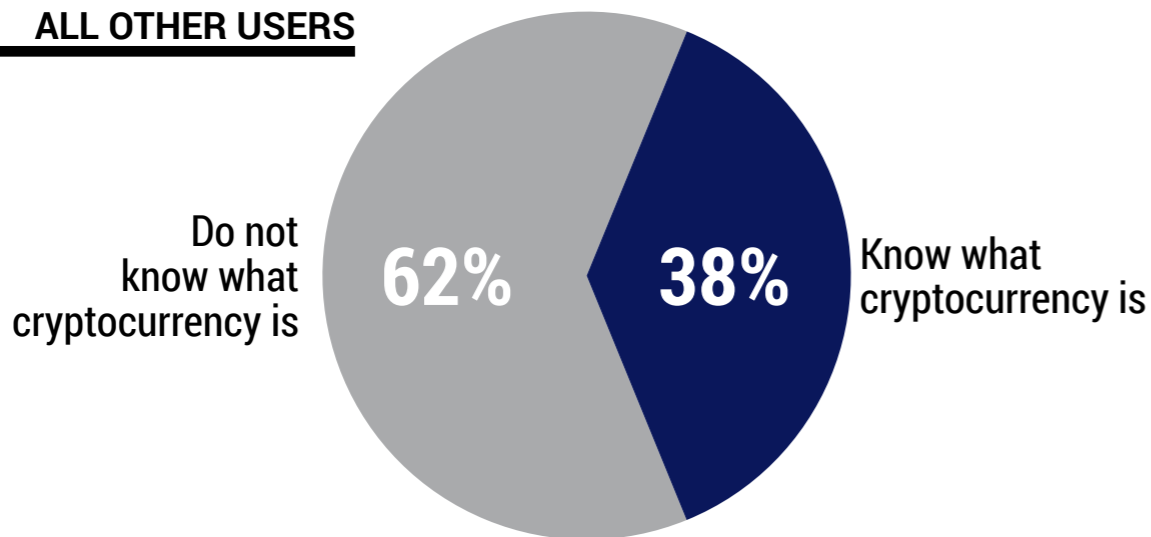
AWARENESS OF CRYPTOCURRENCY, U.S., 2021, % ADULTS AGED 18+

USAGE OF AND INTEREST IN CRYPTOCURRENCY, U.S., 2021, % ADULTS AGED 18+

SUPER USERS



ALL OTHER USERS

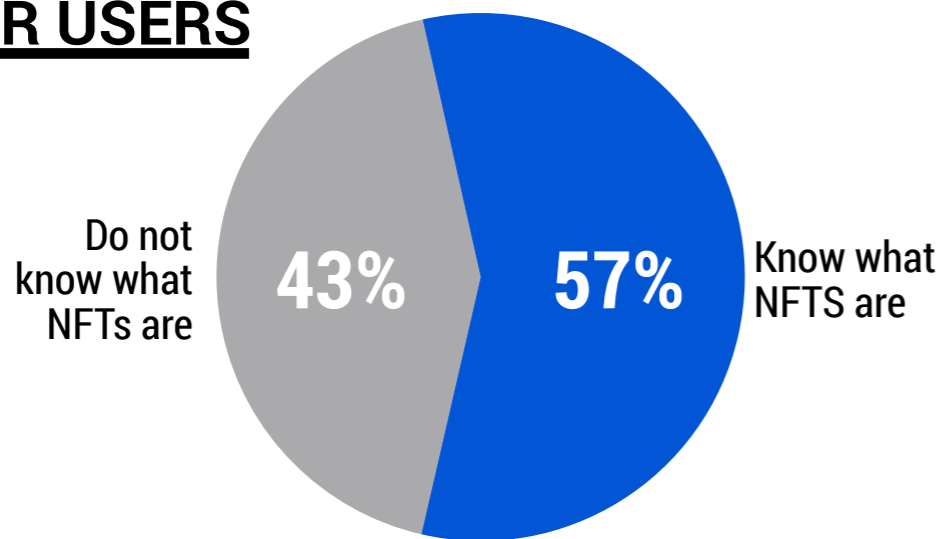


NFTs: Super Users are also significantly more likely to know about NFTs, and many have already purchased or are likely to purchase an NFT in the near future

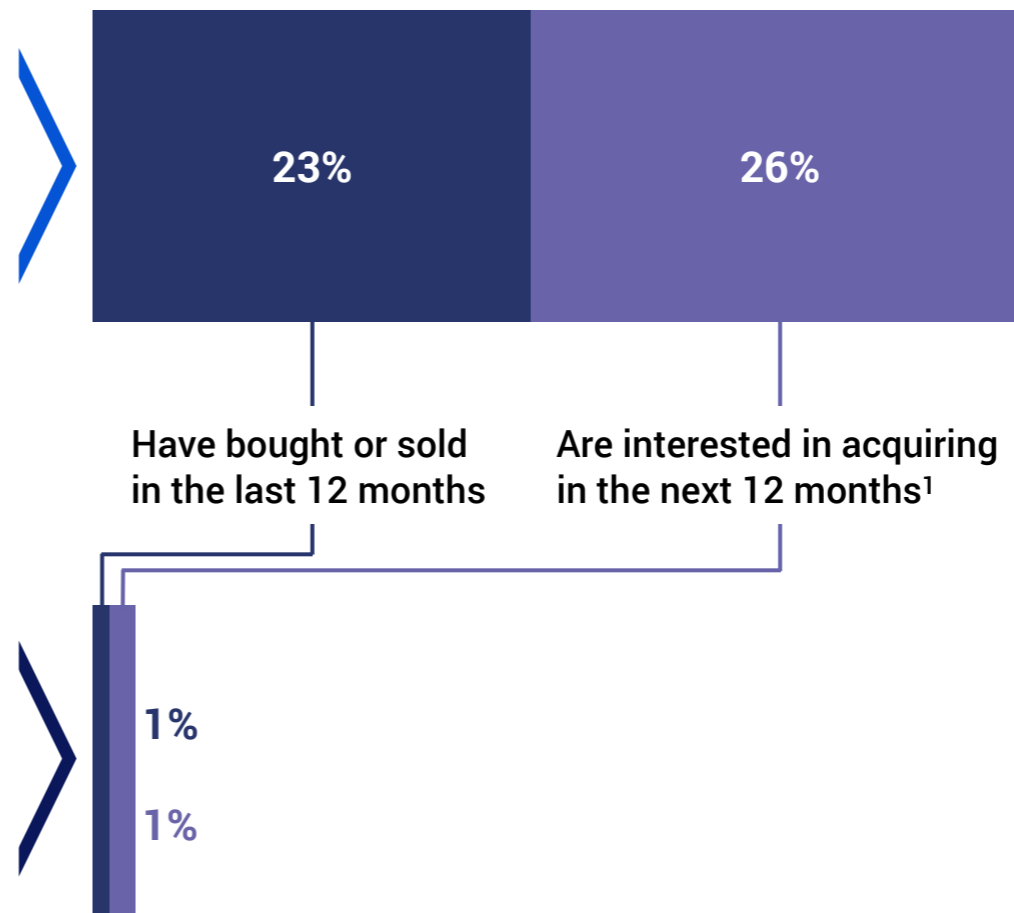
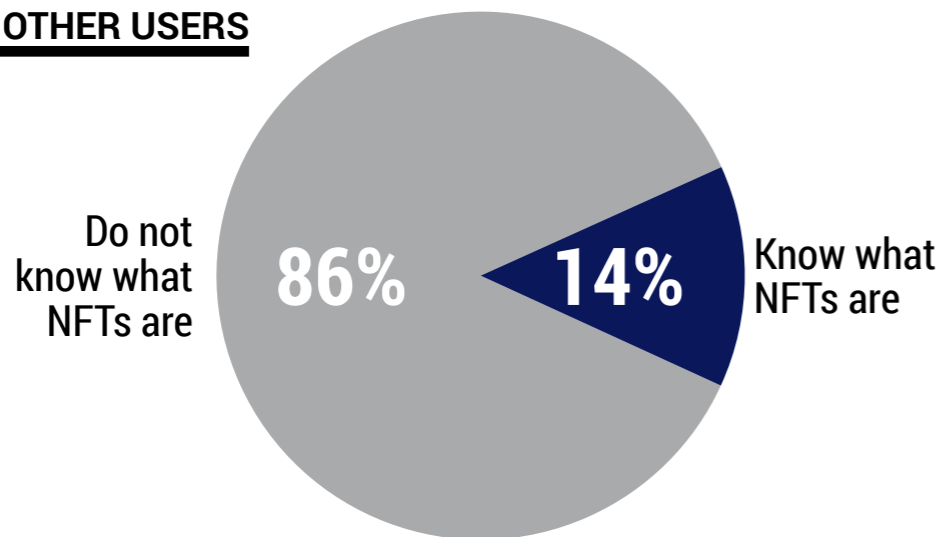
AWARENESS OF NFTS,
U.S., 2021, % ADULTS AGED 18+

USAGE OF AND INTEREST IN NFTS,
U.S., 2021, % ADULTS AGED 18+

SUPER USERS



ALL OTHER USERS



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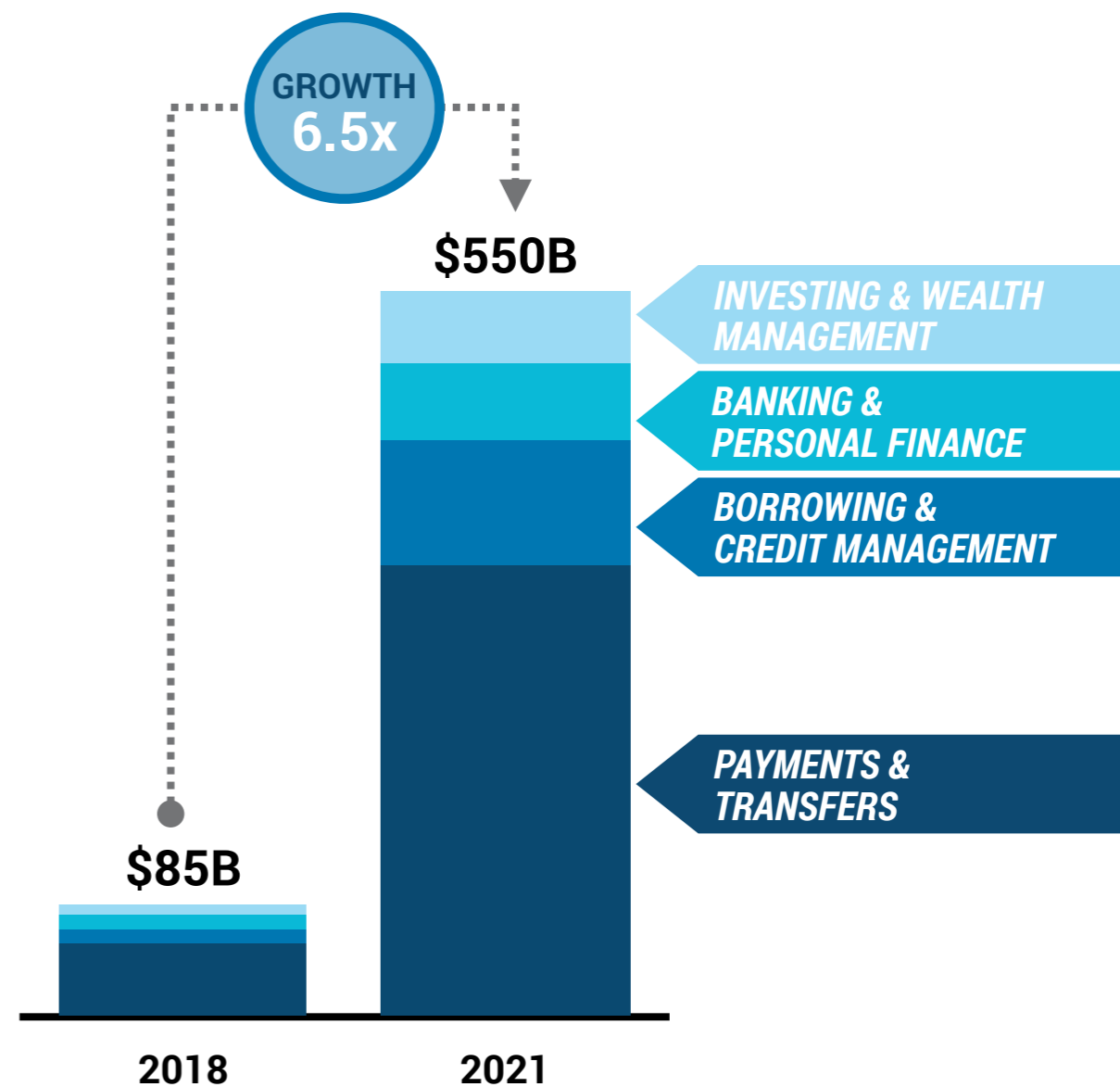
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In 2018, Activate identified the inflection point in Digital Consumer Finance; since then, a massive amount of value has been created

EXAMPLE U.S.-BASED CONSUMER FINANCE COMPANIES FOUNDED SINCE 2007¹

ESTIMATED VALUATION² OF U.S.-BASED CONSUMER FINANCE COMPANIES FOUNDED SINCE 2007¹, U.S., 2018 VS. 2021, BILLIONS USD

INVESTING & WEALTH MANAGEMENT	Active Trading (Stocks & ETFs)	robinhood	M1 Finance	STOCKPILE	
	Wealth Management & Retirement	wealthfront	Betterment	ELLEVEST	
BANKING & PERSONAL FINANCE	Checking & Savings	Varo	Current	digit	chime
	Insurance	Lemonade	ROOT Insurance Co	hippo	
	Budgeting	Dave	EMPOWER RETIREMENT	MoneyLion	
PAYMENTS & TRANSFERS	Consumer Payments & Transfers	flywire	Remitly	tabapay	
	Payments Processing & Networks	Square	Bolt	stripe	toast
BORROWING & CREDIT MANAGEMENT	Lending	Upstart	SoFi	splash financial	Better
	POS Lending	affirm	Katapult	sezzle	
	Credit	credit sesame	NOVA CREDIT	Self.	

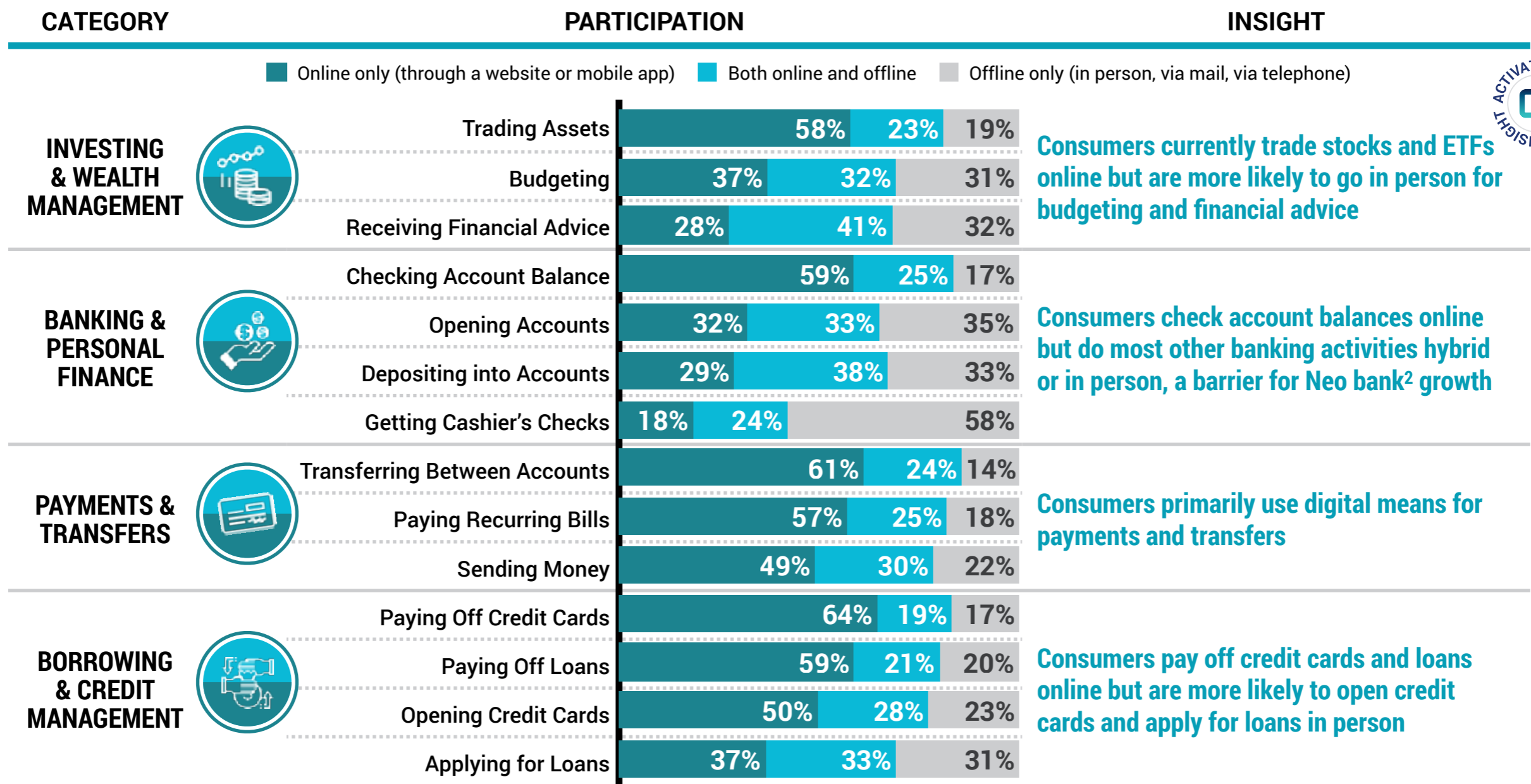


1. Excludes companies that are primarily cryptocurrency platforms. 2. 2018 valuation reflects 2018 or most recent valuation prior to 2018. 2021 valuation reflects 2021 or most recent valuation. Excludes B2B companies. Excludes companies founded before 2018 that do not have a 2018 or prior valuation publicly available.

Sources: Activate analysis, Company filings, Company press releases, Pitchbook

Investing, borrowing, and online-only payment methods will become dominant digital behaviors, while banking will be slower to move entirely online

ONLINE VS. OFFLINE ACTIVITY PARTICIPATION¹, U.S., 2021, % ADULTS AGED 18+ WHO PARTICIPATE IN ACTIVITY



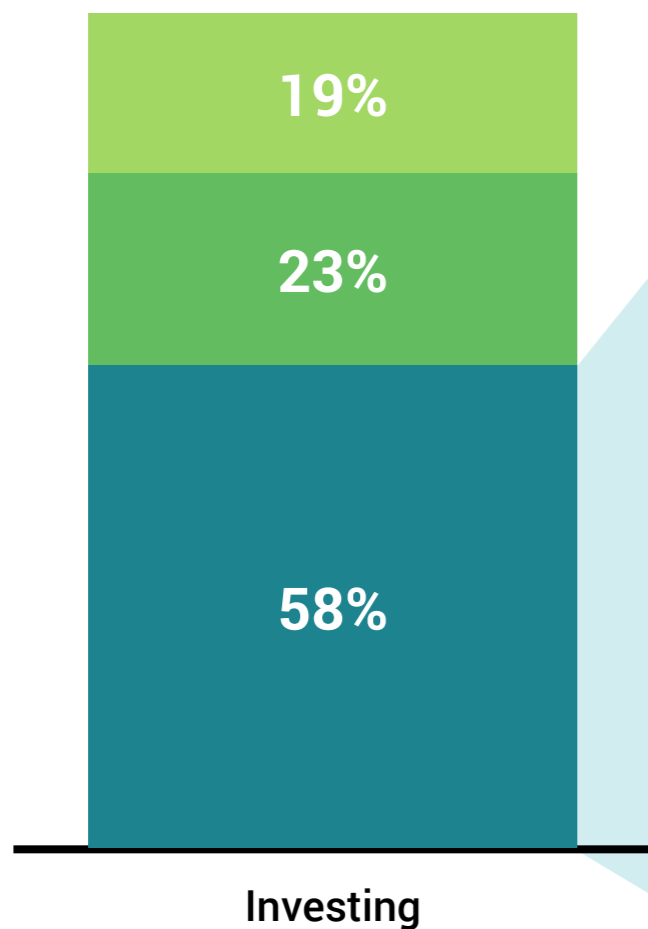
1. Figures do not sum to 100% due to rounding. 2. "Neo banks" are defined as banks that do not have any physical branches and are founded in 2000 or after.
 Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

Investing: Although new players, such as Robinhood and Acorns, have been disruptive in equities trading, traditional players (e.g. Fidelity and Schwab) have adapted and will continue to win most consumers

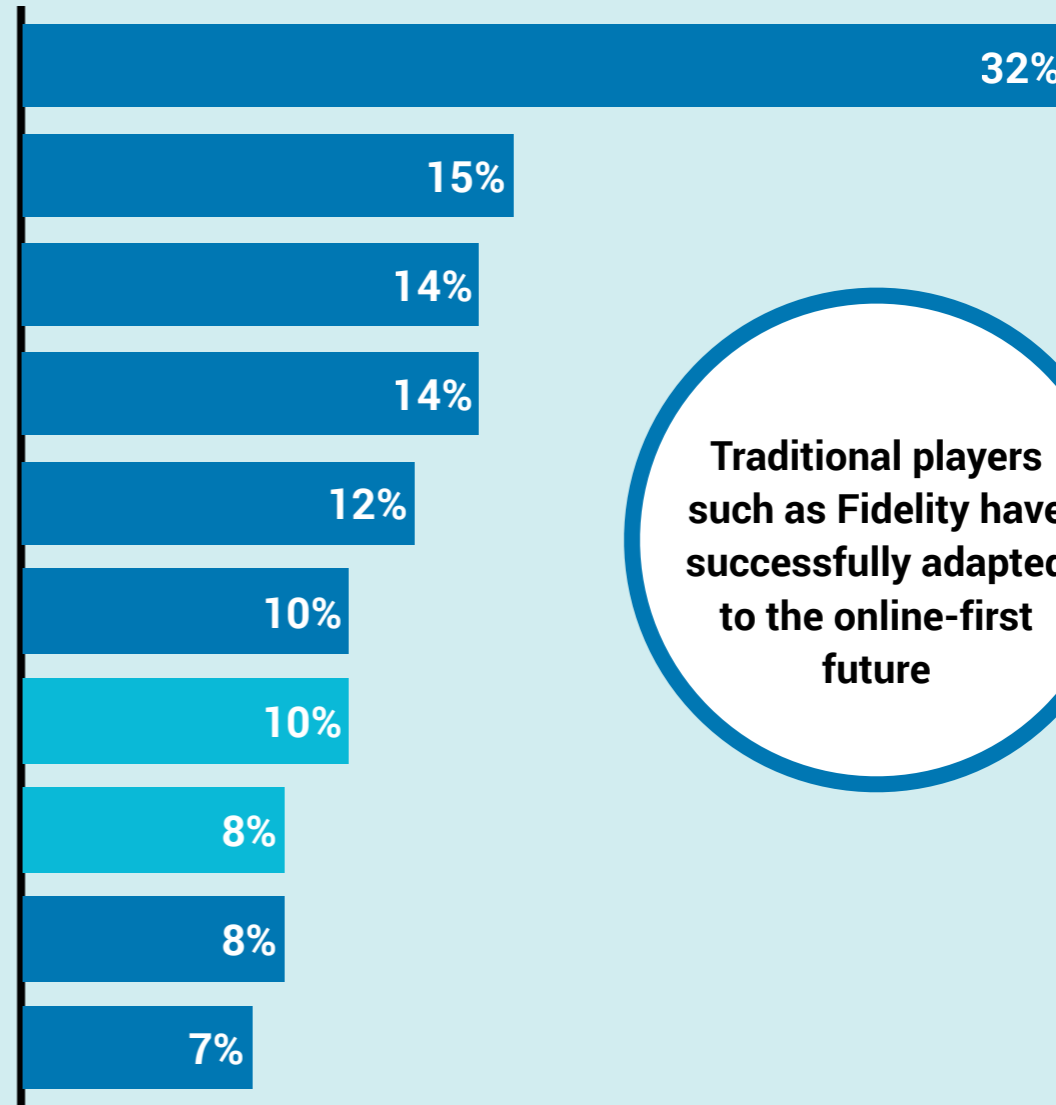
ONLINE VS. OFFLINE PARTICIPATION IN INVESTING, U.S., 2021, % ADULTS AGED 18+ WITH INVESTMENT ACCOUNTS

TOP TEN BROKERAGES USED, U.S., 2021, % ADULTS AGED 18+ WHO ONLY ACCESS INVESTMENT ACCOUNTS ONLINE

- Offline only (in person, via mail, via telephone)
- Both online and offline
- Online only (through a website or mobile app)



- Traditional Brokerages (founded 2001 or before)
- New Digital Brokerages (founded after 2001)



Traditional players such as Fidelity have successfully adapted to the online-first future

Investing: Consumers will continue to choose traditional investment platforms over new digital platforms because of customer service and perceived security

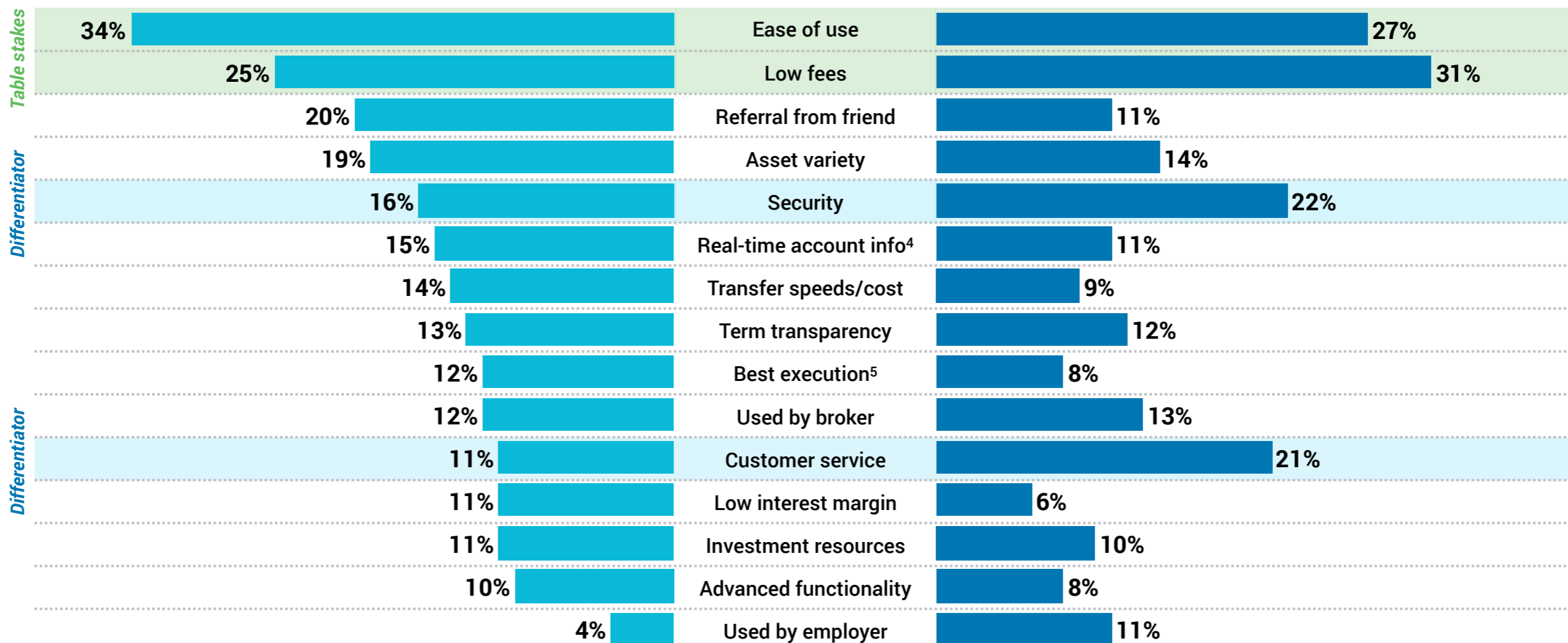
REASONS¹ FOR USING PRIMARY BROKERAGE, U.S., 2021,
% ADULTS AGED 18+ WHOSE PRIMARY BROKERAGE ACCOUNT IS NEW DIGITAL VS. TRADITIONAL

EXAMPLES

NEW DIGITAL BROKERAGES²



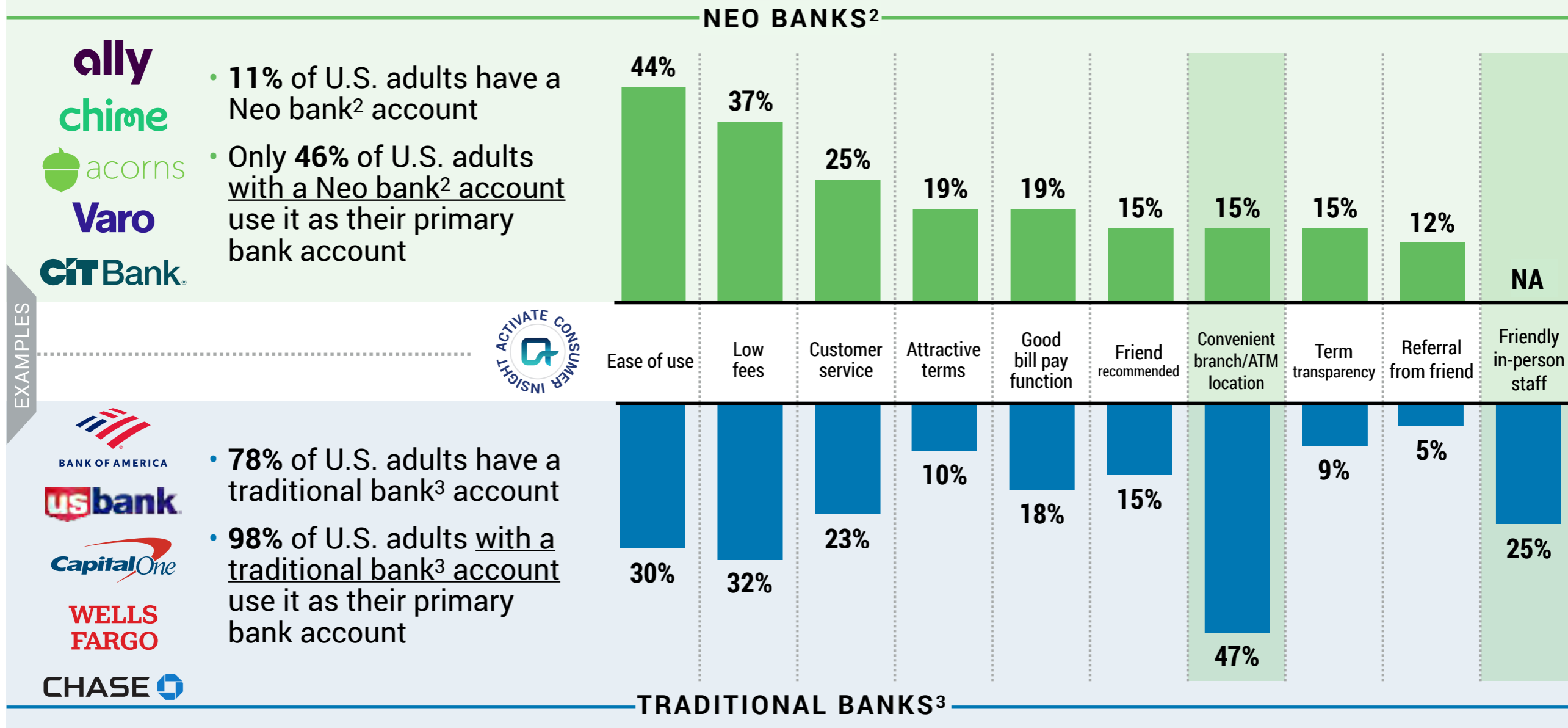
TRADITIONAL BROKERAGES³



1. Consumers were asked to select up to three top reasons for using their primary brokerage. 2. Founded after 2001. 3. Founded 2001 or before. 4. Real-time account information (no delayed reporting). 5. Getting the best execution for purchases and sales of securities (e.g. lowest possible price on purchases, highest possible price on sales). Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

Banking: Consumers will remain resistant to adopting Neo banks due to the convenience of branches / ATM locations of traditional banks, superior customer service, and minimal perceived advantages in fees or ease of use

REASONS FOR USING PRIMARY BANK¹, U.S., 2021,
% ADULTS AGED 18+ WHOSE PRIMARY BANK ACCOUNT IS A NEO BANK² VS. TRADITIONAL BANK³

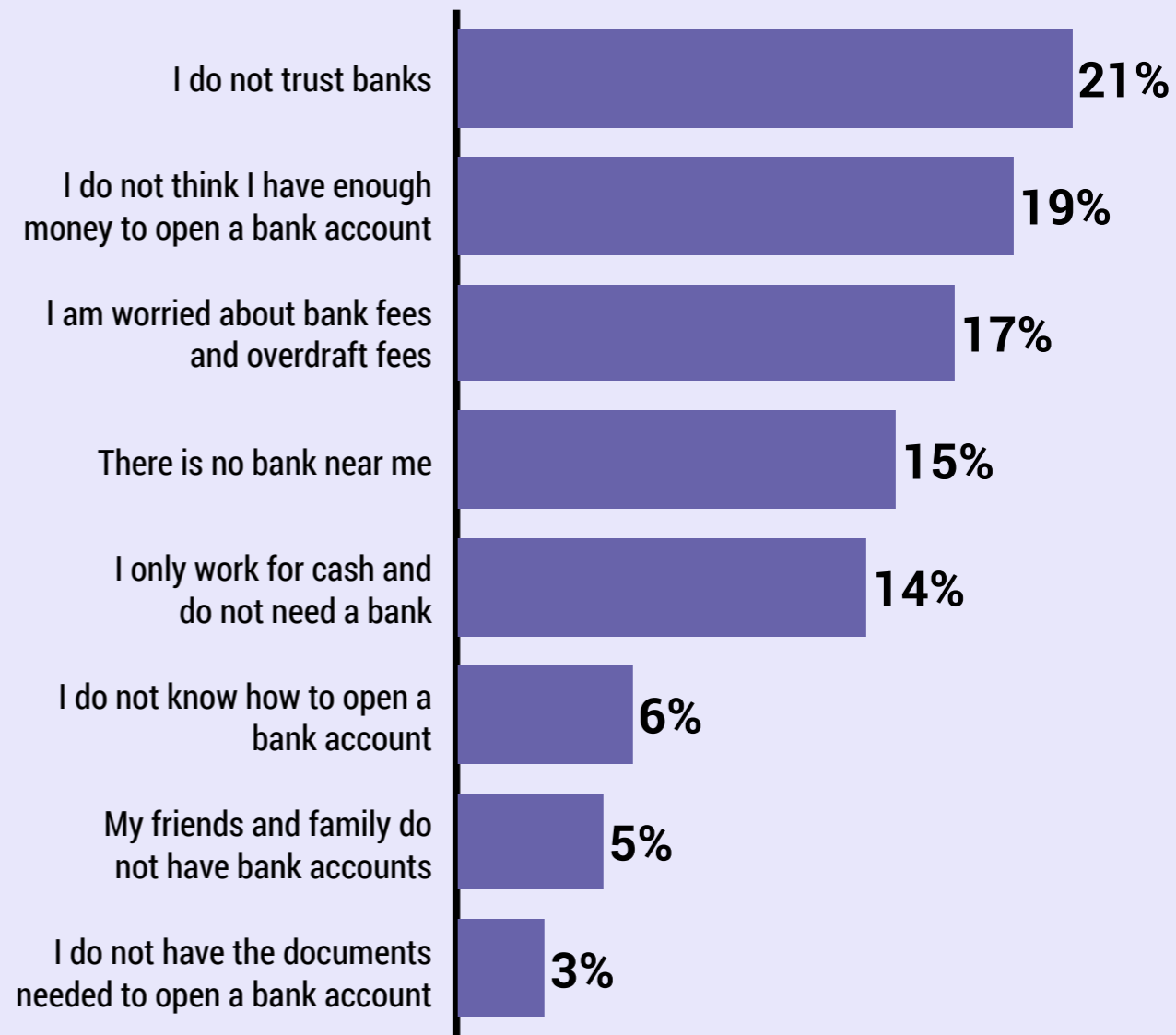
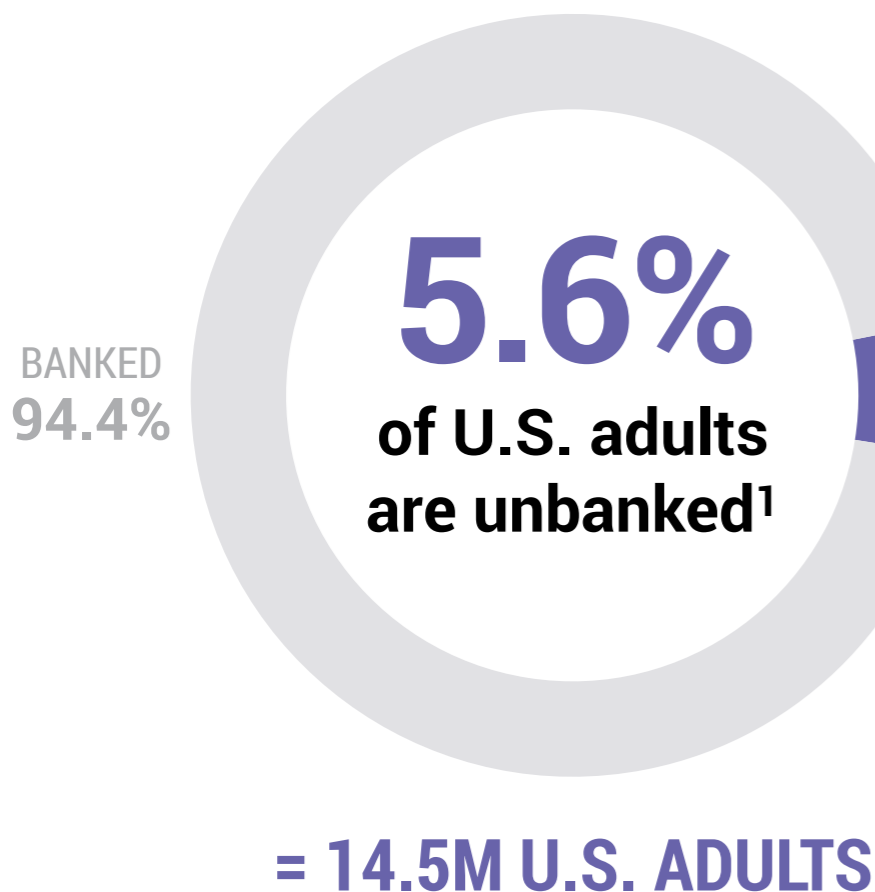


1. Consumers were asked to select up to three top reasons for using their primary bank for checking/savings. 2. "Neo banks" are defined as banks that do not have any physical branches and are founded in 2000 or after. 3. "Traditional banks" are defined as banks with physical branches or founded before 2000.
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

Unbanked: 5.6% of Americans remain unbanked; although many are unable to open an account (due to lack of funds or limited access), the top reason is distrust of banks

**BANKED VS. UNBANKED¹ POPULATION, U.S., 2021,
% ADULTS AGED 18+**

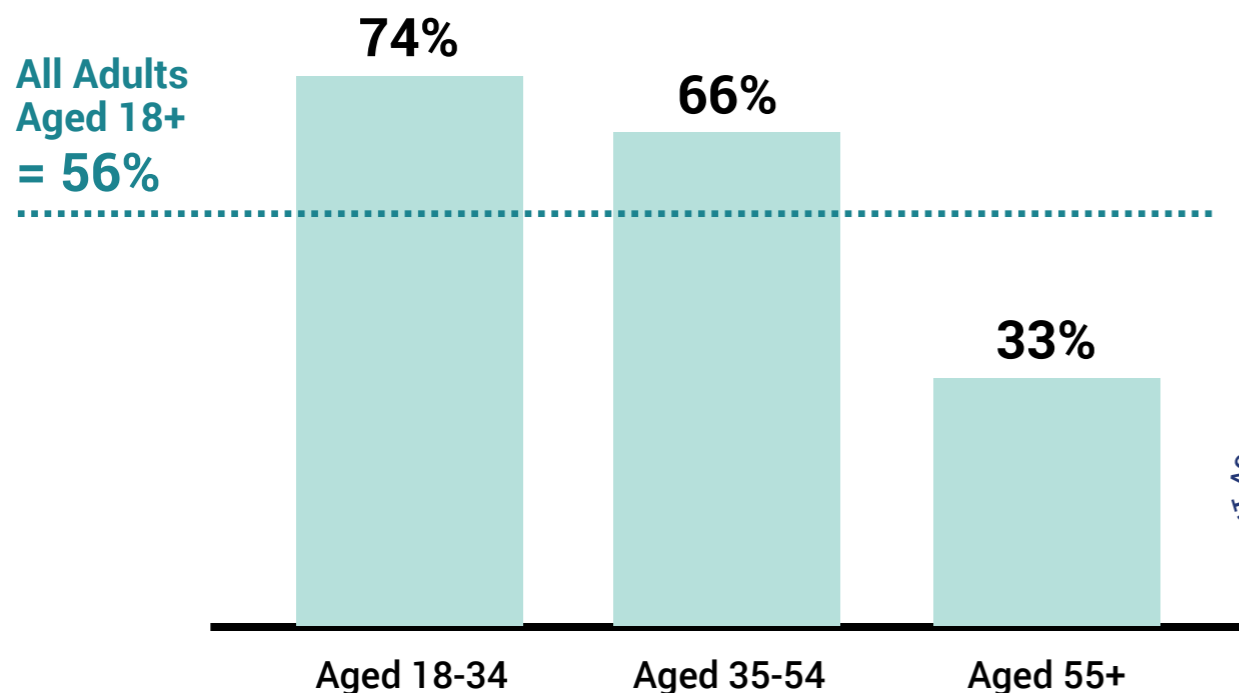
**REASONS² FOR BEING UNBANKED, U.S., 2021,
% UNBANKED¹ ADULTS AGED 18+ WHO PROVIDED REASON³**



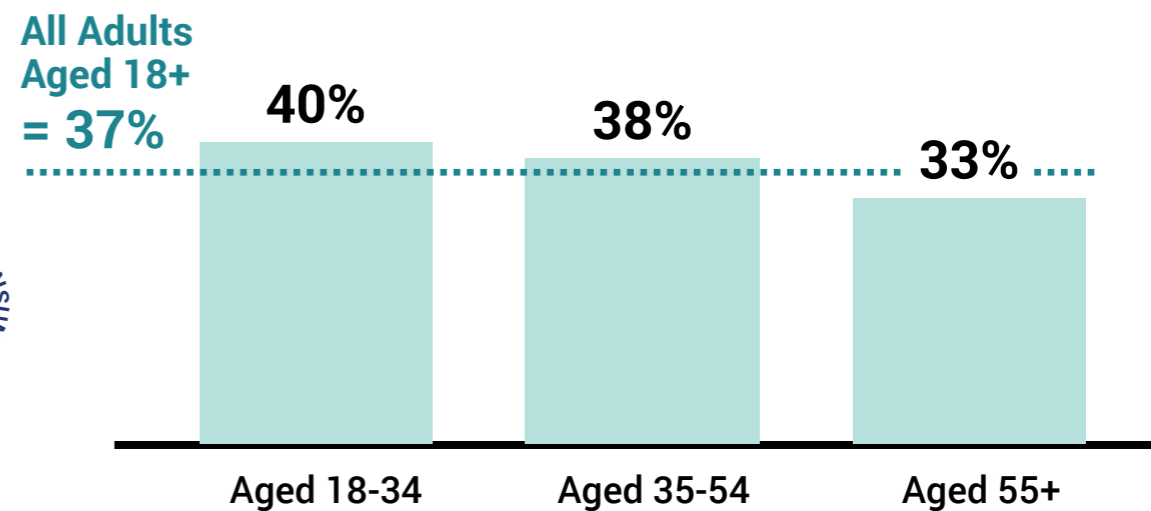
Payments: Younger consumers are much more likely to use digital services for P2P payments; age is not a big differentiator for C2B payments, indicating slower growth ahead

USAGE OF DIGITAL SERVICES FOR P2P VS. C2B PAYMENTS IN THE LAST 12 MONTHS, U.S., 2021, % ADULTS AGED 18+

Use Digital Services for Peer-to-Peer Payments¹



Use Digital Services for Consumer-to-Business Payments²

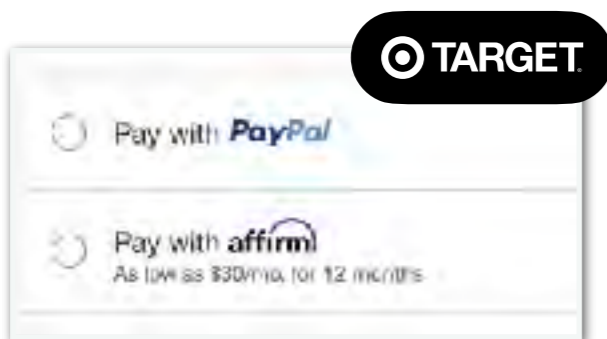


TOP 5 SERVICES:



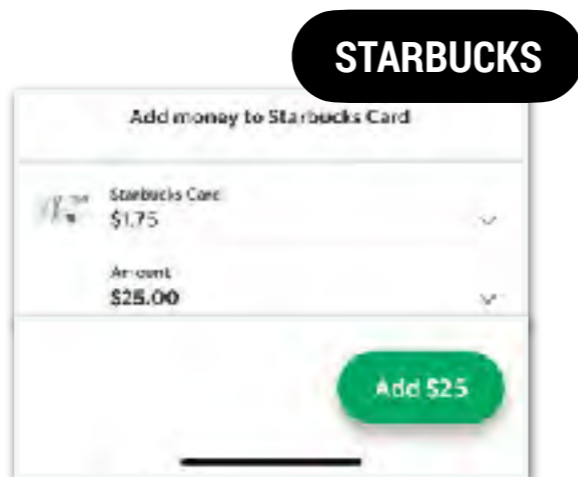
Consumers will increasingly see financial solutions embedded in the consumer goods and technology industries

FINANCIAL SOLUTIONS IN CONSUMER GOODS / TECHNOLOGY



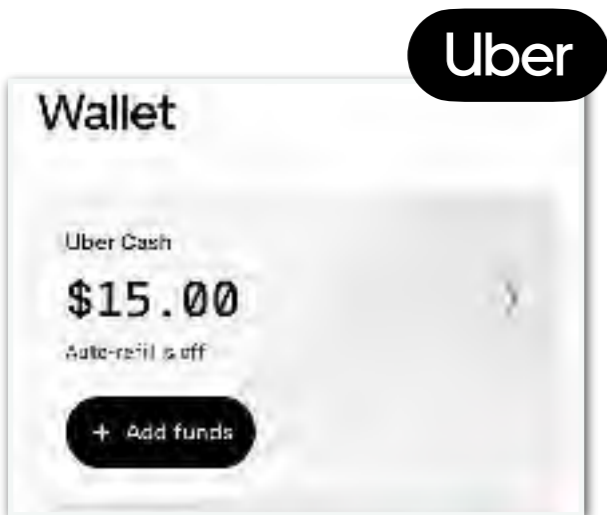
TARGET

Target partners with the digital payment service PayPal, as well as with the Buy Now, Pay Later service Affirm to provide point-of-sale financing



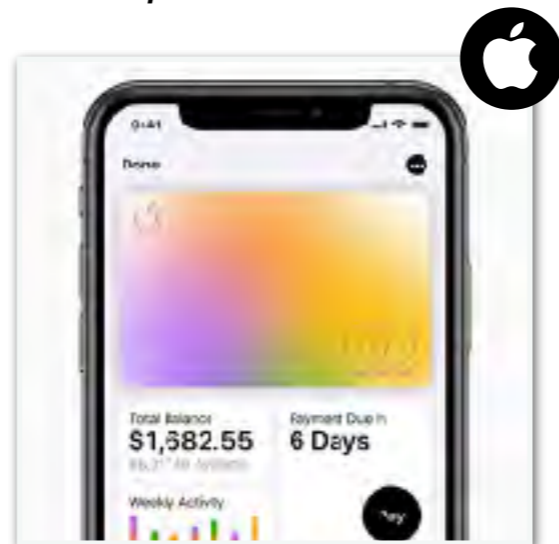
STARBUCKS

Starbucks has its Starbucks Card feature, which allows users to add funds for Starbucks purchases and earn rewards



Uber

Uber Wallet has Uber Cash, which allows users to add funds for their next ride or Eats order, and is home to the Uber Visa Debit Card (partnership with Go2Bank), which allows drivers to cash out up to 5x per day



Apple

Apple Card is a credit card from Apple in partnership with Goldman Sachs optimized for use with Apple devices and Apple Pay

SHOPIFY CASE STUDY: EMBEDDED FINANCE



IN ADDITION TO ITS ECOMMERCE CAPABILITIES, SHOPIFY PROVIDES A ROBUST FINTECH STACK TO ITS MERCHANTS:

SHOPIFY BALANCE ACCOUNT

Shopify Balance Account is a merchant checking account for sales deposits with no fees and no minimum balance

SHOPIFY BALANCE CARD

Shopify Balance Card is a debit card that merchants can use to access their money in Shopify Balance and has cash back and discounts on business spending like shipping and marketing

SHOPIFY CAPITAL

Shopify Capital is a business finance program offering loans or cash advances to Shopify merchants

SHOP PAY

Shop Pay is a one-click checkout solution for customers on Shopify stores and has expanded to U.S. merchants selling on Facebook, Instagram, and Google in 2021

SHOP PAY INSTALLMENTS

Shop Pay Installments is a partnership with Affirm to give merchants and shoppers a Buy Now, Pay Later experience

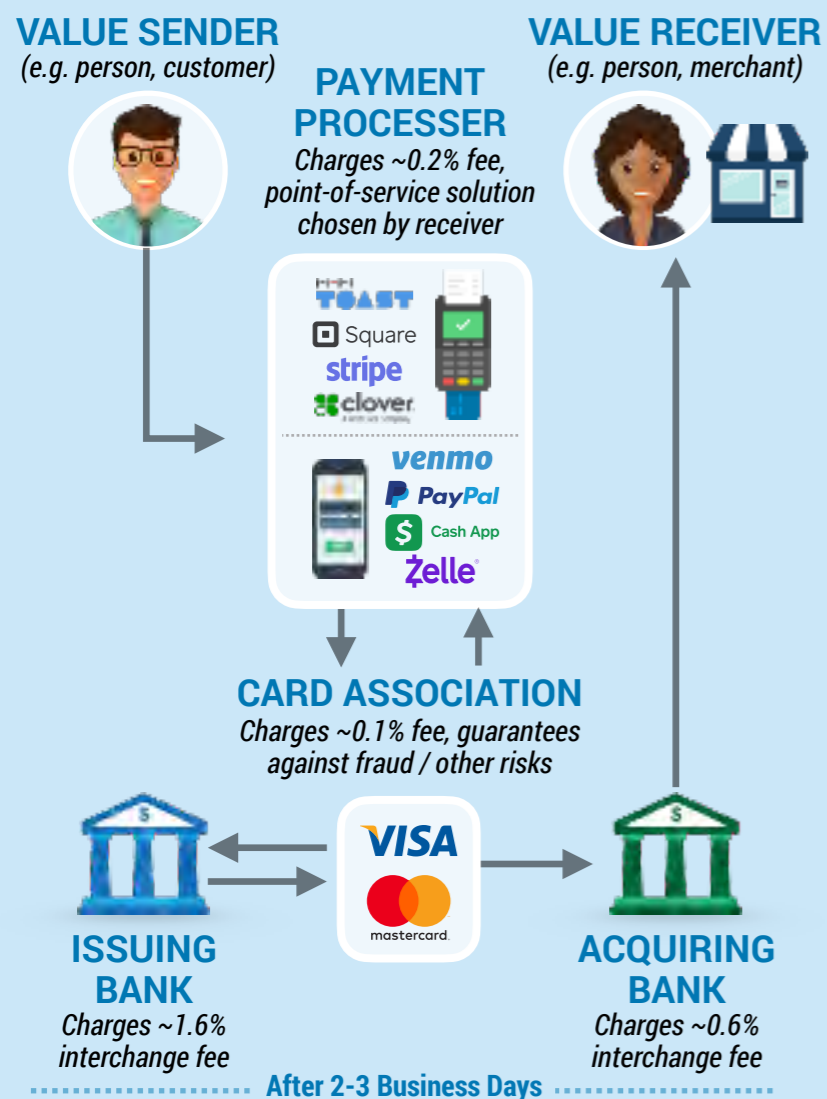
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Cryptocurrencies will likely disrupt industries that rely on transferring value (e.g. consumer finance, video gaming) just as the internet did for transferring information

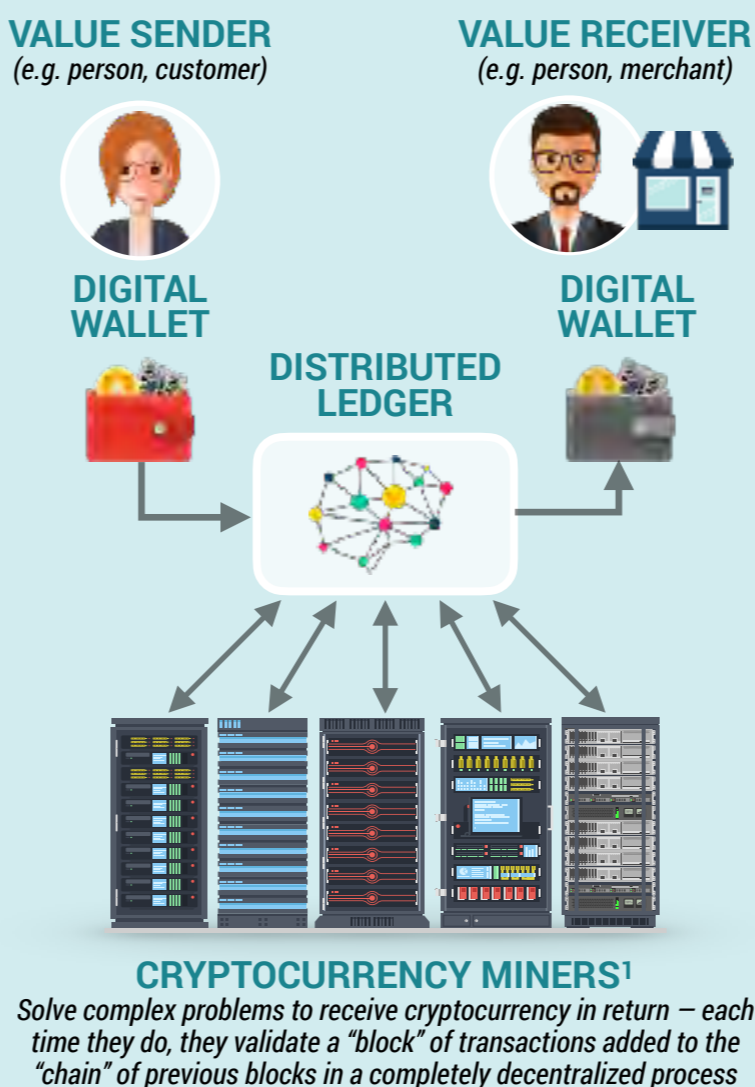
TRANSFERRING VALUE ON THE INTERNET

Total Time to Transfer Value: **2-3 DAYS**
 Total Fees to Transfer Value: **~2.5%**



TRANSFERRING VALUE ON A BLOCKCHAIN

Total Time to Transfer Value: **1-10 MINUTES**
 Total Fees to Transfer Value: **< 0.2%**



vs.

Significantly less time and lower costs for transferring value

The INTERNET revolutionized INFORMATION just as CRYPTOCURRENCIES will revolutionize VALUE

Cryptocurrencies drive down the **cost** of transferring value, just as the internet did with information

Existing institutions **risk being disrupted** and disintermediated

Incumbents that **innovate will find a way** to stay on top, just as we have seen historically in digital consumer finance

Until now, consumers have primarily used cryptocurrency for trading rather than payments or other crypto use cases; many of the promised use cases of cryptocurrency have faced headwinds limiting adoption

POTENTIAL ADVANTAGES AND CURRENT HEADWINDS

ADVANTAGES OF CRYPTO

CURRENT HEADWINDS

 **LOWER FEES** on transactions (especially on low dollar transactions)

Today, fees on transactions with crypto are comparable to other methods due to high fees from crypto intermediaries (e.g. BitPay) and network congestion

 **FASTER SPEEDS** on settlement of transactions

Though crypto settles faster, it appears slower to consumers because payment solutions (e.g. credit cards) are seemingly instant

 **IMPROVED SECURITY** and reduced risk

Though no cryptocurrency has been hacked directly to date, early and current intermediaries in the space are hacked somewhat frequently, eroding trust

 **ANONYMITY** and privacy within transactions

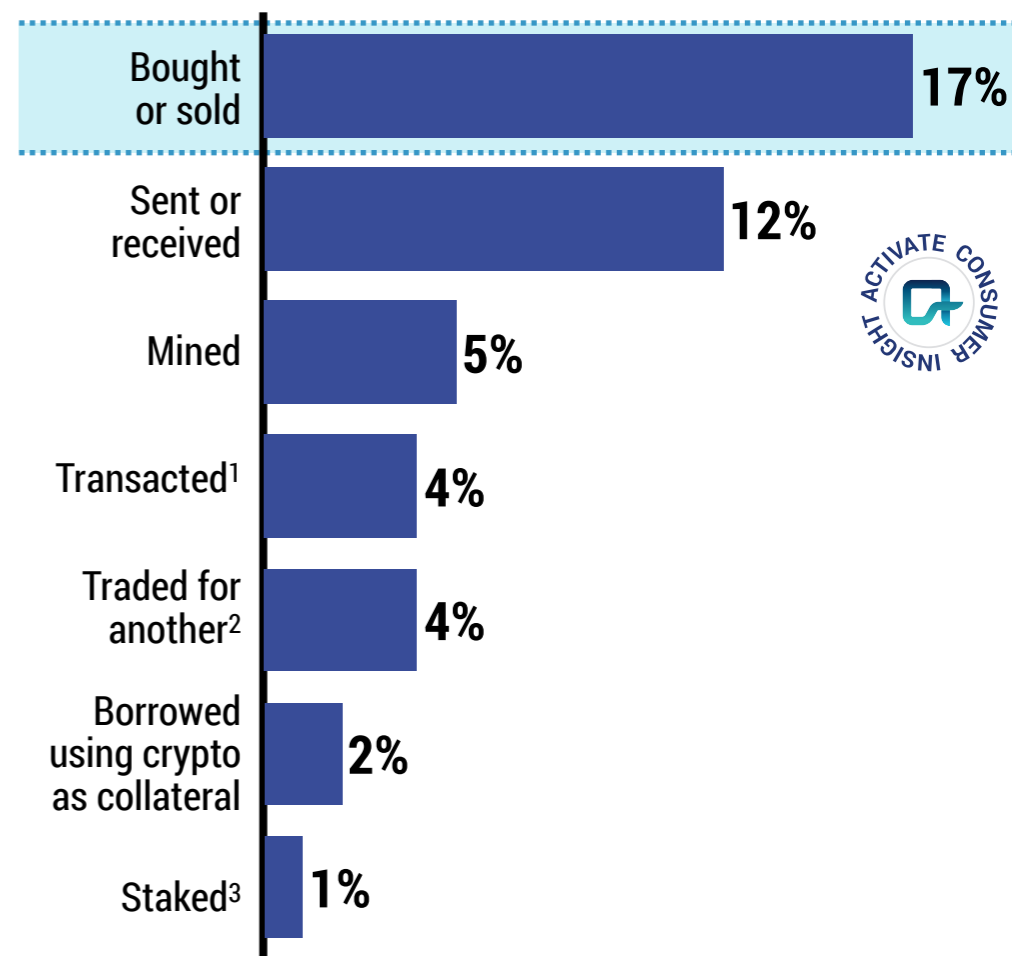
Anonymity creates challenges with preventing money laundering and terrorist financing, and makes regulation compliance difficult

 **DECENTRALIZED AUTHORITY** with no single "fail point"

The computationally intensive proof-of-work mining process (most common decentralized validation method) raises environmental concerns

HOW CONSUMERS USE CRYPTOCURRENCY TODAY

Participation in Cryptocurrency, U.S., 2021, % Adults Aged 18+

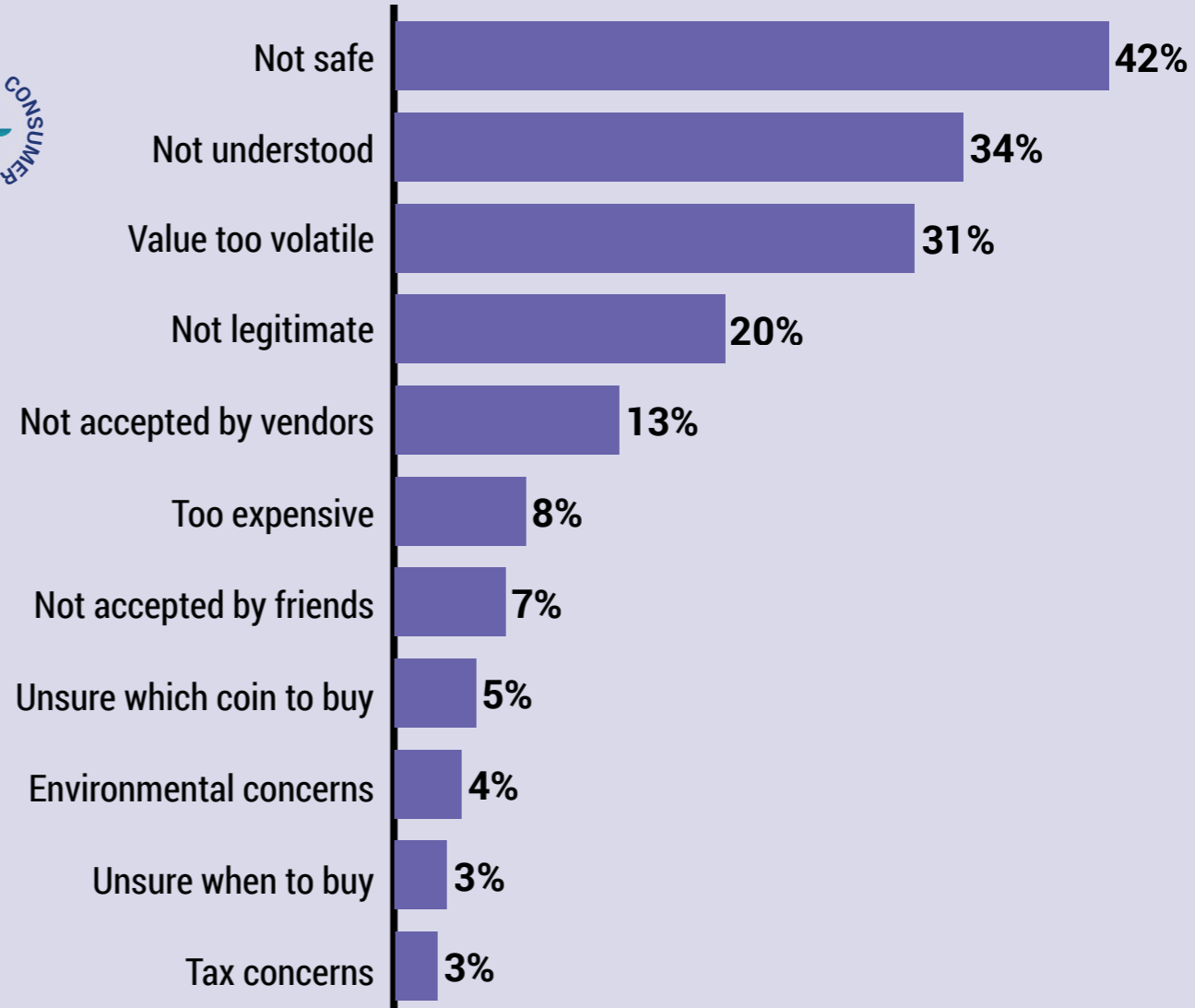
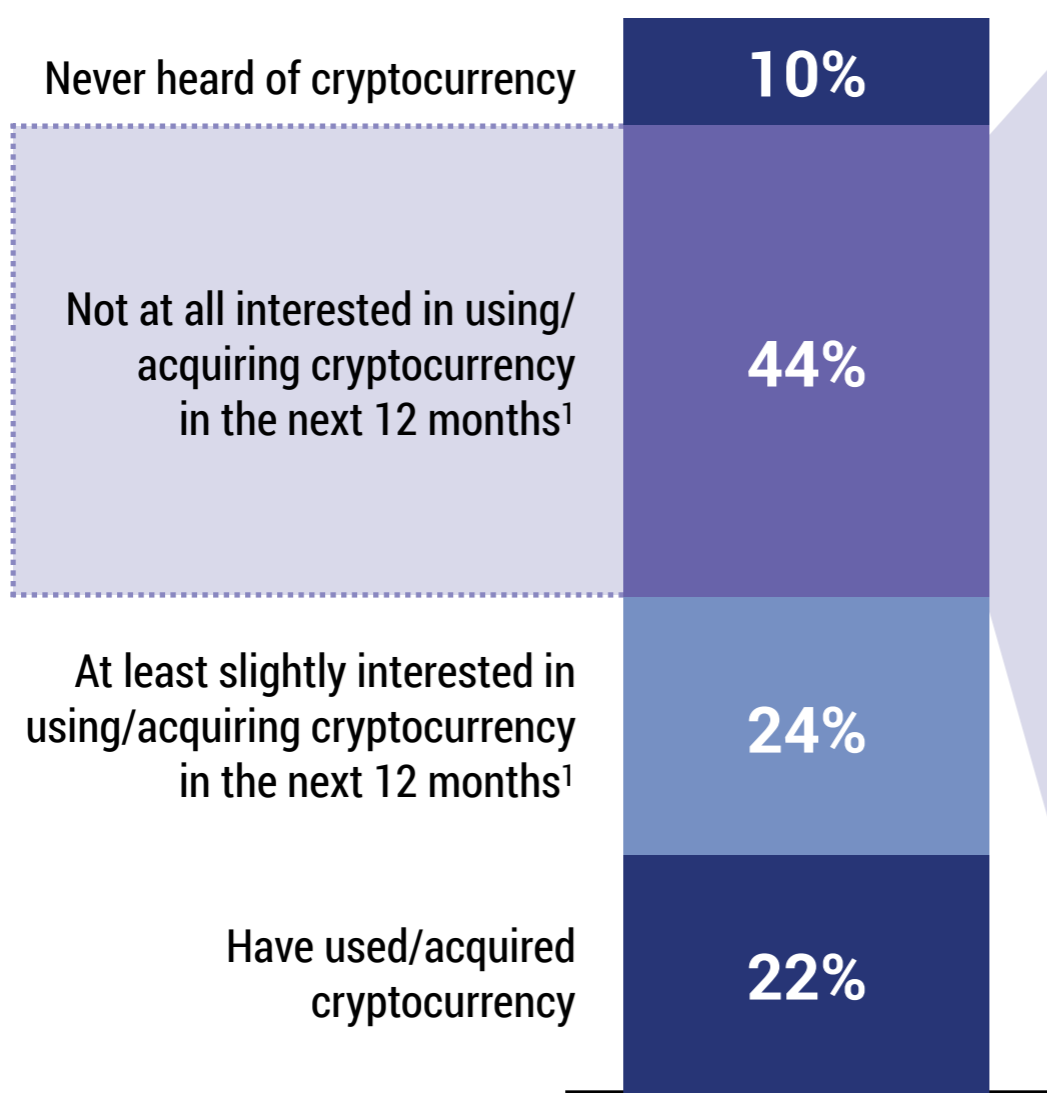


1. Paid for a product/service with cryptocurrency. 2. Traded one cryptocurrency for another. 3. "Staking" refers to the process of committing crypto assets to support a blockchain network and verify transactions. It is available in cryptocurrencies that use a proof-of-stake model to process transactions and results in a reward for those participants that stake their currency (i.e. they generate passive income in the form of that cryptocurrency).
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Company sites

The number of consumers trading crypto has the potential to double in the next 12 months – although many will remain hesitant due to fears of safety, volatility, and a lack of understanding





















CURRENT PARTICIPATION AND FUTURE INTEREST IN USING/ACQUIRING CRYPTOCURRENCY, U.S., 2021, % ADULTS AGED 18+

CONCERNS ABOUT ACQUIRING/USING CRYPTOCURRENCY², U.S., 2021, % ADULTS AGED 18+ WHO ARE NOT INTERESTED IN ACQUIRING/USING CRYPTOCURRENCY IN THE NEXT 12 MONTHS¹



Though Bitcoin and Ethereum remain dominant, innovation will come from Altcoins that focus on solving a range of problems such as faster and lower-cost payments and environmental concerns

TOP TEN CRYPTOCURRENCIES BY MARKET CAPITALIZATION, U.S., SEPT. 2021, BILLIONS USD

	COIN	FOUNDED	MARKET CAPITALIZATION ¹	1-YR GROWTH	KEY DIFFERENCES AND USE CASES
	 bitcoin	2009	 \$820B	4.2x	Has the most liquidity and adoption among consumers to date as the first cryptocurrency
	 ethereum	2015	 \$359B	8.8x	Offers the ability to code smart contracts (including NFTs) and promises future innovation through Ethereum 2.0
TOP ALTCOINS ⁴	 CARDANO	2017	 \$72B	23.8x	Uses an alternate mining method (proof-of-stake) that is more environmentally friendly
	 tether	2014	 \$69B	1.0x	Is a Stablecoin ² that has faced regulatory scrutiny in the U.S.
	 BINANCE COIN	2017	 \$47B	13.7x	Is an exchange-based token created by Binance (largest global crypto exchange), now on its own blockchain
	 XRP	2012	 \$44B	4.1x	Runs digital payments platform RippleNet, which enables high-speed, global money transfers
	 SOLANA	2018	 \$31B	45.8x	Improves decentralized app (DApp ³) creation and scale of alternative mining methods (proof-of-history/-stake)
	 Polkadot	2016	 \$30B	7.3x	Makes different blockchains interoperable , applying beyond crypto (e.g. NFTs, DApps)
	 USD Coin	2018	 \$30B	1.0x	Is a Stablecoin ² offered by Centre Consortium, which holds a reserve of cash and short-term treasuries
	 DOGECOIN	2013	 \$30B	82.7x	Was originally founded as a joke – has since been adopted by speculators and has an active community

1. Market capitalization as of 8 pm on Sept. 30, 2021. 2. "Stablecoin" is a class of cryptocurrency that is pegged to a fiat currency (e.g. is always worth one dollar) and often backed by a reserve asset (e.g. U.S. dollars, treasury bonds). 3. "DApp" is an application that runs on a decentralized computing system. 4. "Altcoins" are cryptocurrencies other than Bitcoin and Ethereum.
Sources: Activate analysis, CoinMarketCap, Company sites

Centralized Financial Exchanges are rapidly expanding into new crypto products and services; Decentralized Financial Exchanges are gaining scale and will carve out a meaningful part of the market

FINANCIAL EXCHANGES THAT SUPPORT THE CRYPTOCURRENCY ECOSYSTEM



- Financial exchanges are pushing into **new financial products and services** (e.g. lending), though are facing **regulatory scrutiny** and push-back
- Centralized exchanges offer consumers **trust in an organization** but are criticized for being **against the decentralized nature** of crypto as a central authority

- As decentralized organizations, decentralized exchanges have largely **avoided regulatory enforcement** – as a result they offer **more innovative** services
- Today, the average consumer has challenges learning about and understanding how to use decentralized exchanges, but decentralized exchanges are **true to the decentralized ethos of the crypto community**

1. As of Sept. 2021. 2. In addition to decentralized exchanges, there is a broad ecosystem of decentralized finance that includes a number of non-exchange financial services (e.g. peer-to-peer lending, asset management, infrastructure development, digital identity, digital insurance, payments solutions).
Sources: Activate analysis, Coin Gecko, CoinMarketCap, Nomics

Traditional financial institutions entering crypto have fueled recent growth; there is more growth to be unlocked once there is greater certainty about U.S. and international government regulation

MAJOR CURRENT OR POTENTIAL CRYPTO PARTICIPANTS

BUY-SIDE INSTITUTIONS	SELL-SIDE INSTITUTIONS	ASSET MANAGERS	FINTECH PLATFORMS
			
<ul style="list-style-type: none"> • Niche crypto funds are no longer the only ones trading crypto – traditional hedge funds have started to test strategies • Family offices and endowments are increasingly entering crypto as a long-term investment • Traditional funds get exposure by investing in crypto companies 	<ul style="list-style-type: none"> • Large banks are looking to serve their clients in the changing crypto landscape with their own trading and custody platforms • New B2B partners (e.g. NYDig, Galaxy) have emerged to serve these institutions • Banks often start with solutions for their high-net-worth clients 	<ul style="list-style-type: none"> • Asset managers will take advantage of a crypto ETF (if and when it is approved by regulators) • Already, crypto-focused funds (e.g. Grayscale) offer trusts based on crypto futures that track cryptocurrency prices • Many asset managers have already filed for crypto ETFs with the SEC 	<ul style="list-style-type: none"> • Platforms are creating new entry points for consumers into crypto with the security of a long-standing and recognizable brand • Though they offer ways to invest today, the real value is in new crypto use cases core to their product in the future

The BIGGEST BARRIER for institutions is regulatory compliance and uncertainty



UNITED STATES

Currently debating and writing a regulatory framework for crypto



CHINA

Actively trying to stifle and ban crypto as an existential monetary threat



EUROPE

Leading the world in fostering an ecosystem of innovation for crypto

The cryptocurrency ecosystem is rapidly evolving with potentially disruptive new companies exploring new use cases and applications

EXAMPLE CRYPTOCURRENCY ECOSYSTEM PARTICIPANTS

CUSTODY & DIGITAL WALLETS



PAYMENTS & TRANSFERS



GAMING



MINING



DAPPS & SMART CONTRACTS (Decentralized applications)



NFTs (Non-Fungible Tokens)



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Activate Point of View on NFTs: as more consumer time migrates to digital experiences and interest grows in the metaverse, we believe that every technology and media company will need an NFT strategy

Why now:

NFTs have exploded onto the scene with total sales exceeding \$8B in 2021 YTD¹

What does “NFT” mean

NFTs, or non-fungible tokens, are unique blockchain-based digital assets such as artworks, videos, games, recordings, etc.

Who is playing:

In addition to well-known memes/one-offs, many major companies are entering the space and experimenting with NFTs, whether the use case is collecting, betting, trading, gaming, or displaying

- This diverse list includes Coca Cola, Dolce & Gabbana, Gucci, Marvel, Mattel, NBA, Nike, TikTok, and WWE – to name a few

Current market:

NFTs could be experiencing a speculative bubble

Looking forward:

Nevertheless, NFTs have the potential to succeed and prove useful moving forward:

- NFTs tap into existing consumer behaviors such as collecting, betting, and supporting content creators – NFT users significantly over-index on these behaviors
- Creators/companies benefit from a new revenue source and the potential to further monetize existing IP
- Every technology and media company will need an NFT strategy, in part to prepare for a potential metaverse relying on NFTs

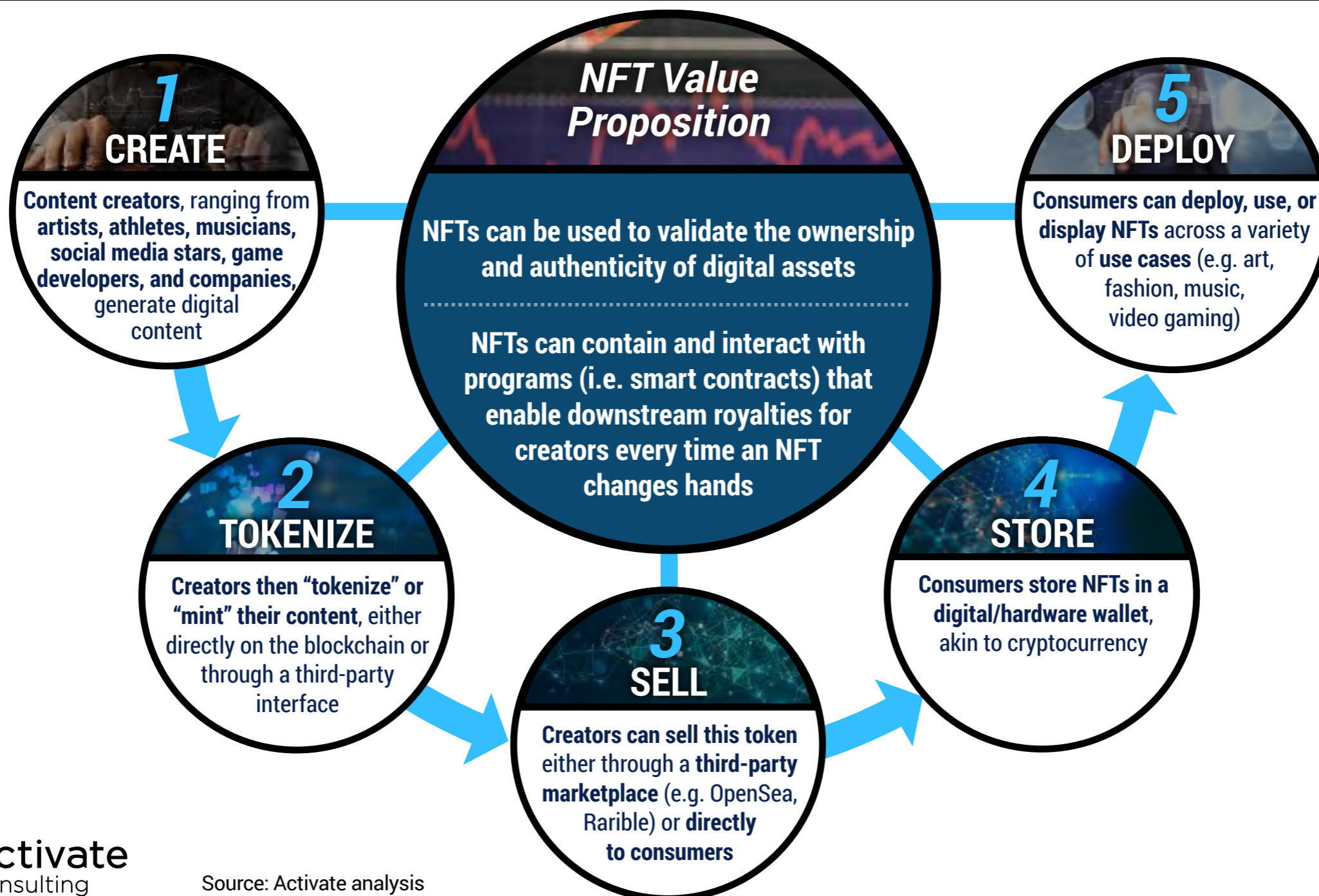
Requirements for NFTs to see mainstream adoption:

Requirements include:

- Authenticity solutions, providing a degree of verification on the initial creation of NFTs
- Standards for storage of underlying metadata (unique attributes beyond ownership)
- Sustainable energy footprint to add NFTs to the blockchain
- Future regulation that is friendly to NFT development (e.g. no high taxes, trading restrictions, emissions restrictions)
- Ability to buy and transfer NFTs across platforms, especially social media / video gaming
- Low costs to create NFTs (in the form of mint/gas fees²)
- Participation at scale in NFTs from companies holding major IP (e.g. Disney, Warner Bros.)

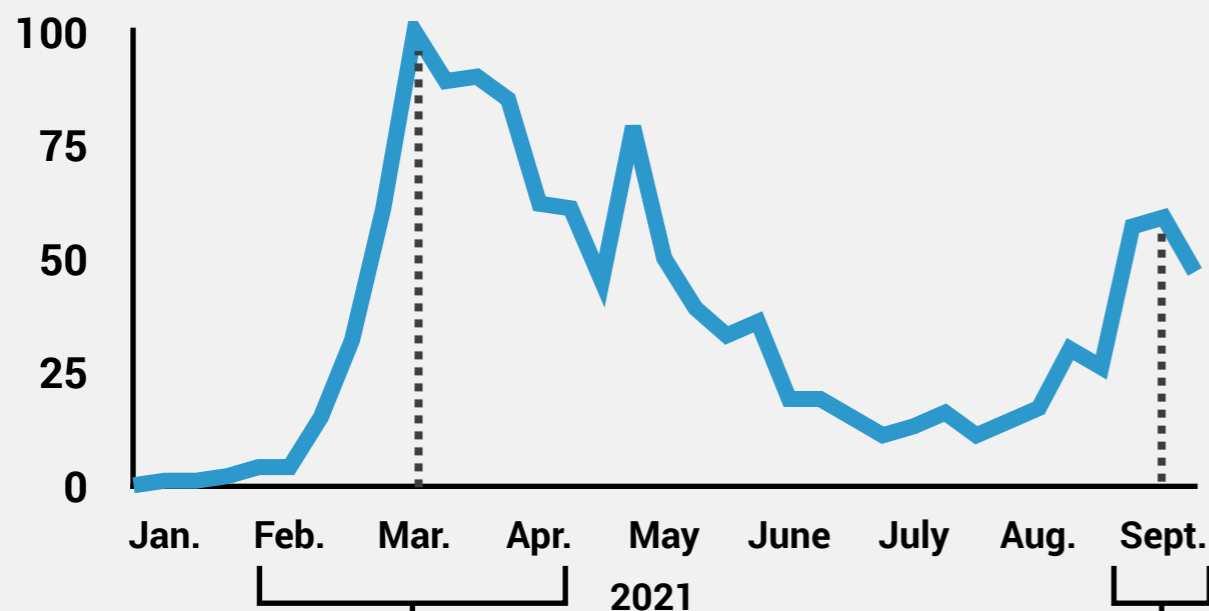
NFTs provide a unique value proposition for owners of digital assets, with broad applications across all IP, including art, videos, and video gaming

PATH OF AN NFT: HOW NFTS ARE CREATED, SOLD, AND DEPLOYED



2021 was the breakout year for NFTs, with major increases in both interest and purchase activity; 73% of U.S. NFT buyers made their first purchase this year

GOOGLE SEARCH INTEREST IN NFTS¹, U.S., JAN. 2021-SEPT. 2021², INDEXED TO PEAK INTEREST

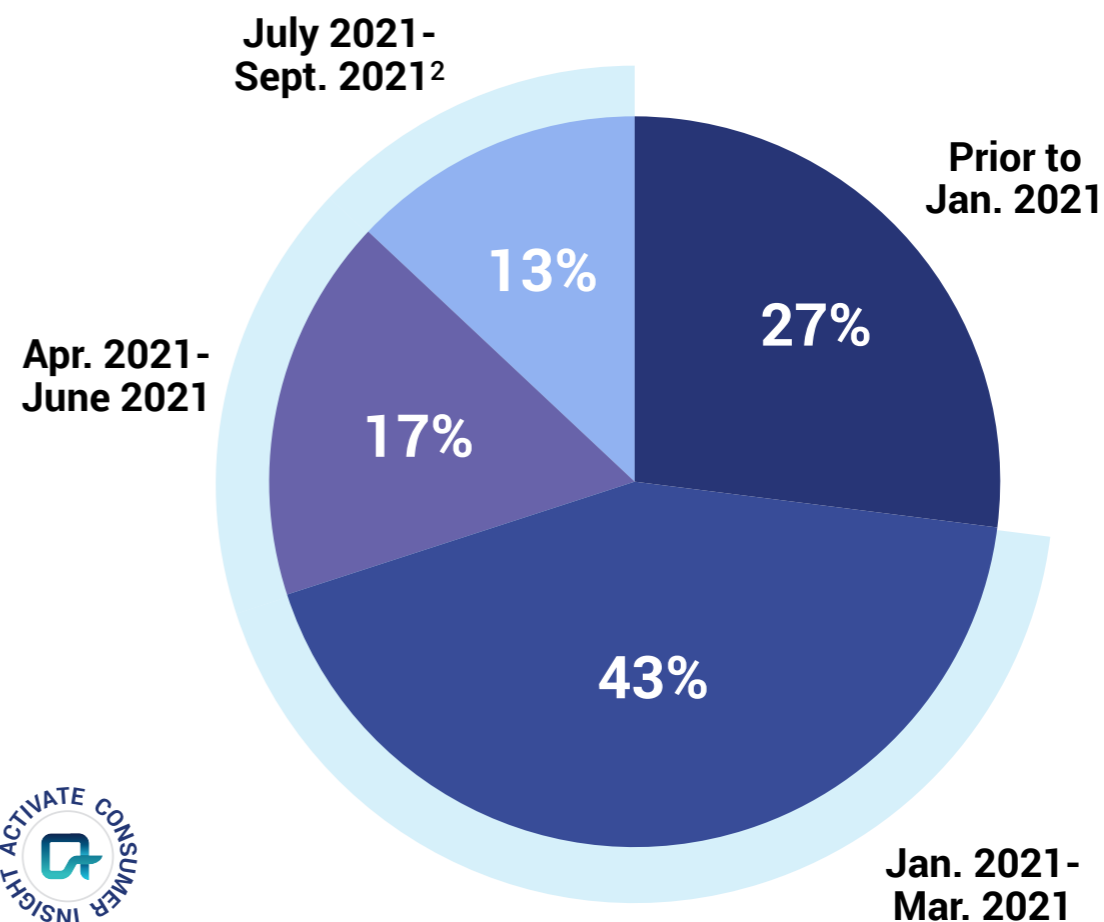


Interest spiked in Q1 with the multi-million dollar Beeple sale and the release of NBA Top Shot



Interest surged again in Q3 with increased popularity of NFT projects Ether Rocks, Bored Ape Yacht Club, and CryptoPunks

FIRST NFT PURCHASE BY TIME PERIOD, U.S., 2021, % NFT BUYERS³




73% of NFT buyers made their first purchase in 2021

A broad set of industries are now creating and testing NFT products: Art and Fashion

EXAMPLE ARTISTS AND COMPANIES OFFERING NFTS BY INDUSTRY

ART EXAMPLES

BEEPLE'S "EVERYDAYS"



JPEG file of 5,000 images created over 13 years sold for \$69.3M on Christie's to be collected and displayed

CRYPTOPUNKS



Nine pixelated portraits from Larva Labs' platform released to fans to be collected or displayed

PAK'S "THE FUNGIBLE" COLLECTION



Digital artwork collection sold to art collectors through Nifty Gateway marketplace in partnership with Sotheby's

FASHION EXAMPLES

DOLCE & GABBANA



Nine-piece digital fashion collection linked to physical creations or fully virtual designs to be displayed or worn in virtual worlds

GUCCI



Three-channelled video loop inspired by its Fall/Winter 2021 collection sold on Christie's as a collectible

NIKE



"CryptoKicks" (patented in 2019) digital shoes to be worn in virtual worlds and also linked to physical Nike shoes

A broad set of industries are now creating and testing NFT products: Music and Sports

EXAMPLE ARTISTS AND COMPANIES OFFERING NFTS BY INDUSTRY

MUSIC EXAMPLES

KINGS OF LEON YellowHeart

KINGS OF LEON
EDUCATED BY YELL-OH-HEART

Auction Opens Friday 12PM EST
16h 55m 53s

NFT

“When You See Yourself” album launched as a series of NFTs for users to listen to and engage with accompanying audiovisual art

SHAWN MENDES

Artist avatars and digital wearables sold to fans as collectibles and memorabilia

ROCKI

Streaming platform enabling artists to sell music NFTs to customers, allowing fans to support and share in royalties

SPORTS EXAMPLES

NBA TOPSHOT

Marketplace for “digital video trading cards” featuring NBA moments to be collected, traded, and displayed

WWE

Limited-edition collectibles featuring moments from The Undertaker’s and John Cena’s WWE careers

AUTOGRAPH


Digital sports memorabilia platform featuring star athletes (e.g. Tiger Woods, Naomi Osaka, Derek Jeter) co-founded by Tom Brady

A broad set of industries are now creating and testing NFT products: Video Gaming and Consumer Businesses

EXAMPLE COMPANIES OFFERING NFTS BY INDUSTRY


VIDEO GAMING EXAMPLES

AXIE INFINITY



Game featuring monster-like creatures as NFTs to be collected, traded, or bred to battle other creatures (modeled after Pokémon)

GODS UNCHAINED



Trading game where players compete in duels using fantasy cards and earn tokenized in-game assets that can be monetized

BATTLE PETS



Game where each pet is an NFT to be collected, raised, and used to battle with other pets


CONSUMER BUSINESS EXAMPLES

NYX PROFESSIONAL MAKEUP



A NYX Cosmetics digital look made into an NFT and unveiled during the "Meta Gala" virtual fashion show of Crypto Fashion Week

TACO BELL



Taco-themed GIFs, short video clips, and images, which appealed to meme culture, sold as limited-edition collectibles

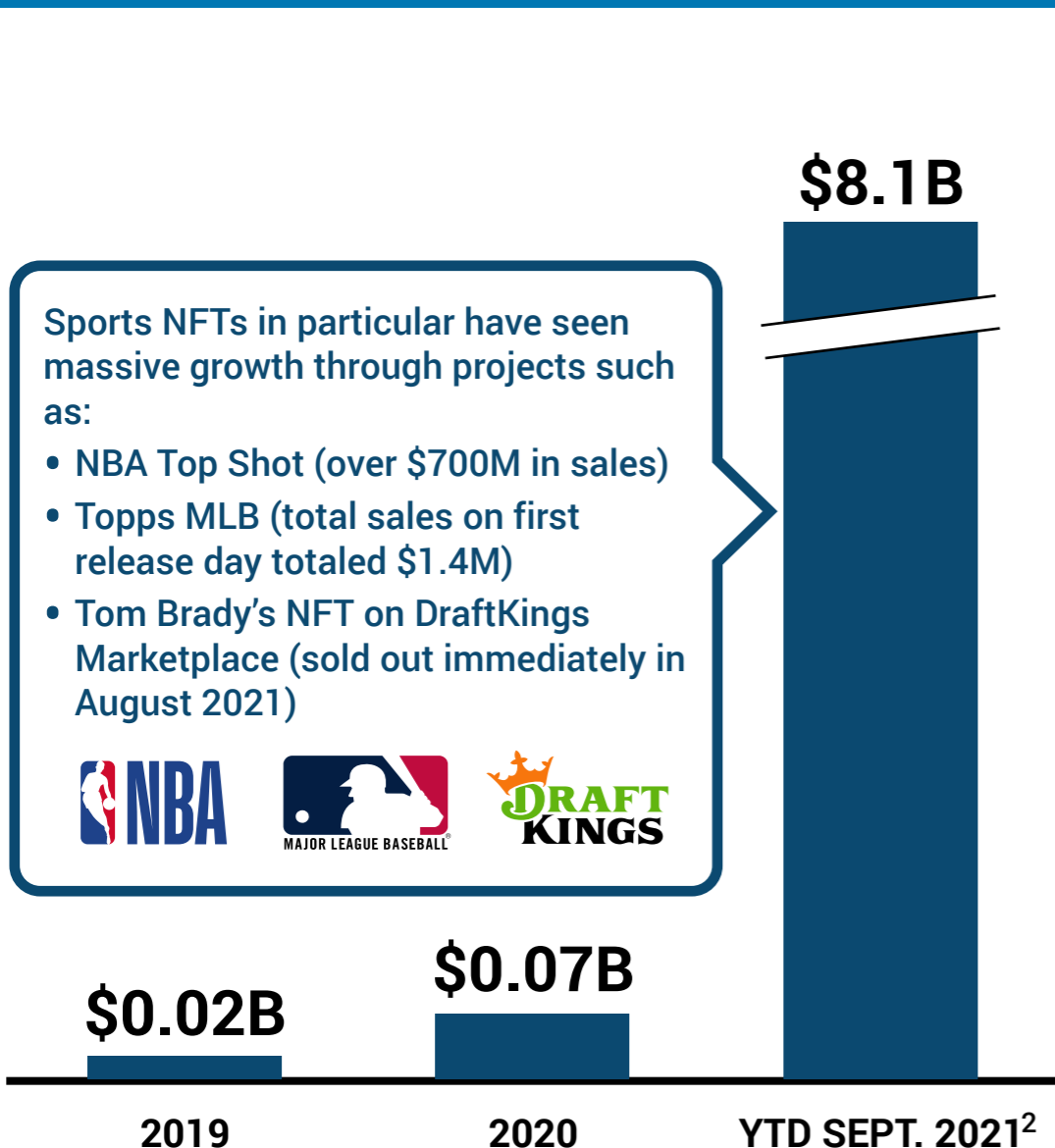
MATTEL'S HOT WHEELS



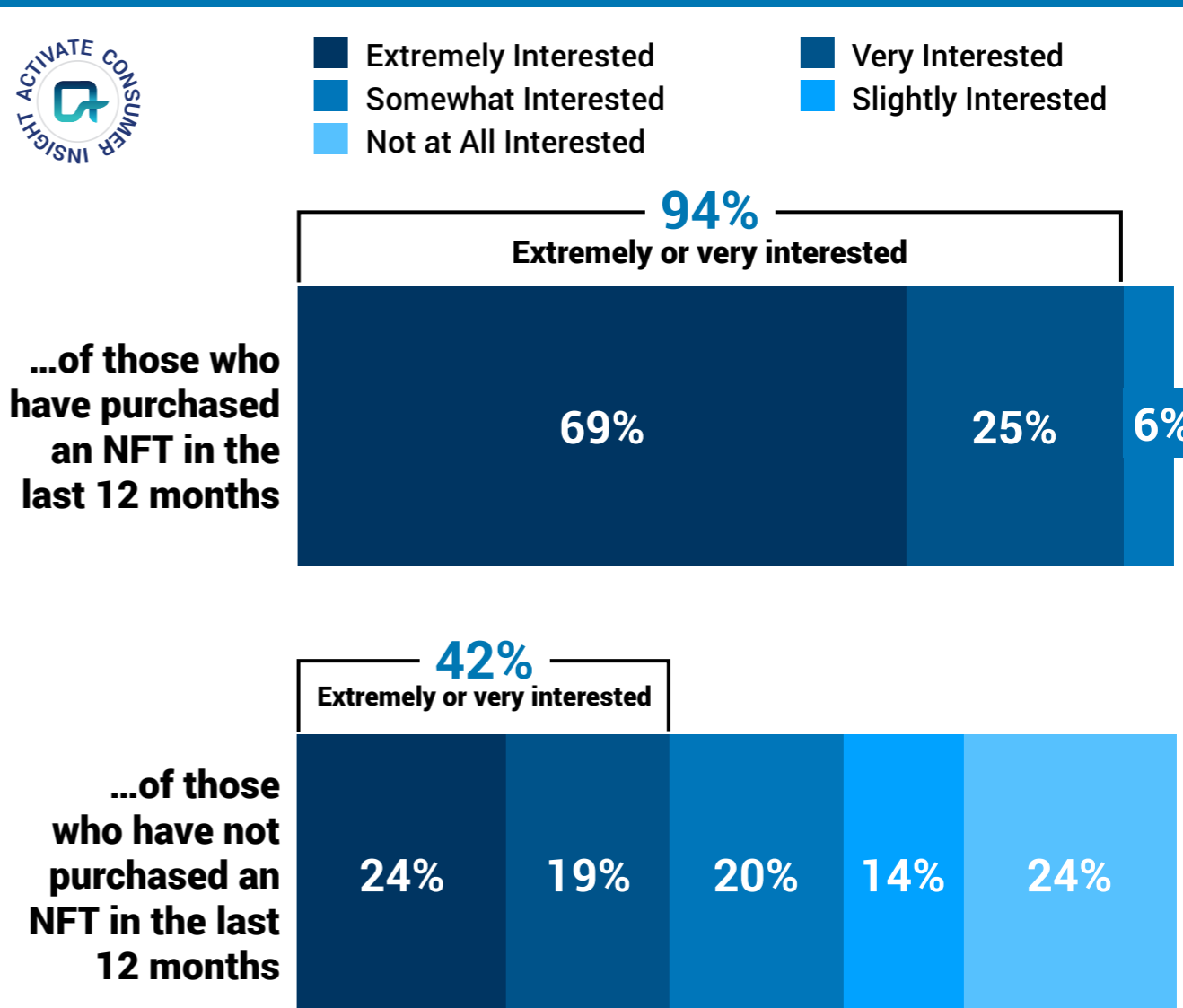
Digital Hot Wheels collectibles feature 3 vehicles from "The First Editions" vehicle collection

NFTs have seen explosive growth in global sales, from less than \$100M in 2020 to over \$8B in 2021 YTD; our research shows that the majority of those participating plan to continue in the next year

TOTAL SALES OF NFTS¹, GLOBAL, 2019-YTD SEPT. 2021², BILLIONS USD



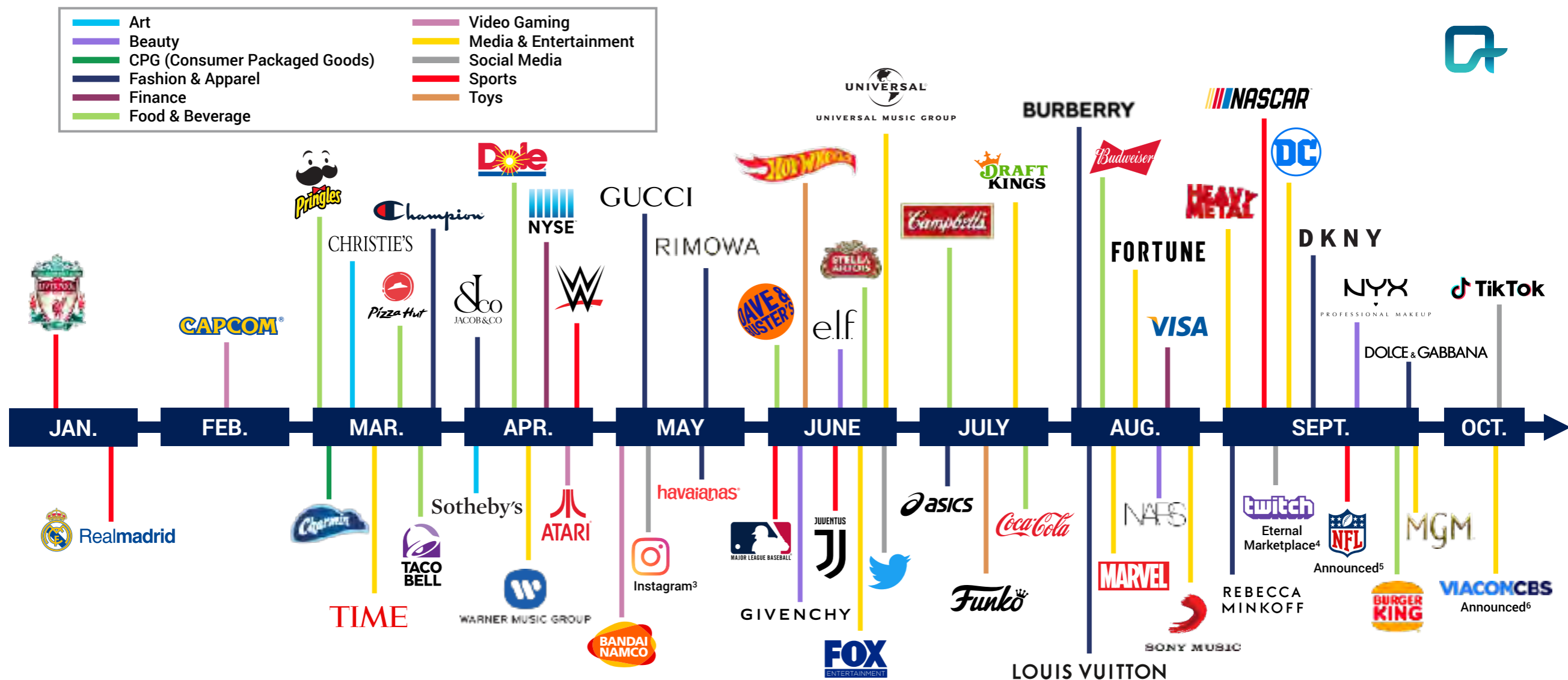
INTEREST IN PURCHASING NFTS IN THE NEXT 12 MONTHS³, U.S., 2021, % ADULTS AGED 18+ AWARE OF NFTS⁴



1. Includes primary and secondary market sales. 2. As of September 10, 2021. 3. Figures do not sum due to rounding. 4. "Aware of NFTs" is defined as consumers who know what NFTs are and can identify the correct definition. Sources: Activate analysis, Activate 2021 Consumer NFT Research Study (n = 1,040), CryptoSlam, DappRadar, GlobeNewswire, NonFungible

Major brands and tech companies are entering into the space and will expand their NFT strategies

TIMELINE OF COMPANIES ENTERING THE NFT SPACE¹, U.S., JAN. 2021-OCT. 2021²



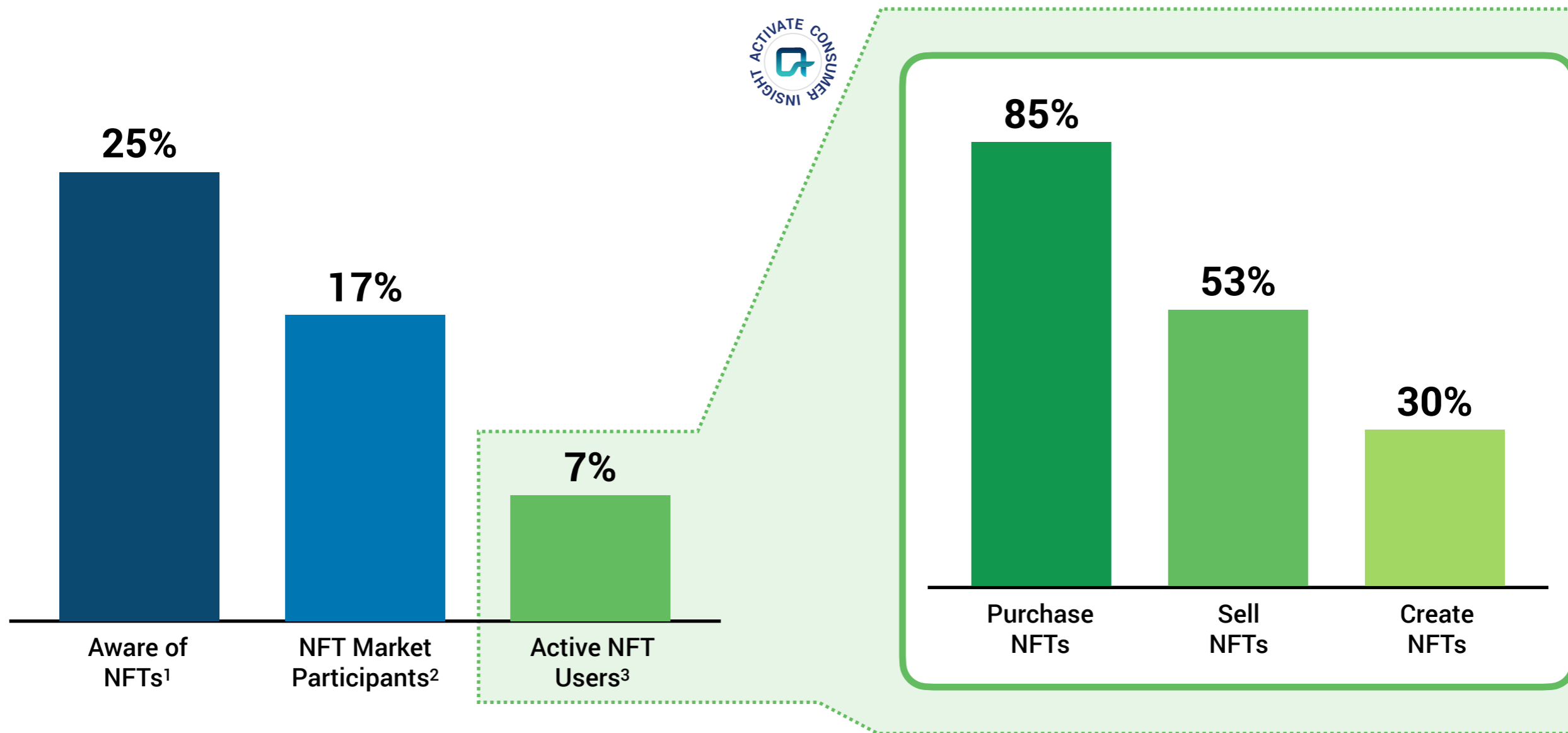
1. Order of NFTs within month and size of timeline lines are for illustrative purposes, not indicative of exact launch dates or importance. Timeline is not exhaustive. 2. As of October 4, 2021. 3. Instagram is experimenting with NFT integration into its app. 4. Eternal, an NFT marketplace featuring Twitch streamer clips as NFTs, received backing from Mark Cuban and Coinbase. 5. The NFL announced a deal with Dapper Labs to create digital video highlights as NFTs on September 29, 2021. 6. ViacomCBS announced a deal with RECUR to create a fan-focused platform around buying, collecting, and trading NFTs on October 13, 2021.

Sources: Activate analysis, AdAge, ARTnews, Business of Fashion, Company press releases, Company sites, Fashion Network, Forbes, Glossy, The Information, Markets Insider, OpenSea, TechCrunch, Variety, The Verge, Vogue Business

The NFT market is still in its infancy: only 25% of U.S. adults are familiar with NFTs, and only 7% are active users

NFT AWARENESS AND ADOPTION, U.S., 2021, % ADULTS AGED 18+

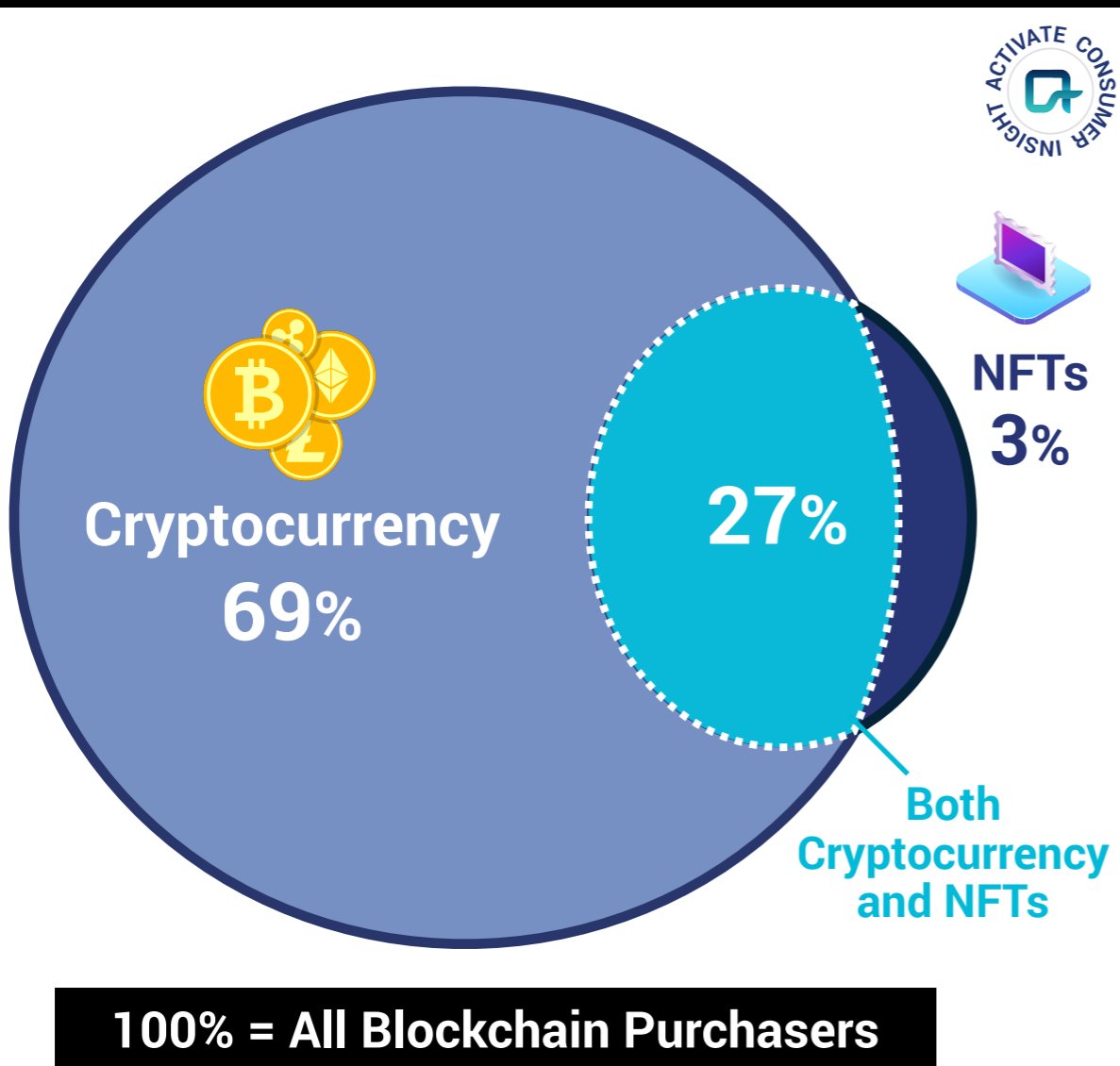
ACTIVE USER PARTICIPATION IN NFT MARKET BY ACTIVITY, U.S., 2021, % ACTIVE NFT USERS³



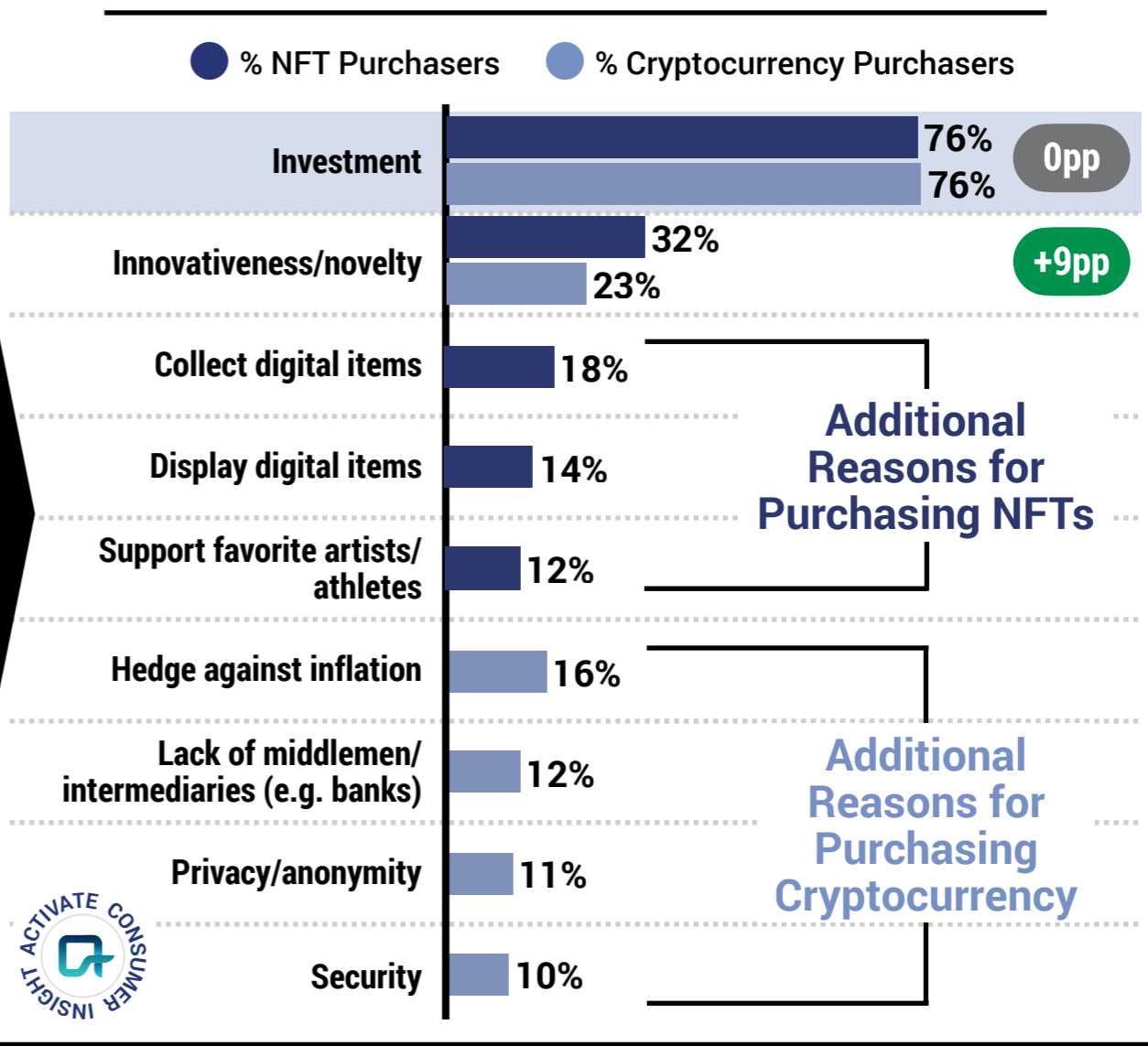
1. "Aware of NFTs" is defined as consumers who know what NFTs are. 2. "NFT market participants" are defined as adults aged 18+ who research/discuss, browse, bid on, purchase, sell, or create NFTs. 3. "Active NFT users" are defined as adults aged 18+ who purchase, sell, or create NFTs. Sources: Activate analysis, Activate 2021 Consumer NFT Research Study (n = 1,040), Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

Currently, NFTs are a subset of cryptocurrency, with investment as the top reason behind purchasing – in fact, 89 percent of NFT buyers are also cryptocurrency users

BLOCKCHAIN PURCHASING USE CASES¹, U.S., 2021, % BLOCKCHAIN PURCHASERS²



TOP REASONS³ FOR PURCHASING NFTS/CRYPTOCURRENCY, U.S., 2021, % BLOCKCHAIN PURCHASERS²



1. Figures do not sum to 100% due to rounding. 2. "Blockchain purchasers" are defined as adults aged 18+ who have purchased NFTs in the last 12 months or have ever purchased cryptocurrency. 3. Consumers were asked to select up to two top reasons. Sources: Activate analysis, Activate 2021 Consumer NFT Research Study (n = 1,040), Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

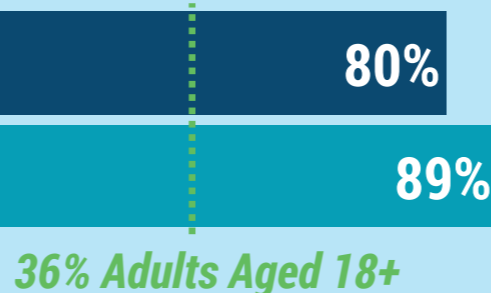
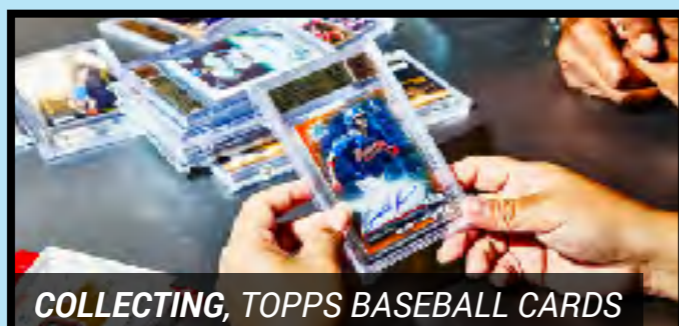
Consumers are likely to participate in NFTs moving forward because they tie into existing behaviors such as collecting, betting, and supporting content creators

PARTICIPATION IN SELECT BEHAVIORS, U.S., 2021, % ADULTS AGED 18+

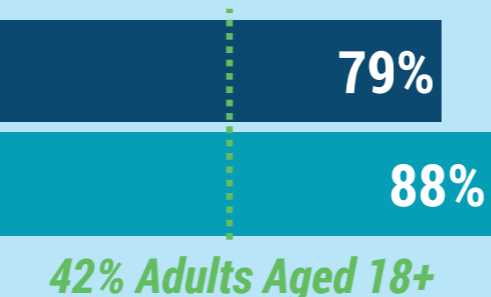


■ % NFT Market Participants⁴
■ % NFT Active Users⁵

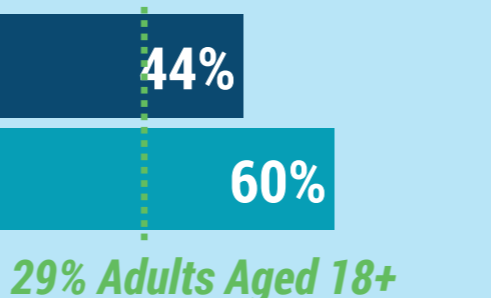
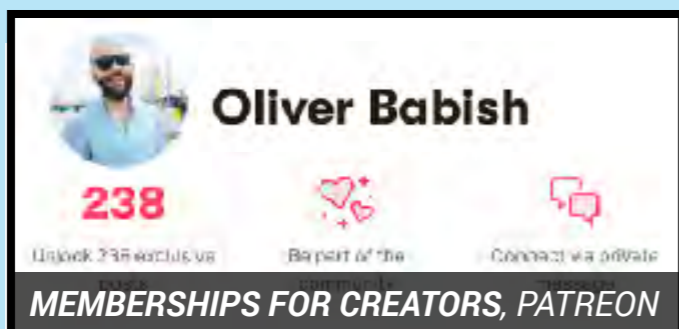
COLLECTING¹



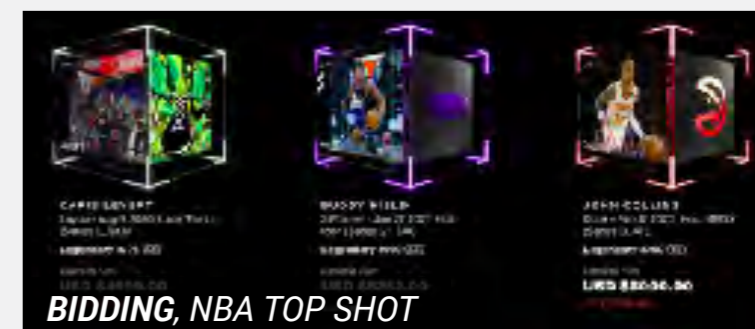
BETTING/
BIDDING²



SUPPORTING
ARTISTS /
FAN CULTURE³



NFT EQUIVALENT EXAMPLES



1. "Collecting" includes luxury goods, art, comic books, trading cards, coins, stamps, or music collectibles. 2. "Betting/bidding" includes sports betting, esports betting, and bidding on online auctions. 3. "Supporting artists / fan culture" includes sending money to artists, creators, or athletes. 4. "NFT market participants" are defined as adults aged 18+ who research/discuss, browse, bid on, purchase, sell, or create NFTs. 5. "NFT active users" are defined as adults aged 18+ who purchase, sell, or create NFTs. Sources: Activate analysis, Activate 2021 Consumer NFT Research Study (n = 1,040), Activate 2021 Consumer Technology & Media Research Study (n = 4,018), CoinDesk, CryptoPunks, SB Nation

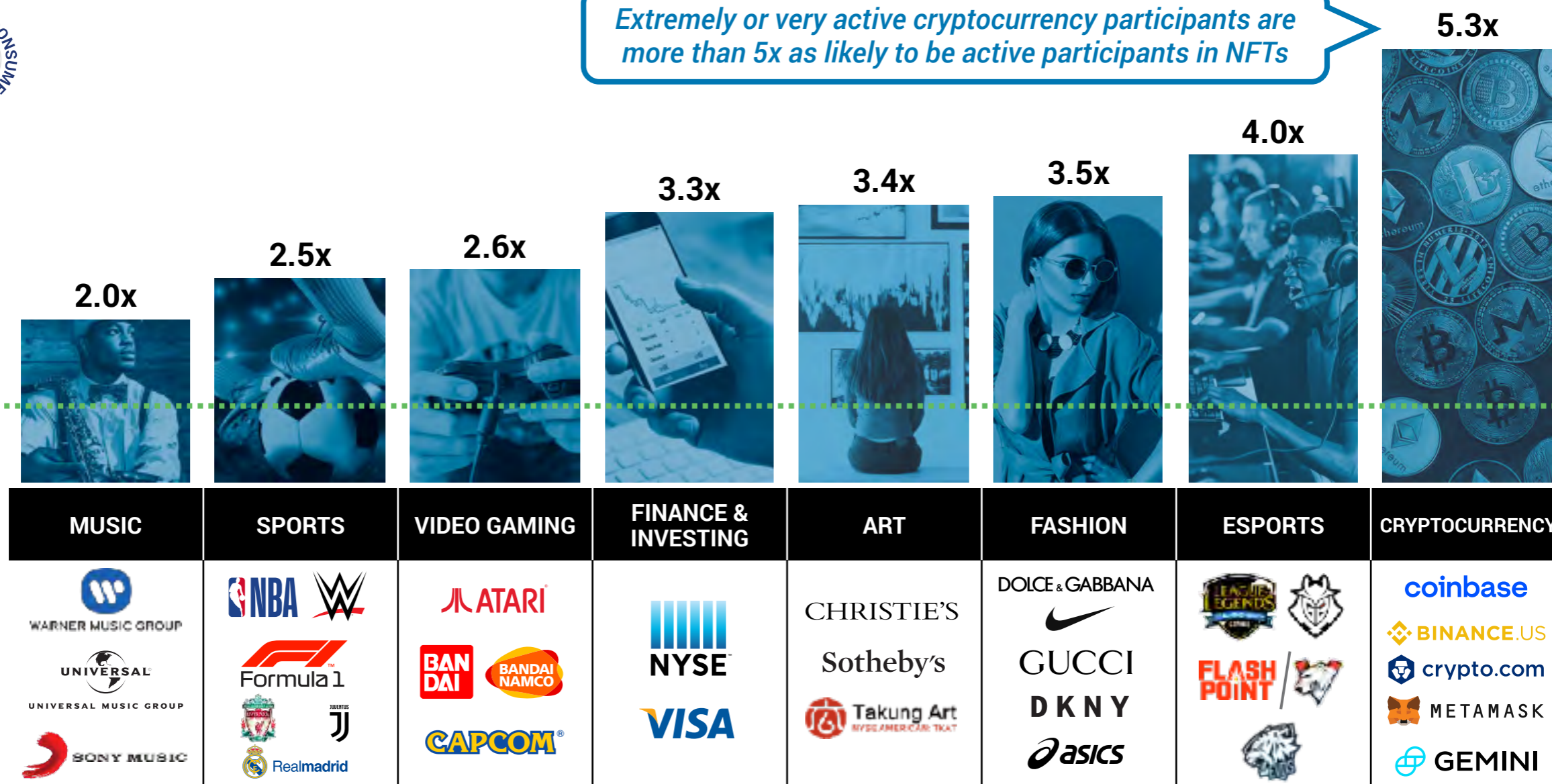
We expect to see NFT growth across a broader set of industries, driven by consumer interest

CONSUMER PARTICIPATION IN NFTS BY INDUSTRY INVOLVEMENT¹, U.S., 2021, INDUSTRY INDEXED TO NFT ACTIVE USERS² BY INVOLVEMENT

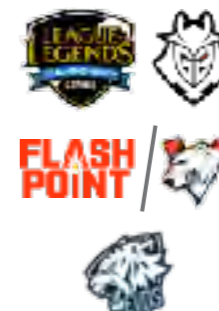


Extremely or very active cryptocurrency participants are more than 5x as likely to be active participants in NFTs

Adults Aged 18+ Average: 1.0x (7%)



Example Companies with NFTs



1. "Industry involvement" is defined as being "extremely" or "very" actively involved in the industry over the last 12 months.

2. "NFT active users" are defined as adults aged 18+ who purchase, sell, or create NFTs.

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), AdAge, Billboard, Bloomberg, CoinDesk, Company press releases, Company sites, Esports News, Forbes, LA Times, Variety, The Verge, Vogue

NFTs will become a mainstream behavior, while creating value for consumers and IP owners; every technology and media company will need an NFT strategy

1

The line between physical and virtual experiences is blurring – spaces and exhibits with a mix of physical and digital content are growing, and over 80% of consumers believe a brand's digital presence is equally as important to its in-store presence

2

Consumers are increasingly interacting with companies and brands in fully digital environments – especially in video gaming through “skins” and other virtual items

3

As more consumer time migrates to digital experiences / the metaverse, **technology and media companies will all need an NFT strategy to future-proof their content**, or risk becoming less relevant

4

NFTs can become a way for companies with large amounts of IP to unlock new and potentially lucrative revenue streams by offering unique items and engaging top fans – there is significant liquid value in the market today

5

Companies will need to approach NFTs with a long-term point of view to avoid speculative bubbles and scams, which ultimately could harm their brand

The winners in the NFT space are far from decided; new players, technologies, and use cases will continue to emerge

CREATORS¹

INDIVIDUALS / SMALL GROUPS

ARTISTS	MUSICIANS	ATHLETES	SOCIAL MEDIA STARS

MAJOR COMPANIES

MEDIA & ENTERTAINMENT	SPORTS & ESPORTS
FOOD & BEVERAGE	VIDEO GAMES
FASHION	FINANCE

MARKETPLACES

NFT-FIRST MARKETPLACES

TRADITIONAL ECOMMERCE MARKETS

USER-POWERED MARKETS

CRYPTO EXCHANGES

AUCTION HOUSES

END-USE CASES

VIRTUAL WORLDS / SOCIAL PLATFORMS

VIRTUAL WORLDS	SOCIAL

DISPLAYS / VIRTUAL MUSEUMS

VIDEO GAMING

MUSIC STREAMING

INFRASTRUCTURE

CORPORATE TOKEN PARTNERS²

BLOCKCHAIN PROTOCOLS³

NFT DAPPS, PLATFORMS, & PROJECTS⁴

STORAGE & MANAGEMENT








WALLETS	ASSET MGMT

Note: Company list is not exhaustive. Companies are categorized according to their primary category. As of October 4, 2021. 1. "Creators" include individuals and companies who have launched and announced NFTs. 2. "Corporate token partners" are defined as companies providing technology to enable partners to launch NFT products. 3. "Blockchain protocols" are defined as the underlying technology that NFTs are minted on. 4. "NFT dapps, platforms, & projects" are defined as platforms that enable users to participate in and build the NFT ecosystem.

Sources: Activate analysis, AdAge, ARTnews, Barrons, Billboard, Bloomberg, Business of Fashion, Coin Market Cap, CoinDesk, Company press releases, Company sites, DappRadar, Deal Room, Esports News, Fashion Network, Forbes, The Information, LA Times, Ledger Insights, Markets Insider, The New York Times, NonFungible, OpenSea, Variety, The Verge, Vogue, Wonder

Requirements for NFTs to succeed going forward, from speculation to mainstream adoption

■ MOVING TO RESOLUTION
 ■ PROGRESS MADE BUT UNCERTAIN
 ■ HIGHLY UNCERTAIN

Key requirements for NFT success:		Current status:
 PARTICIPATION OF IP HOLDERS	Companies holding major IP will participate at scale in NFTs (e.g. Disney, Warner Bros.)	Companies across industries are embracing NFTs, with many media companies developing long-term strategies
 LOW COST TO CREATORS	Mint/gas fees ¹ for NFTs do not serve as a barrier to entry	While Ethereum gas fees ¹ fluctuate widely, several alternative protocols offer creators lower fee alternatives (e.g. Tezos, Near)
 CROSS-PLATFORM USABILITY	NFTs can be bought and transferred across platforms, especially social media / video gaming	Of the leading social media platforms (e.g. Facebook, Instagram, TikTok, Twitter, Snapchat) and video gaming platforms (e.g. Fortnite, League of Legends, Dota II), only TikTok and Twitter currently enable users to buy NFTs or transfer them between platforms
 STORAGE OF UNDERLYING DATA	Standards arise for the storage of NFT metadata (unique attributes beyond ownership), either on-chain or off-chain	On many platforms, NFT buyers purchase a link that refers to the digital asset rather than the asset itself; users must rely on the company hosting the website to stay in business to prove authenticity long term. While there are solutions emerging (e.g. IPFS, Freezing), they are not the default and are not seen in all major NFT projects
 AUTHENTICITY SOLUTIONS / PROVENANCE	Platforms / technology companies are able to provide a degree of verification on the initial minting of NFTs and avoid problems with IP laws	The burden of proving the authenticity of the underlying digital asset is on the owner, which leaves consumers vulnerable
 LOW ENERGY USAGE	NFTs can be minted on the blockchain with a sustainable energy footprint	The vast majority of NFTs are minted on the Ethereum blockchain, which leverages an energy-intensive proof-of-work model; Ethereum has claimed to be moving to proof-of-stake model (which has lower energy requirements) for several years but has yet to complete this transition
 REGULATORY ALLOWANCE	Future regulation does not significantly stifle the creation, selling, or purchase of NFTs (e.g. high taxes, trading restrictions, emissions restrictions)	Regulatory frameworks governing cryptocurrency and NFTs are still very nascent

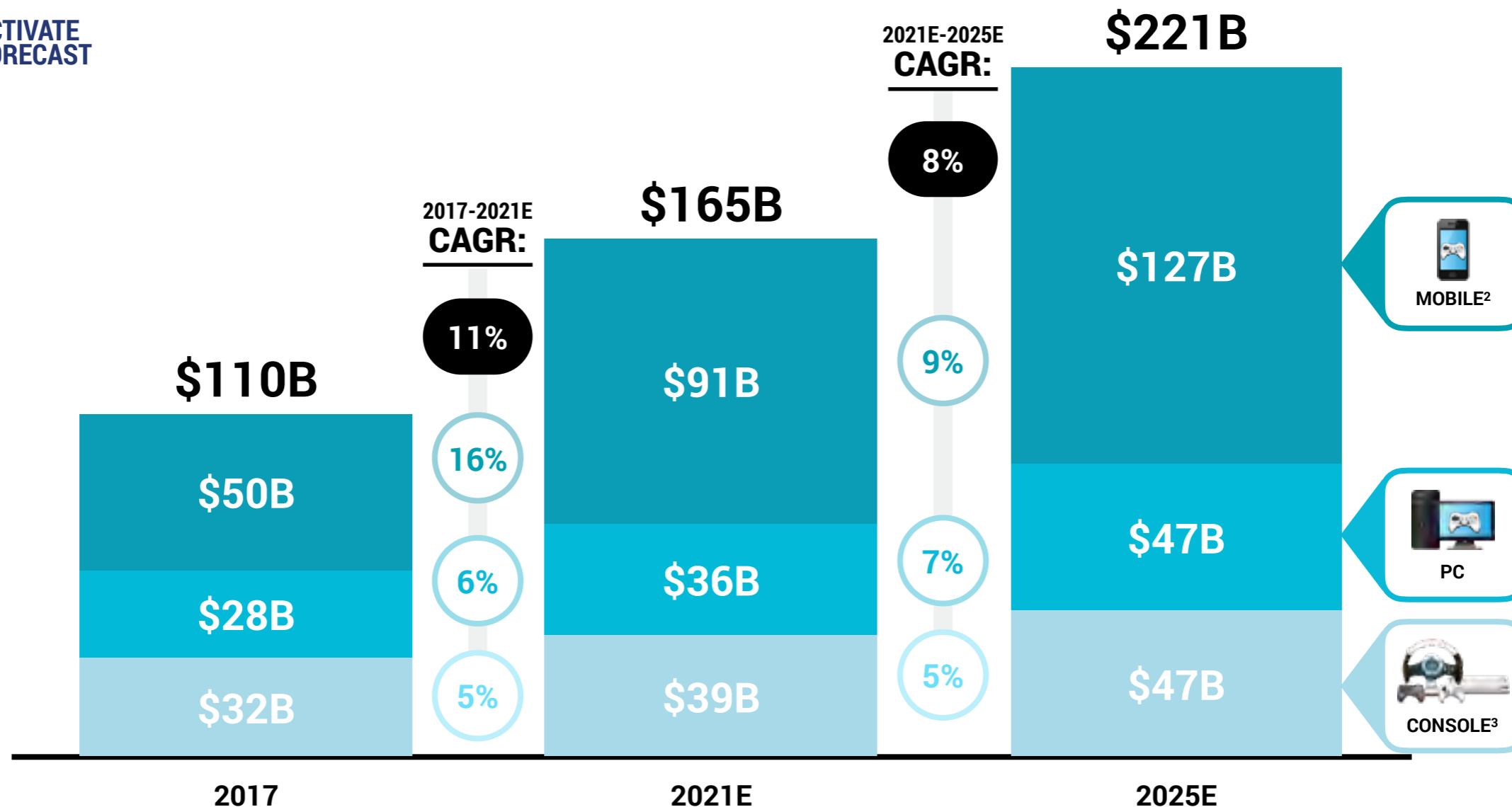
1. "Mint/gas fees" are defined as the computational costs required to add an NFT to the blockchain. Sources: Activate analysis, Company sites, OpenSea

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The global video game industry will grow across all major platforms, with mobile gaming continuing to represent the largest and fastest growing portion of the market

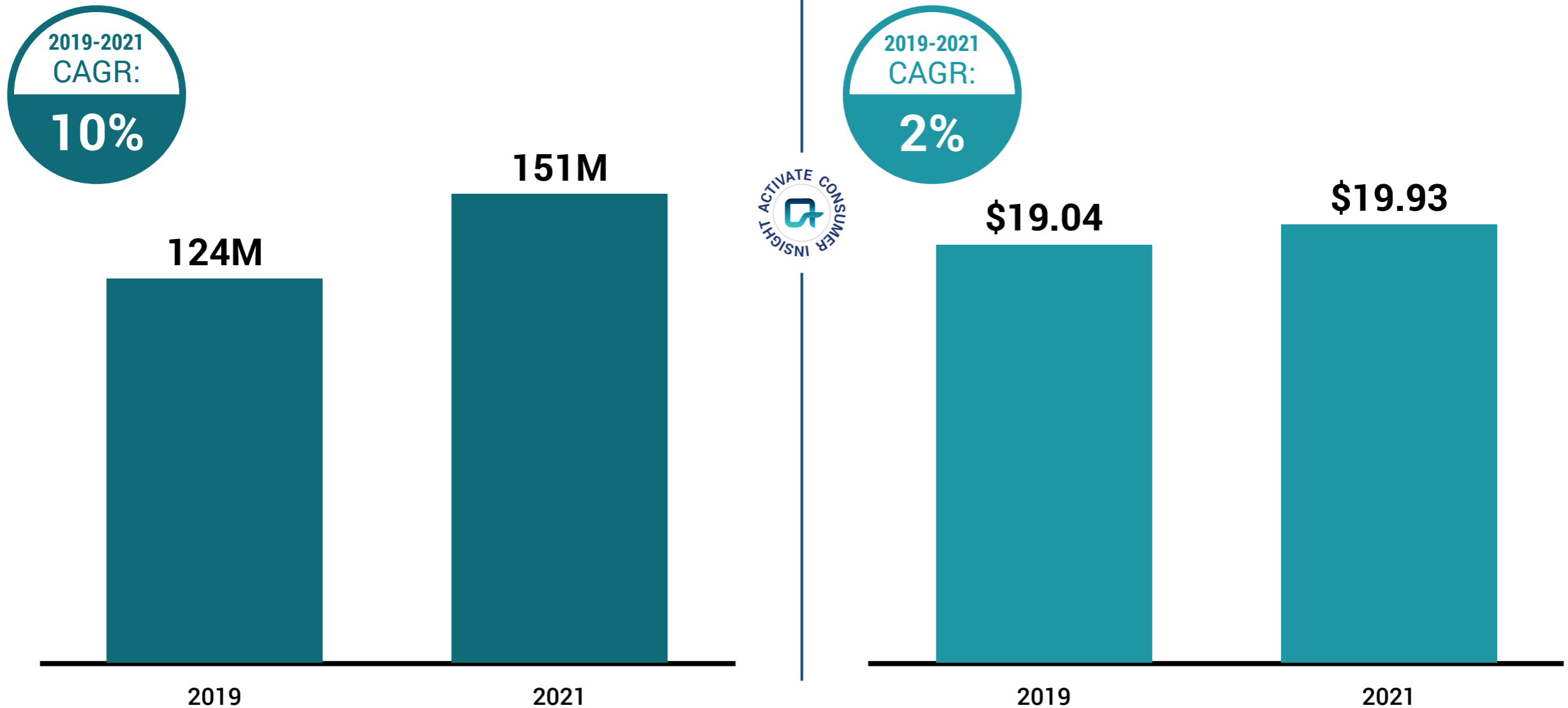
CONSUMER VIDEO GAME REVENUE BY PLATFORM¹, GLOBAL, 2017 VS. 2021E VS. 2025E, BILLIONS USD



The number of gamers has significantly increased while average spend per gamer has continued to grow

GAMING POPULATION, U.S., 2019 VS. 2021, MILLIONS GAMERS¹

AVERAGE MONTHLY VIDEO GAME DOLLAR SPEND² PER GAMER¹, U.S., 2019 VS. 2021, USD PER MONTH



1. "Gamers" are defined as adults aged 18+ who currently play video games. 2. Excludes hardware and device sales, augmented reality / virtual reality content, and advertising.

Sources: Activate analysis, Activate 2019 Consumer Technology & Media Research Study (n = 4,006), Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Newzoo, PricewaterhouseCoopers, U.S. Census Bureau


The average gamer plays most of the days in a week and multiple times a day

AVERAGE GAMING FREQUENCY BY DEVICE, U.S., 2021, DAYS BY GAMERS¹ USING DEVICE FOR GAMING




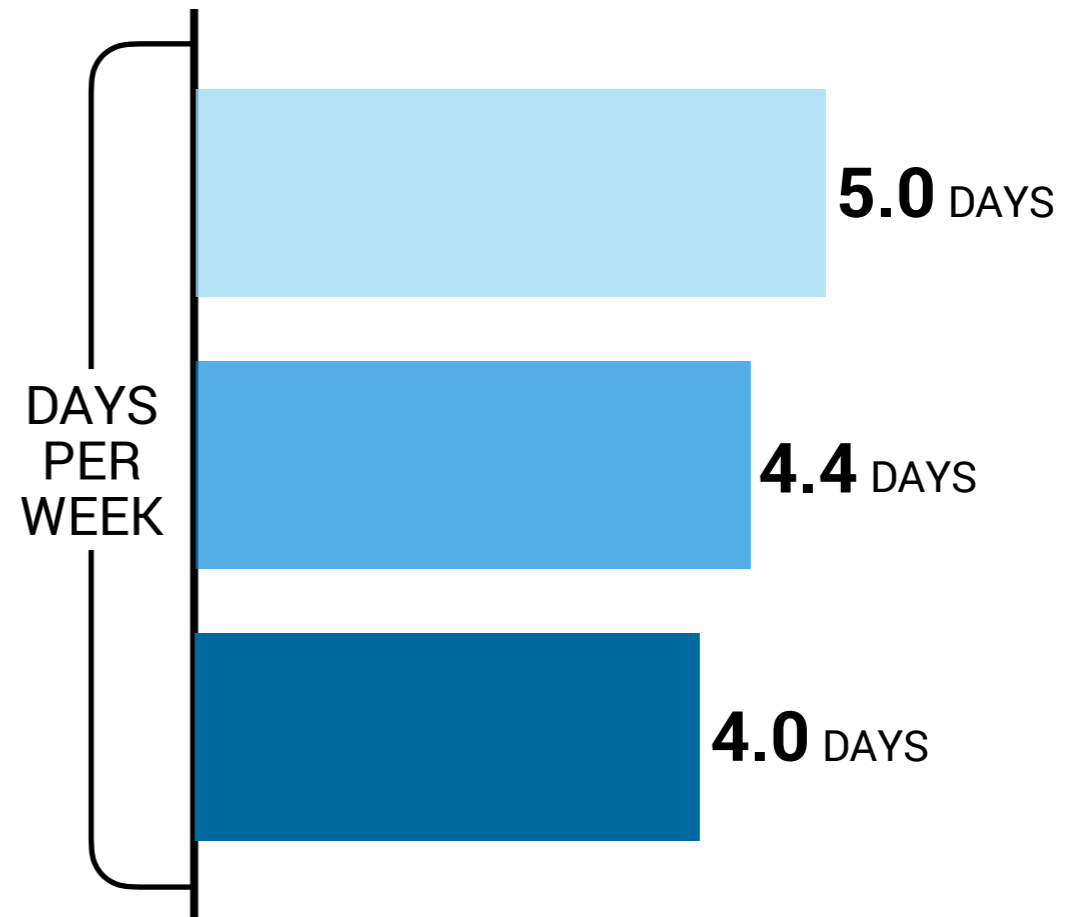
Mobile Gaming² PC Gaming³ Console Gaming⁴

IN THE LAST 12 MONTHS,
THE AVERAGE GAMER PLAYED

 **4.5 DAYS**
PER WEEK

AND

 **3.0 SESSIONS**
PER DAY



1. "Gamers" are defined as adults aged 18+ who currently play video games. 2. Reflects frequency of adults aged 18+ who spend any time playing video games on smartphones or tablets. 3. Reflects frequency of adults aged 18+ who spend any time playing video games on a desktop/laptop computer. 4. Reflects frequency of adults aged 18+ who spend any time playing video games on a game console. Nintendo Switch is included as a console.
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

Multi-platform gamers spend significantly more time gaming than single-platform gamers

SINGLE PLATFORM VS. MULTI-PLATFORM GAMERS¹, U.S., 2021, % GAMERS²



67%
OF GAMERS
ARE MULTI-
PLATFORM
GAMERS¹

2019

The average **multi-platform gamer**¹ spent

47%

more time gaming
than the average
single-platform gamer

2021

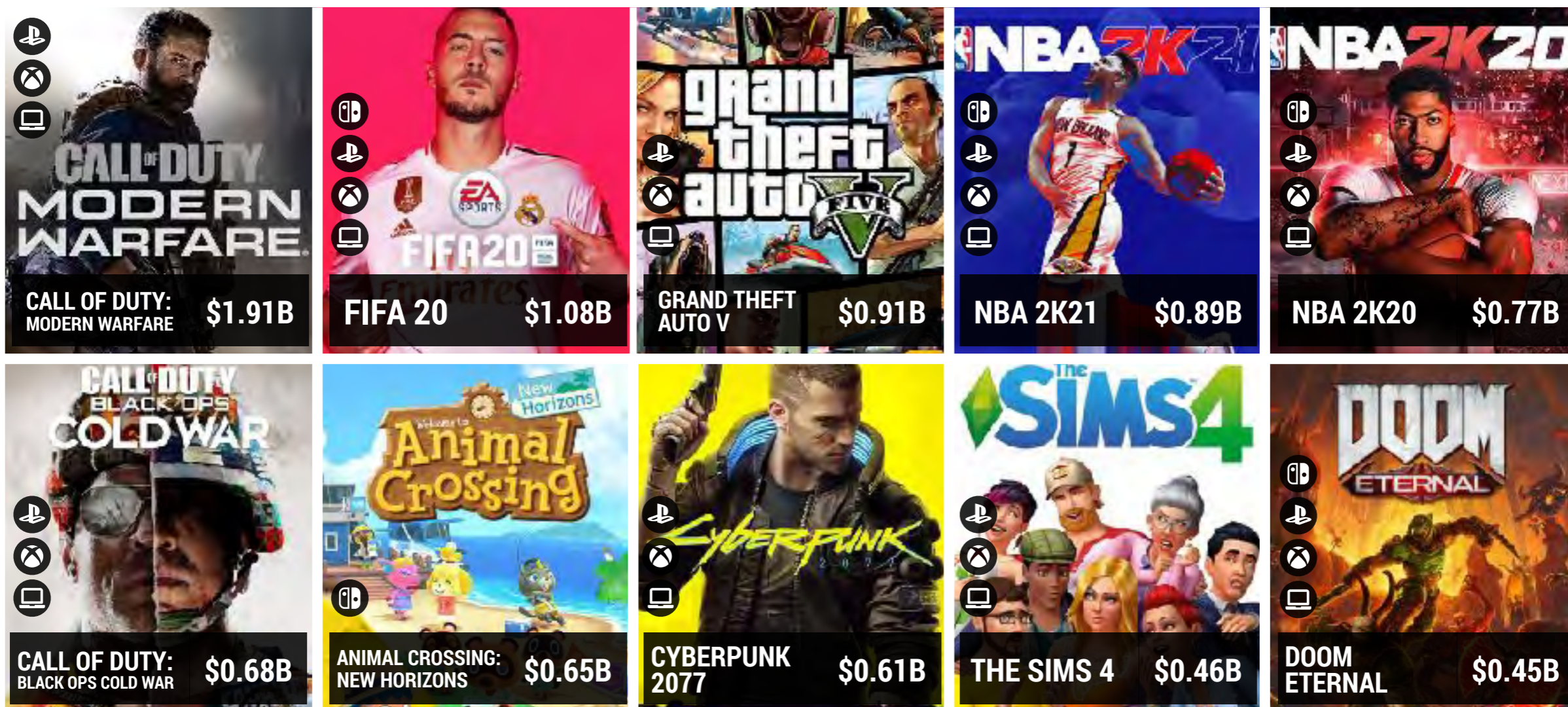
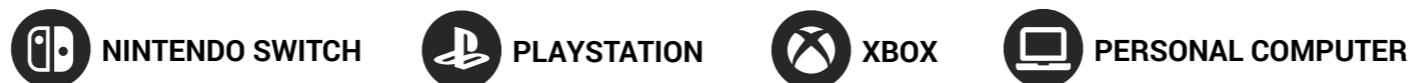
The average **multi-platform gamer**¹ spent

51%

more time gaming
than the average
single-platform gamer

Multi-platform franchises dominate

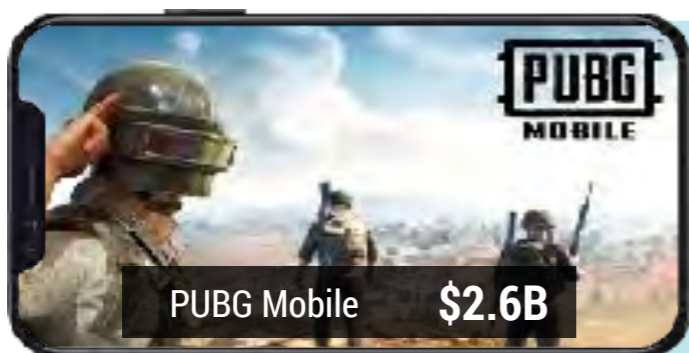
TOP-EARNING PAID PC AND CONSOLE VIDEO GAME TITLES, GLOBAL, 2020, BILLIONS USD



On mobile, top-earning titles encourage gamers to interact with friends through social features, in-game benefits, and rewards

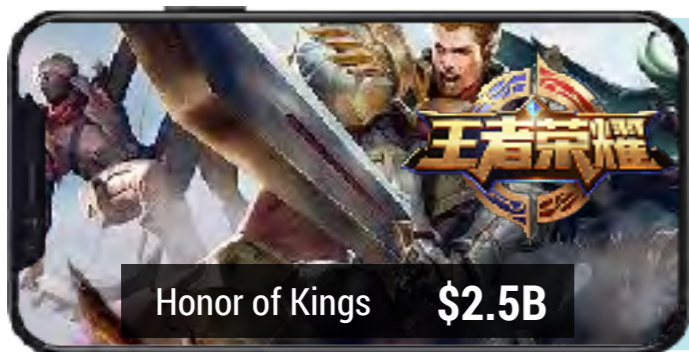
TOP-EARNING¹ MOBILE² GAME TITLES, GLOBAL, 2020³, BILLIONS USD

TOP MOBILE GAMES OFFER PLAYERS SOCIAL FEATURES TO INTERACT WITH OTHER PLAYERS



PUBG Mobile \$2.6B

- Ability to share highlights and results via chat
- Ability to invite/ compete with players from same region



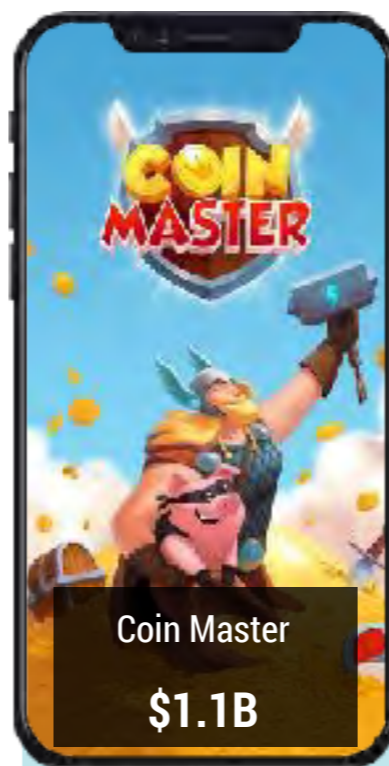
Honor of Kings \$2.5B

- Cooperative play with 5 people
- Integrations with social/messaging platforms (e.g. WeChat, QQ)



Pokémon Go \$1.2B

- Ability to send in-game gifts to others
- Bonuses based on tiered "Friendship Levels"



Coin Master \$1.1B

- Bonuses for linking to social media accounts (e.g. Facebook)
- In-game rewards for inviting friends



Roblox \$1.1B

- Ability to invite others to specific servers
- Increasing in-game payouts based on engagement

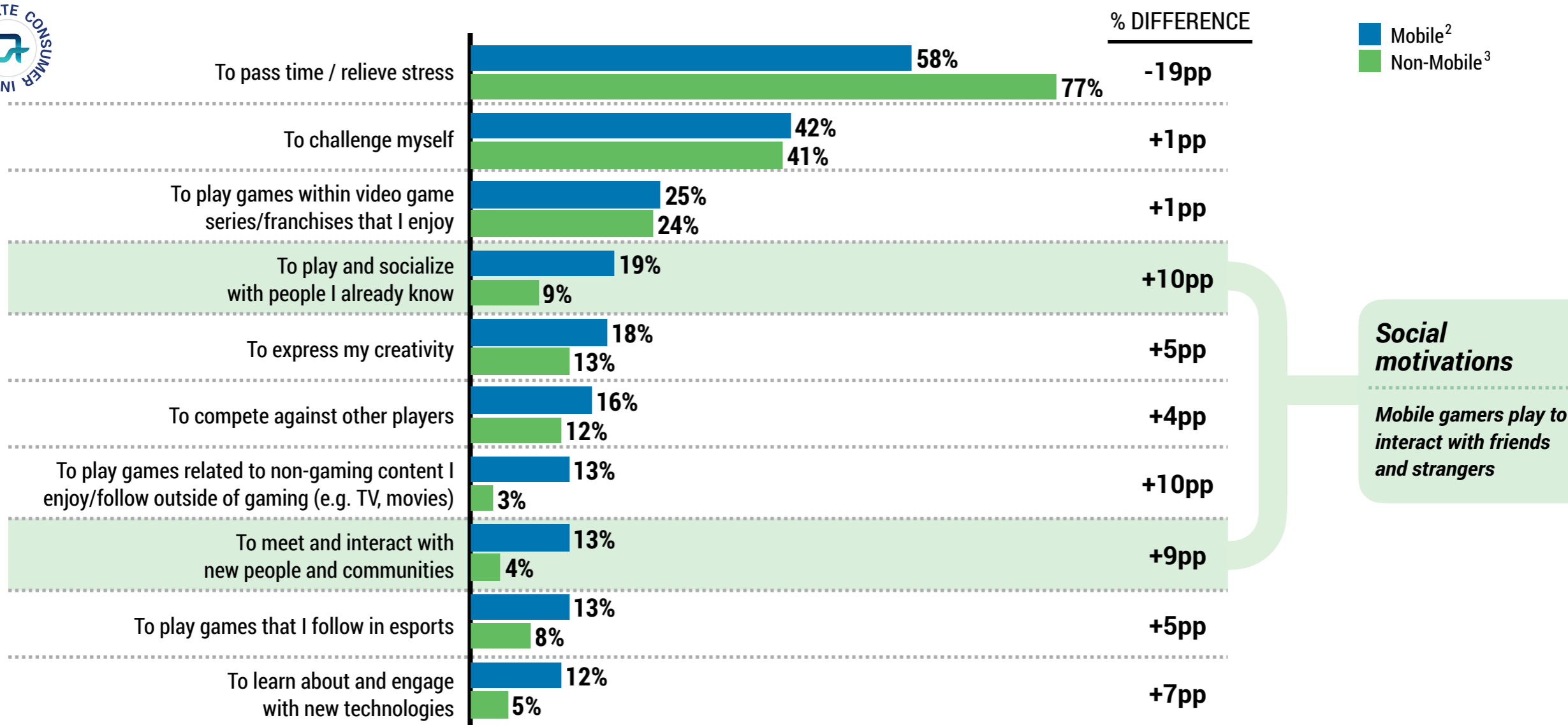


Monster Strike \$1.0B

- Local and online co-op
- Bonuses for playing via social media platforms (e.g. Facebook, WhatsApp)

Mobile gamers seek more diverse experiences and tap into social behaviors when they play

TOP REASONS¹ FOR GAMING BY MOBILE AND NON-MOBILE GAMING PARTICIPATION, U.S., 2021, % MOBILE² VS. NON-MOBILE³ GAMERS

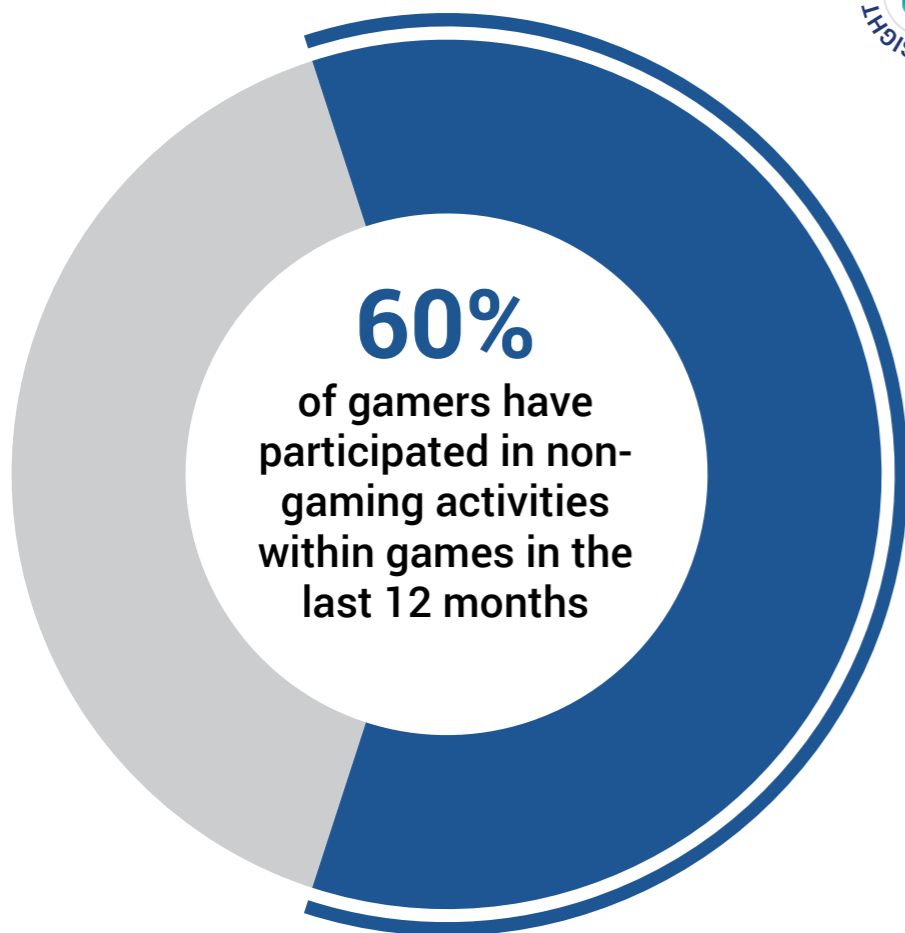


1. Respondents were asked to select up to 3 primary reasons for playing video games. 2. "Mobile gamers" are defined as adults aged 18+ who spend any time playing video games on smartphones or tablets. 3. "Non-mobile gamers" are defined as adults aged 18+ who spend any time playing video games on game consoles and/or desktop/laptop computers, but not on smartphones or tablets.

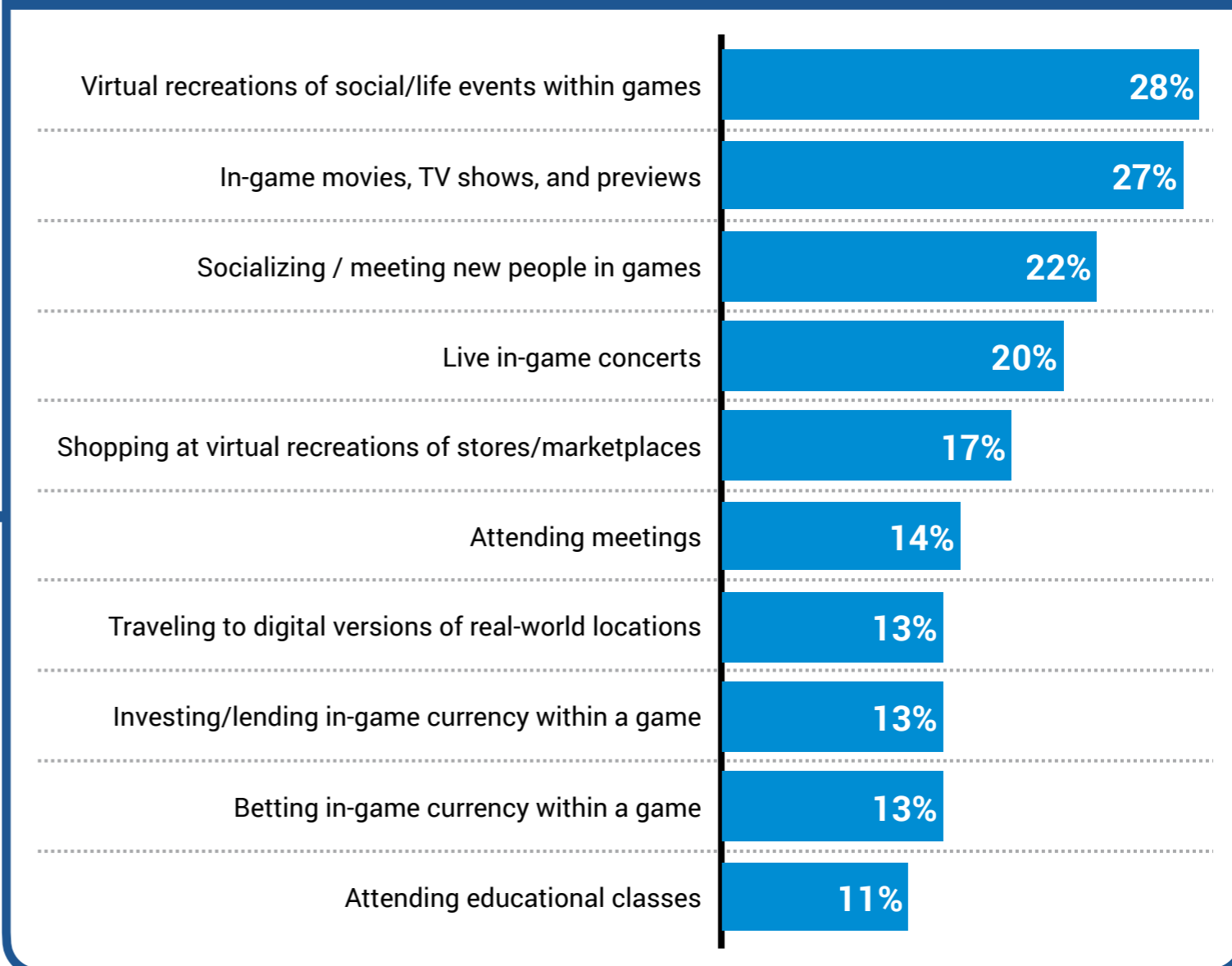
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

The majority of gamers participate in non-gaming activities within games – highlighting the criticality of games in the metaverse

PARTICIPATION IN NON-GAMING ACTIVITIES OR EVENTS WITHIN VIDEO GAMES IN THE LAST 12 MONTHS¹, U.S., 2021, % GAMERS²

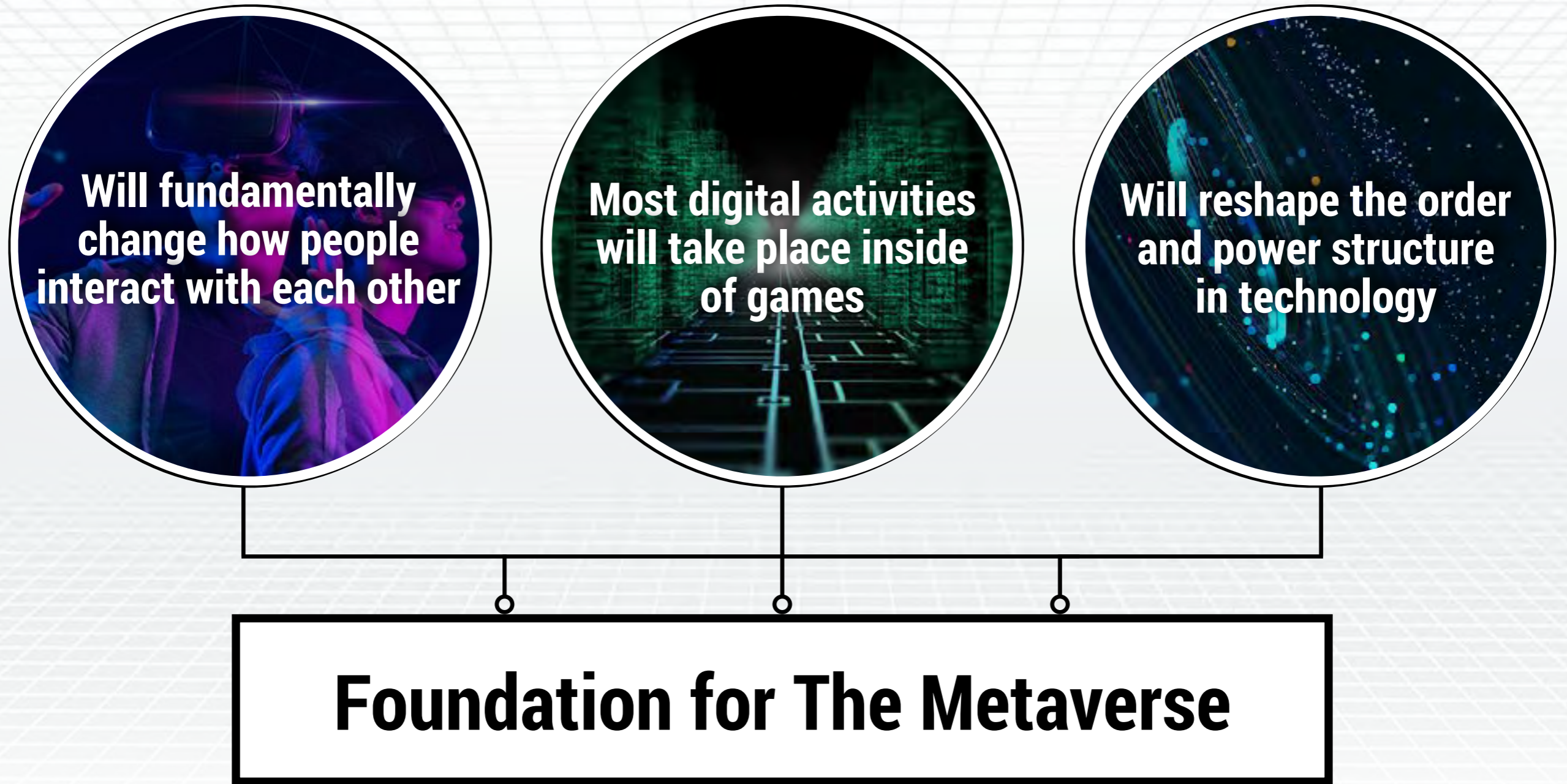


PARTICIPATION IN NON-GAMING ACTIVITIES OR EVENTS WITHIN VIDEO GAMES IN THE LAST 12 MONTHS¹, U.S., 2021, % GAMERS²











1. The list of surveyed in-game activities and events has been updated from previous years. “Non-gaming activities or events” includes activities inside of video games that are not an essential component of gameplay. 2. “Gamers” are defined as adults aged 18+ who currently play video games.
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

Gaming is the new technology paradigm



Given the overwhelming importance of video gaming to the future of technology, the major technology companies are building out their capabilities across the full gaming stack

ELEMENTS NEEDED FOR A COMPREHENSIVE GAMING STACK

STACK ELEMENT	DEFINITION
 GAME PUBLISHER	Capabilities to develop in-house gaming titles (<i>e.g. Amazon Games, Valve</i>)
 VIRTUAL WORLD	Tools and infrastructure to create virtual spaces (<i>e.g. Minecraft, Facebook Horizon</i>)
 CONSOLE	Hardware to operate and display video games (<i>e.g. Xbox, PlayStation</i>)
 AR/VR DEVICE	Hardware to display digital content in AR/VR (<i>e.g. Oculus, PlayStation VR</i>)
 CLOUD	Infrastructure and services to stream video game content over an internet connection (as opposed to local hardware) (<i>e.g. Google Stadia, Amazon Luna</i>)
 APP STORE	Marketplaces to purchase gaming titles and content (<i>e.g. Steam, Apple App Store</i>)
 SUBSCRIPTION SERVICE	Subscriptions to allow access to gaming titles, content, and/or additional features (<i>e.g. Xbox Game Pass, PlayStation Plus</i>)
 GAMING AS VIDEO	Platforms to host and serve gaming media (<i>e.g. Twitch, YouTube</i>)

Each of the technology companies will either acquire or build their way to become full-stack gaming players

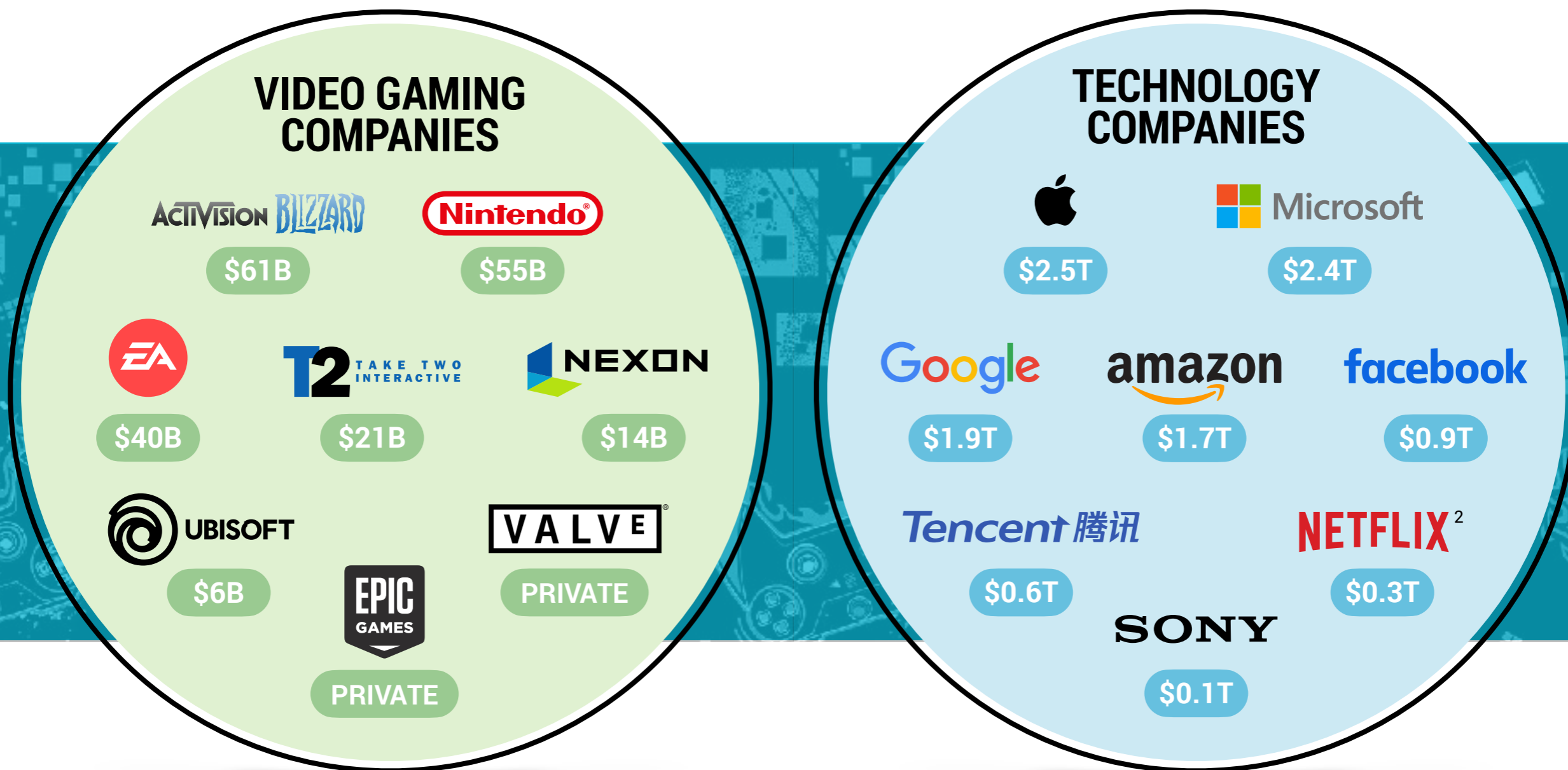
SELECT COMPANIES' PRESENCE IN GAMING¹

New Since October 2020	amazon	Apple	facebook	Google	Microsoft	NETFLIX	Nintendo	SONY	Tencent	VALVE
GAME PUBLISHER	games		READY AT DAWN		XBOX GAME STUDIOS	night school* STUDIO	Nintendo	Sony Interactive Entertainment	Tencent Games	VALVE
VIRTUAL WORLD			horizon FACEBOOK Reality Labs		MINECRAFT AllspaceVR				WeChat	garry's mod ⁵
CONSOLE ⁷					XBOX		NINTENDO SWITCH	PlayStation		STEAM DECK ⁶
AR/VR DEVICE		Apple Glass*	oculus (facebook)	GLASS	Microsoft HoloLens		NINTENDO LABO THE VRBOT	PlayStation.VR		VALVE INDEX VIVE STEAMVR
CLOUD	luna		facebook gaming ²	Stadia	Project xCloud ³		Nintendo Cloud Streaming ⁴ *	PlayStation Now	START	Steam Cloud Play (beta)
APP STORE	amazon appstore	Apple App Store		Google Play	Microsoft Store		Nintendo eShop	PlayStation Store	应用宝 myapp.com	STEAM
SUBSCRIPTION SERVICE	luna prime gaming	Apple Arcade		Stadia Google Play Pass	XBOX GAME PASS Project xCloud ³ XBOX LIVE GOLD	NETFLIX	NINTENDO ONLINE Nintendo Switch Online	PlayStation Now PlayStation Plus	START	
GAMING AS VIDEO	twitch		facebook gaming	YouTube					企鹅电竞 EGAME	STEAMTV

1. Information as of Oct. 6, 2021. Does not include areas in which the company is a majority stakeholder. 2. Facebook does not offer a standalone cloud service but allows streaming of select games through Facebook on Android and web. 3. Only available through a bundle with Xbox Game Pass Ultimate. 4. On a game-by-game basis, not as a subscription or service. 5. Engine created by Valve and game eventually published by Valve, but independently developed by Garry Newman and Facepunch Studios. 6. Expected to be released in Dec. 2021. 7. Excludes devices with a primary purpose other than gaming (e.g. Apple TV). Sources: Activate analysis, Company sites

We expect technology giants to pursue acquisitions of today's top gaming companies, as they broaden their capabilities across the gaming stack

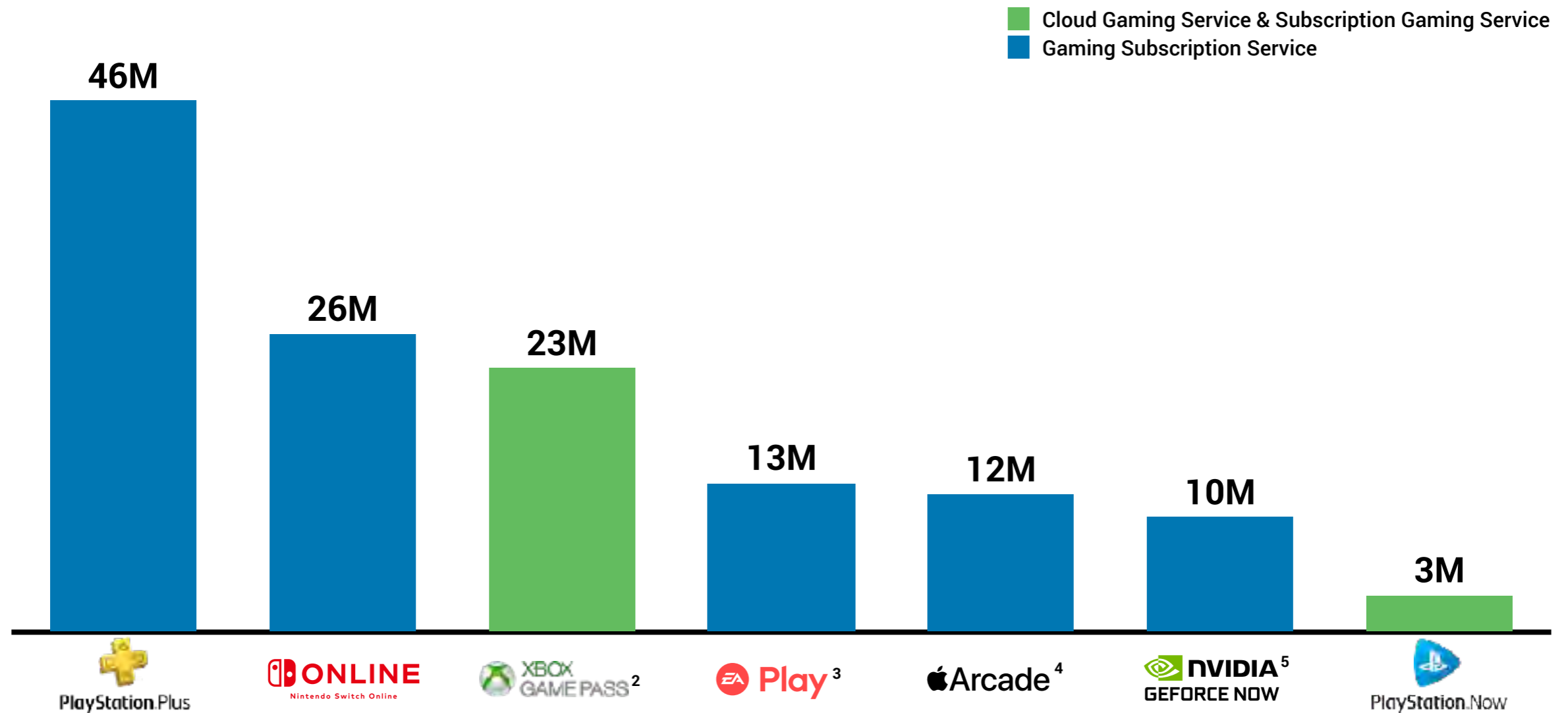
MARKET CAPS OF VIDEO GAME COMPANIES AND TECHNOLOGY COMPANIES¹, GLOBAL, 2021, USD



1. Not exhaustive. Market capitalizations as of Oct. 28, 2021.
 2. Netflix acquired game developer/publisher Night School Studio in Sept. 2021.
 Sources: Activate analysis, Bloomberg

There is substantial demand for gaming subscriptions and cloud gaming services

USAGE OF SELECT CLOUD GAMING SERVICES AND GAMING SUBSCRIPTION SERVICES¹, GLOBAL, 2021, MILLIONS SUBSCRIBERS



1. Gaming subscription services and cloud gaming services are not mutually exclusive. "Gaming subscription service" is defined as a gaming service with a subscription pricing plan (e.g. monthly subscription for access to a game library, online multiplayer mode). "Cloud gaming service" is defined as a gaming service that allows users to play video games by streaming from another device (e.g. a server through the cloud). 2. Ultimate Bundle includes cloud gaming functionality as of Oct. 18, 2021. 3. Across all formats (e.g. PC, Console). 4. Estimate. 5. Indicative of members across paid and free tiers.
Sources: Activate analysis, Company press releases, IHS Markit

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Conversation and news about the metaverse have reached a fever pitch in the last 12 months

METaverse HEADLINES: 2020 AND 2021

THE WALL STREET JOURNAL

Facebook, Roblox See the 'Metaverse' as Key to the Internet's Next Phase

Social-media giant's Horizon Workrooms app reflects interest to invest in technology and content development for new range of online social experiences

The Washington Post

Epic Games believes the Internet is broken. This is their blueprint to fix it.

Epic CEO Tim Sweeney and other executives detail their plan for the metaverse and how it differs from Facebook's vision

The New York Times

Facebook Renames Itself Meta

WIRED

The Metaverse is coming

A 3D virtual world where millions meet online will become our key social hub

THE WALL STREET JOURNAL

THE FUTURE OF EVERYTHING

THE AMAZING THINGS YOU'LL DO IN THE 'METAVERSE' AND WHAT IT WILL TAKE TO GET THERE

Tech visionaries forecast a next, immersive world that will use real-world data and virtual tools to allow people to do what previously could only be imagined

VOGUE BUSINESS

Is it time to hire a chief metaverse officer?

The Metaverse Is Here. Is Your Company Ready?

What it is and why every company needs to care

The Washington Post

Big Tech wants to build the 'metaverse.' What on Earth does that mean?

Microsoft, Facebook and other tech companies claim a virtual reality universe is the future of the Internet

The Washington Post

How Facebook's 'metaverse' became a political strategy in Washington

With a buzzy push for next-wave virtual reality hardware, the tech giant is trying to outrun its mounting woes

THE NEW YORK TIMES STYLE MAGAZINE

Are We in the Metaverse Yet?

Crypto people say they're building it. Gamers might already be living in it. The art world is cashing in on it. Web veterans are trying to save it. But what is it?

Forbes

The Metaverse Is Coming And It's A Very Big Deal

THE VERGE

WHAT IS THE METAVERSE

However, the conversation about the potential of the metaverse in technology and media has been taking place for many years, going back over 15 years

METaverse HEADLINES: 2006-2008



IBM, Linden Lab Envision Borderless Metaverse



Virtual worlds with real purposes



The ever-expanding metaverse



Google moves into virtual worlds

By combining satellite maps and 3-D software, Google Earth is turning into a virtual online playground.

MIT Technology Review

Second Earth

The World Wide Web will soon be absorbed into the World Wide Sim: an environment combining elements of Second Life, Google Earth.



Here Comes the Open Source Metaverse

The New York Times

TECHNOLOGY

Exploring the Vast Business Potential of the Metaverse



Bank Failure in Second Life Leads to Calls for Regulation

When Second Life-based Bank Financial collapsed earlier this month, investors lost the equivalent of \$700,000 in U.S. currency. The bank failure is leading some to call for more regulation in the virtual world.

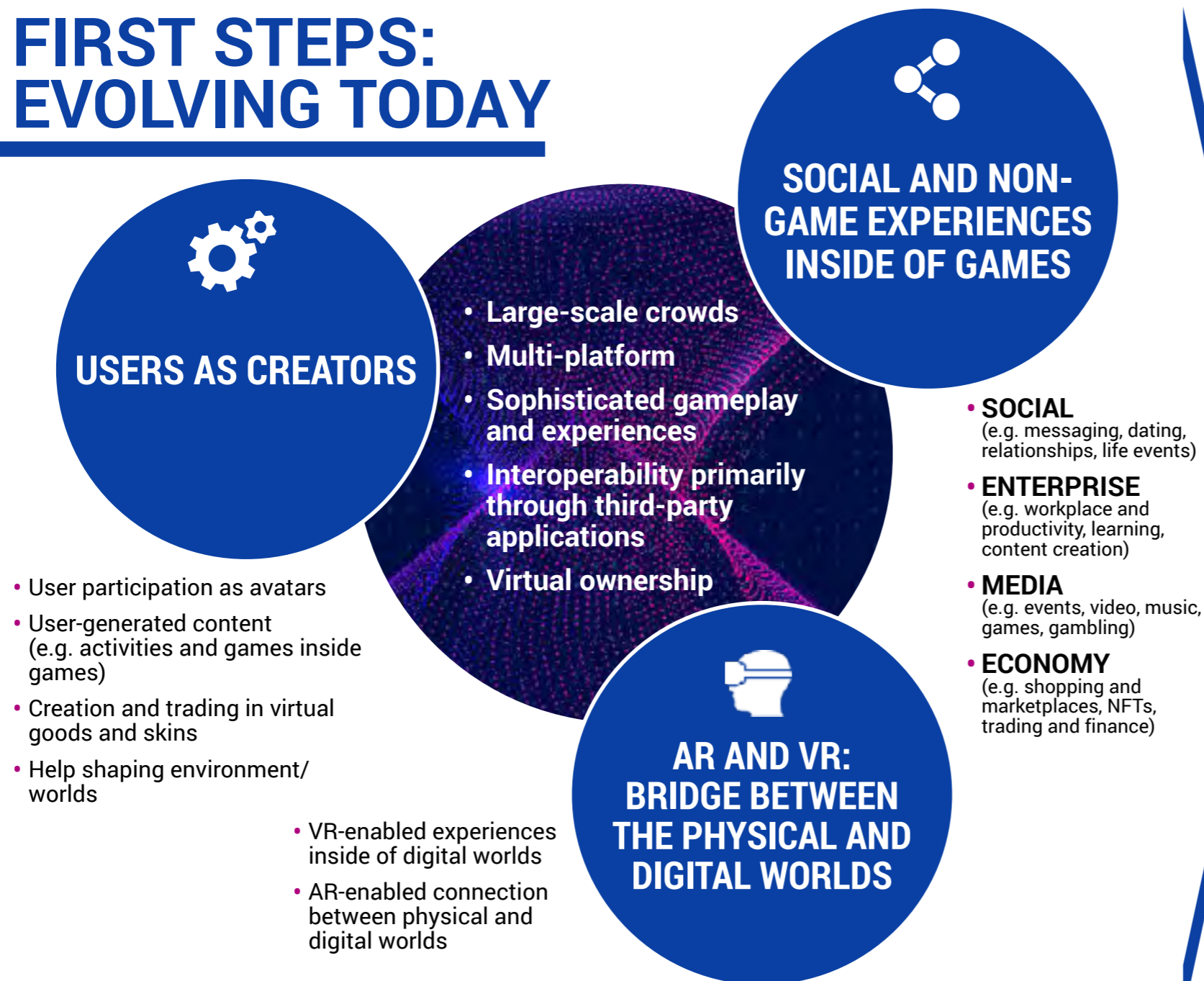


When Virtual Worlds Collide

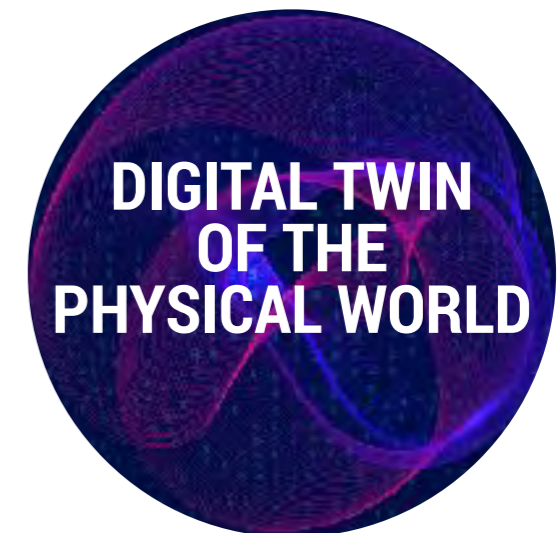
Grand Theft Auto crashes through EverQuest into The Sims. The walls dividing the game universe are coming down.

Many of the foundational elements for the metaverse are already here

FIRST STEPS: EVOLVING TODAY



VISION OF THE FUTURE



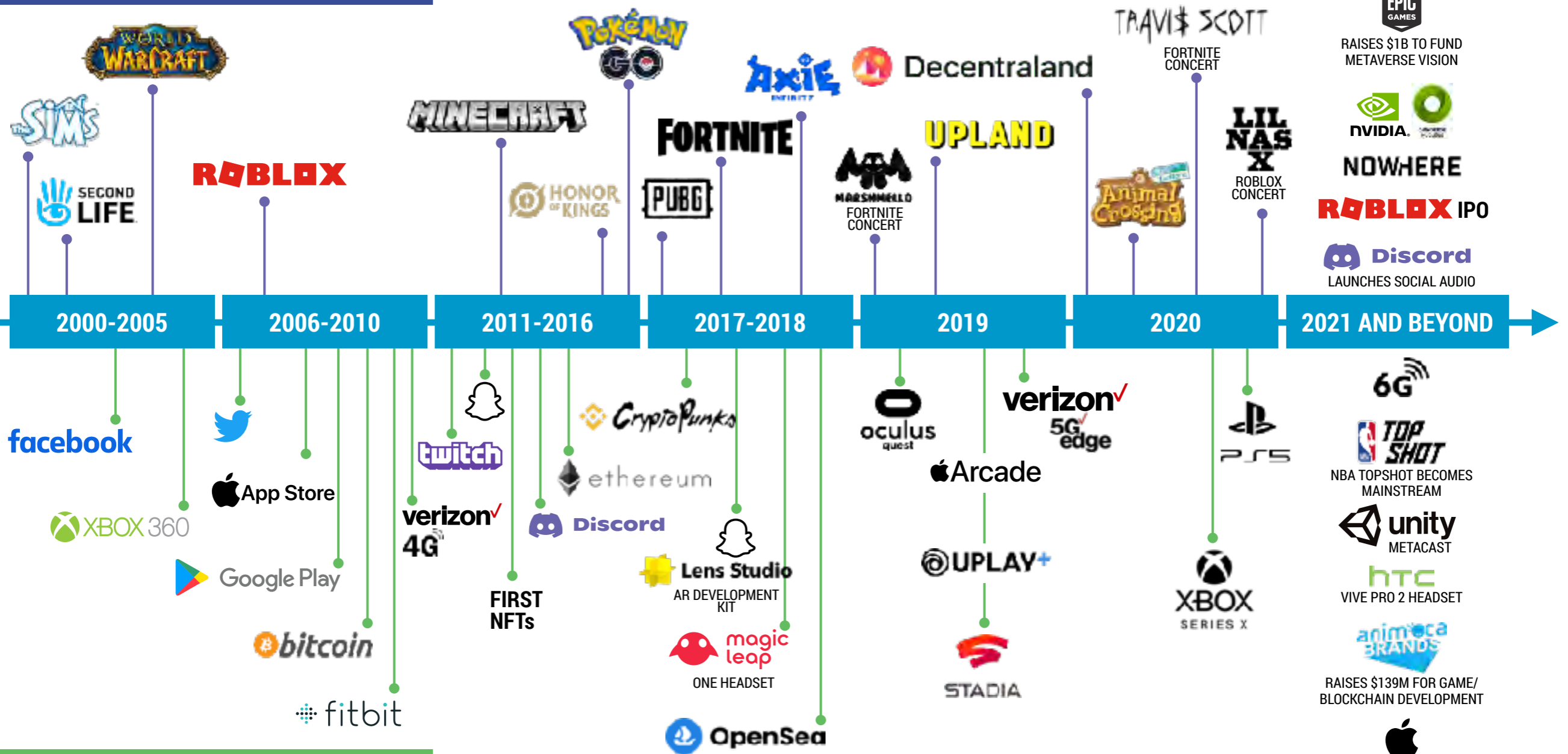
- Fully interconnected spaces
- Persistent identity/avatar
- Interoperability across platforms
- Sophisticated social mechanics
- Digital ownership and virtual possessions
- Extensive economies

Our point of view on the metaverse

- **Pursuit of the metaverse will drive companies to make extensive technology and experience investments**
- **Gaming is the most viable path towards the metaverse** and is increasingly the next technology paradigm for all digital activities
- **“Metaverse activities” beyond gaming are already taking place inside of games**, including social interactions, avatars, media, economies, and messaging
- **VR enables user involvement inside of metaverse experiences; AR bridges the gap between physical and digital worlds**
- **“Interoperability” will be a significant challenge** and will not be resolved any time soon; **third-party applications** (e.g. messaging, payments, audio) **will provide functionality and experiences across metaverse platforms**
- **There will not be one metaverse platform**
- **No one company will own the metaverse**

Development of technologies, experiences, and activities leading to the metaverse have been underway for the last 20 years

METaverse EVENTS/PLATFORMS



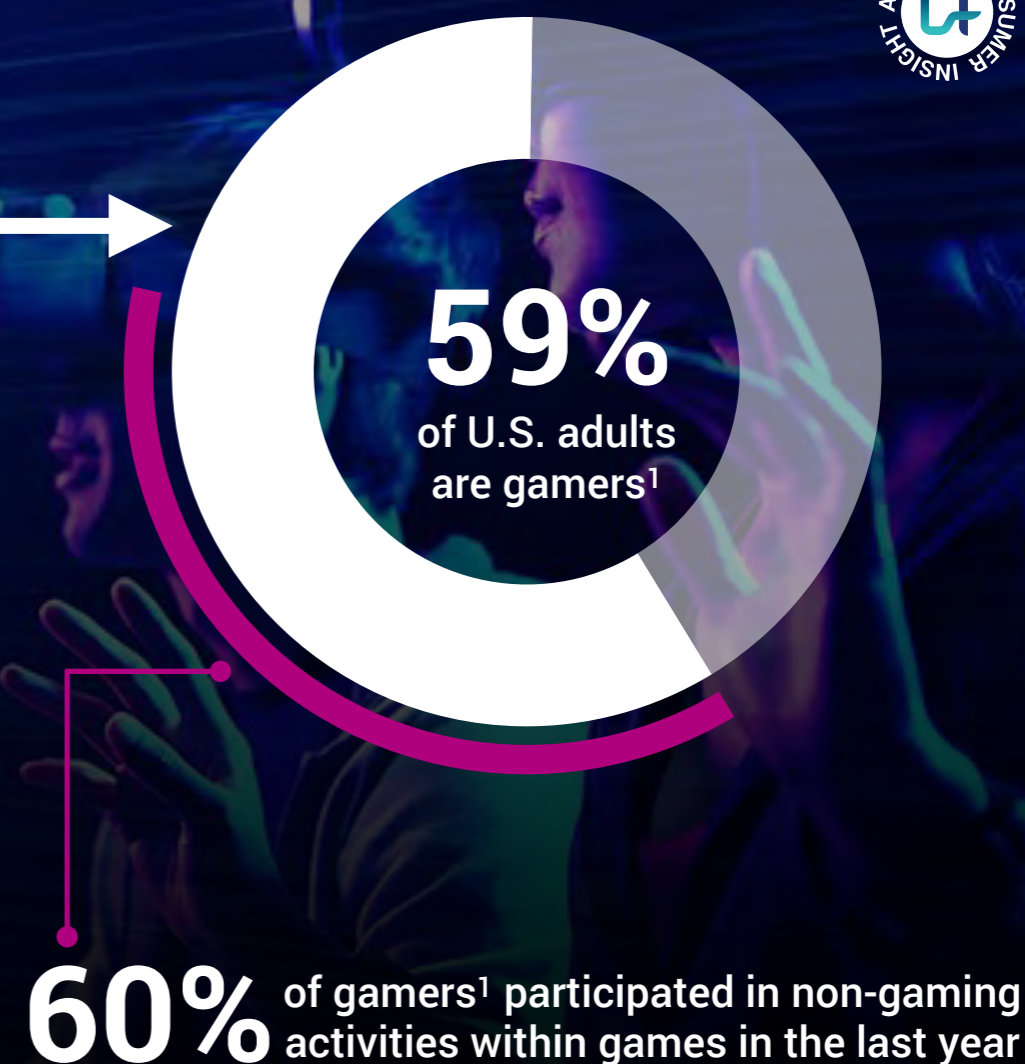
TECHNOLOGY INNOVATIONS

Games are the starting point and most viable path towards the metaverse

GAMES ARE THE FOUNDATION TO AN EXPANSIVE DIGITAL WORLD

- **Many games already at scale** (e.g. massive, engaged user bases)
- **Games already providing experiences for consumers to participate in several behaviors indicative of a metaverse** (e.g. sense of presence, digital goods ownership, live events, personalization)
- **Existing elements of user-created content** (e.g. user-generated activities, games, virtual goods, environments/worlds)
- **Ability to create new user behaviors through attachment to game IP** (e.g. established titles serve as a familiar hook for users to try new virtual experiences within these games)
- **Technology requirements to build a metaverse already being developed through capabilities of existing leaders in gaming** (e.g. game mechanics, concurrency, AR/VR integration, security, content moderation)

VIDEO GAMES ARE A MAINSTREAM CONSUMER BEHAVIOR



We have already begun to see extensive participation in metaverse activities inside of games

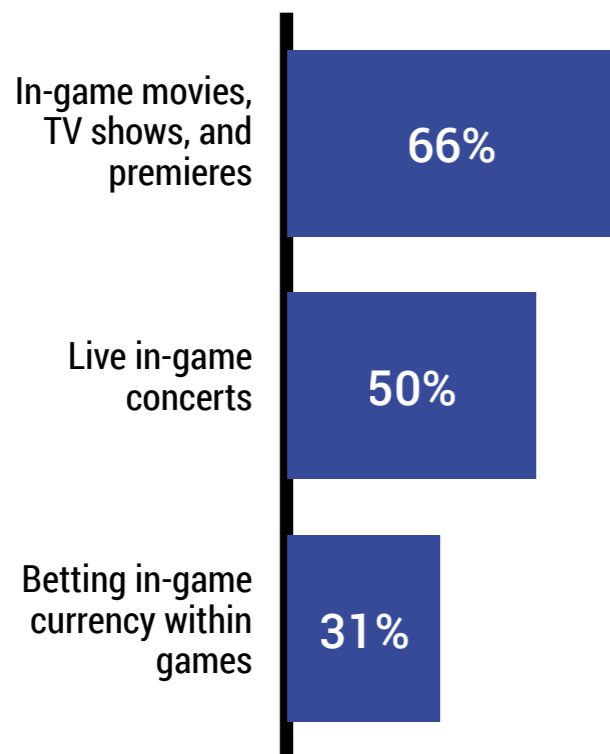
PARTICIPATION IN METaverse ACTIVITIES WITHIN VIDEO GAMES, U.S., 2021, % METaverse PARTICIPANTS¹



65% MEDIA EXPERIENCE



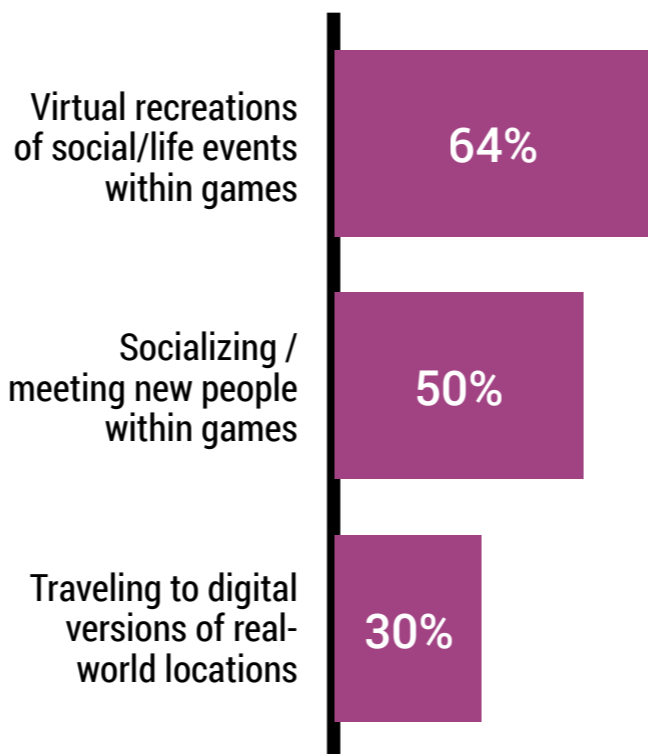
Of those who have participated in a media experience...



69% SOCIAL ACTIVITY



Of those who have participated in a social activity...



72% ECONOMIC ACTIVITY

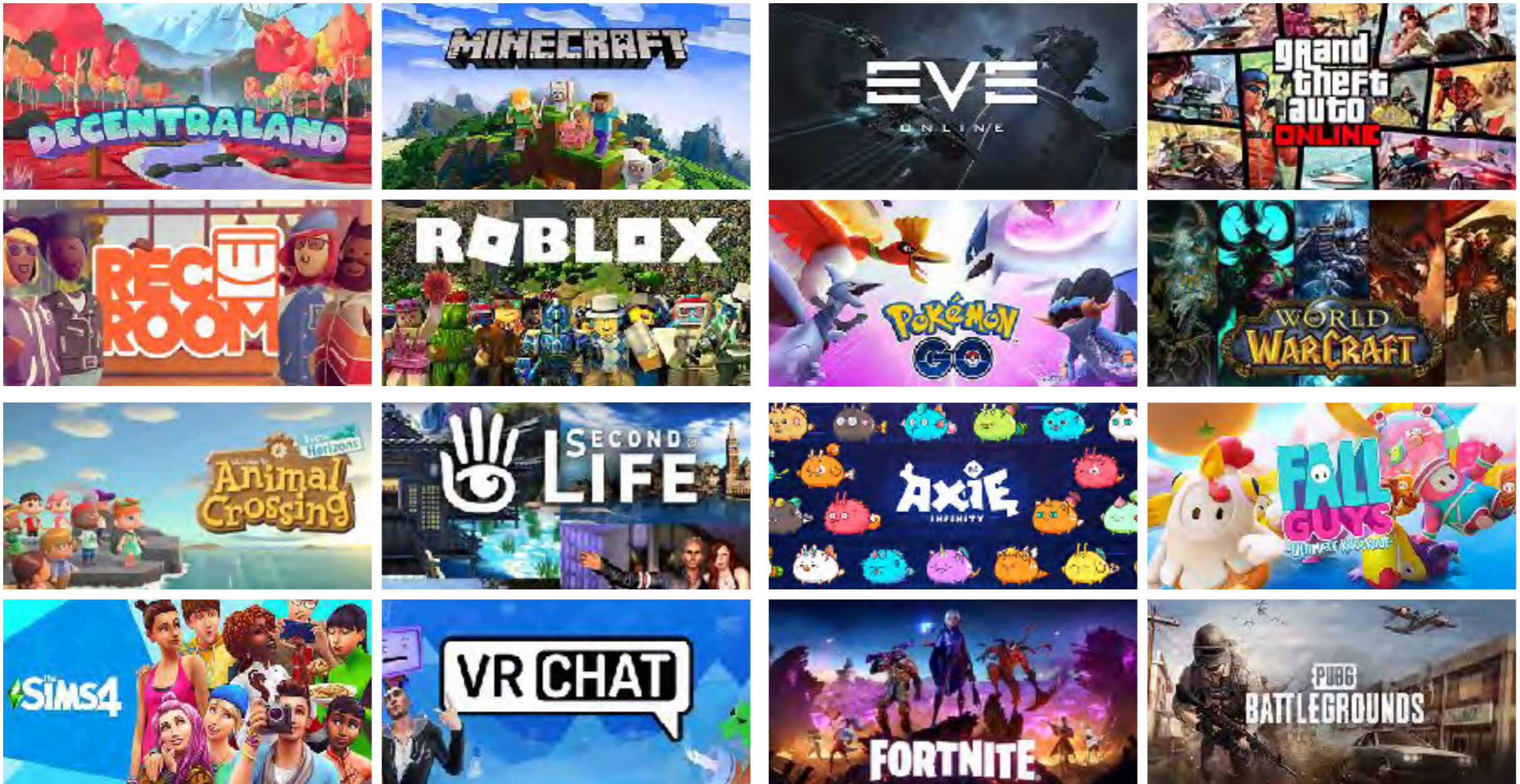


Of those who have participated in an economic activity...



1. "Metaverse participants" are defined as adults aged 18+ who have engaged in one or more media, social, or economic activities within a video game in the last 12 months.
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

Major video game titles are morphing into metaverse platforms and are beginning to show us what it is like to be in the metaverse



We expect to see an expansive set of metaverse activities; eventually all digital behavior and many daily activities will take place on metaverse platforms

SOCIAL

ENTERPRISE

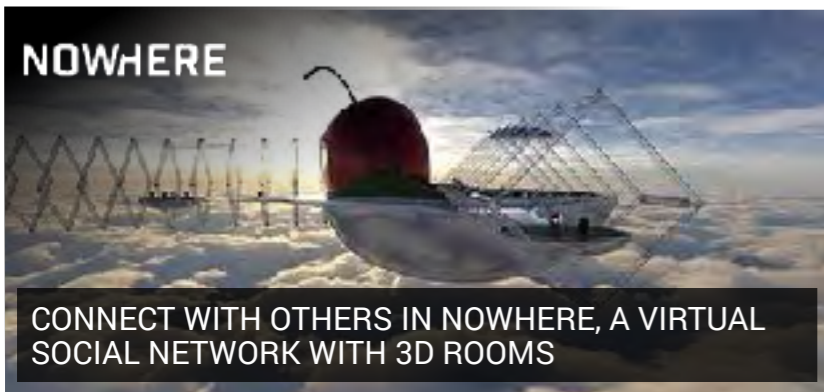
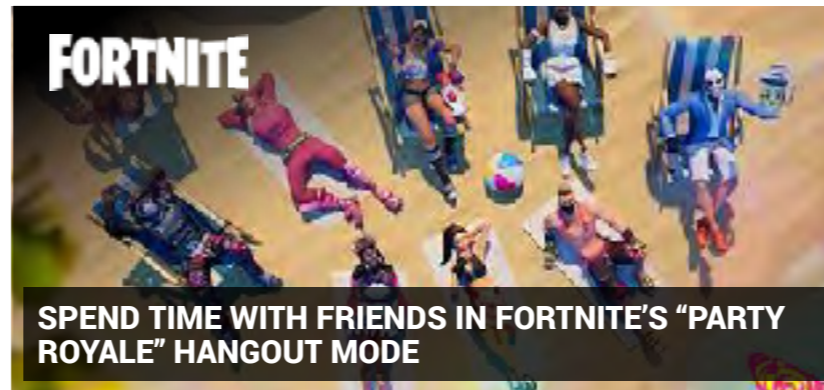
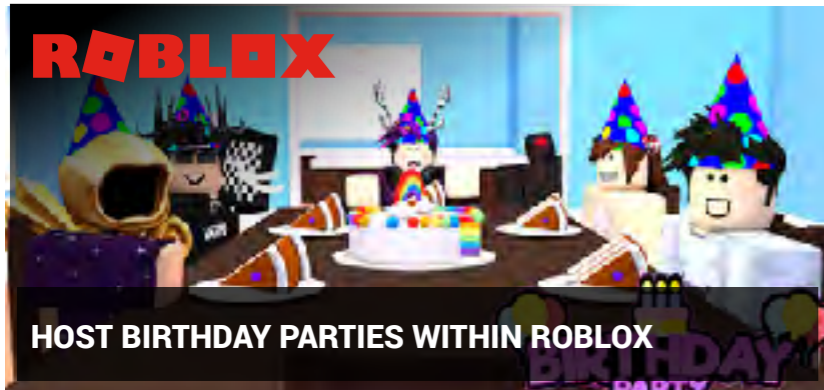
 Communication	 Social Networks	 Messaging	 Workplace and Productivity	 Browsing	 Search
 Telephony	 Dating/ Relationships	 Shopping and Marketplaces	 Events/Performances/ Exhibits	 Learning	 Experience and Content Creation
 Sex and Pornography	 NFTs and Other Digital Goods	 Real Estate and Land Ownership	 Video	 Music	 Video Games
 Advertising/ Sponsorships/ Partnerships	 Trading and Finance	 Payments and Currency	 Gambling	 News	 Sports

ECONOMIES

MEDIA EXPERIENCES

Social experiences, communications, and functionality will increasingly take place in metaverse platforms

EARLY STAGES OF METaverse SOCIAL INTERACTIONS



ACTIVATE PERSPECTIVE

Social experiences and functionality will take place in the virtual world

- Messaging/communication
- Spending time with friends
- Making new connections based on shared interests
- Dating / forming relationships
- Celebrating life events (e.g. weddings, births)
- Playing games
- Hosting parties

Future of metaverse social experiences:

- Spontaneous social interactions
- Ambient communication
- Extensive simulated presence

Enterprise Metaverse: Most enterprise metaverse applications will build on those developed in consumer

EARLY STAGES OF METAVERSE ENTERPRISE APPLICATIONS



ACTIVATE PERSPECTIVE

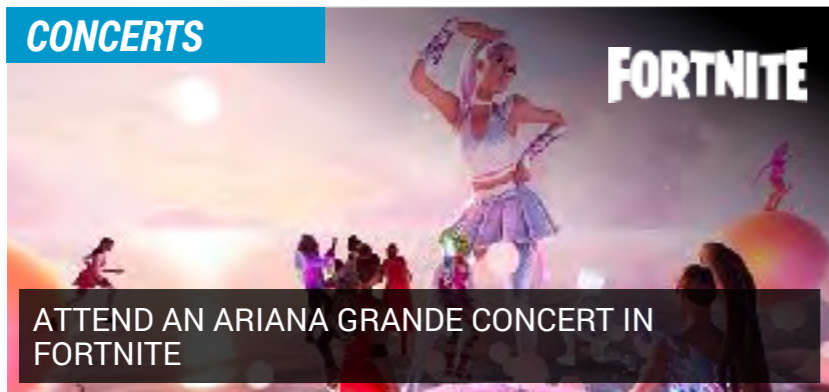
Enterprise metaverse will evolve to include:

- Workflow and productivity tools
- Real-time collaboration
- Meetings
- Intuitive interfaces
- Learning/training

Media Experiences: Early media experiences show the potential of shared virtual events and entertainment

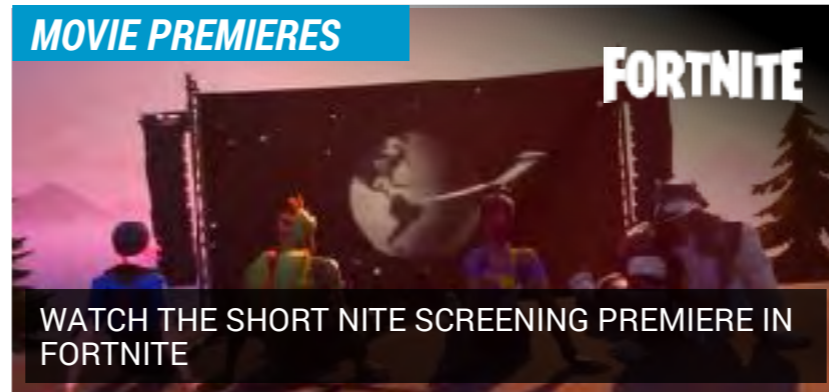
EARLY STAGES OF METaverse MEDIA EXPERIENCES

CONCERTS



ATTEND AN ARIANA GRANDE CONCERT IN FORTNITE

MOVIE PREMIERES



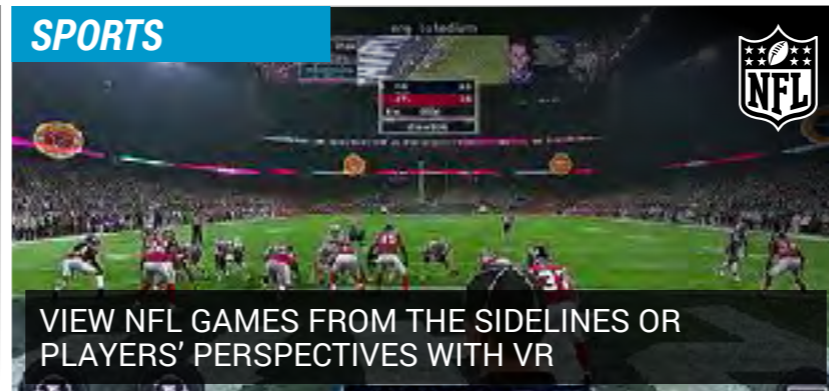
WATCH THE SHORT NITE SCREENING PREMIERE IN FORTNITE

EXHIBITS



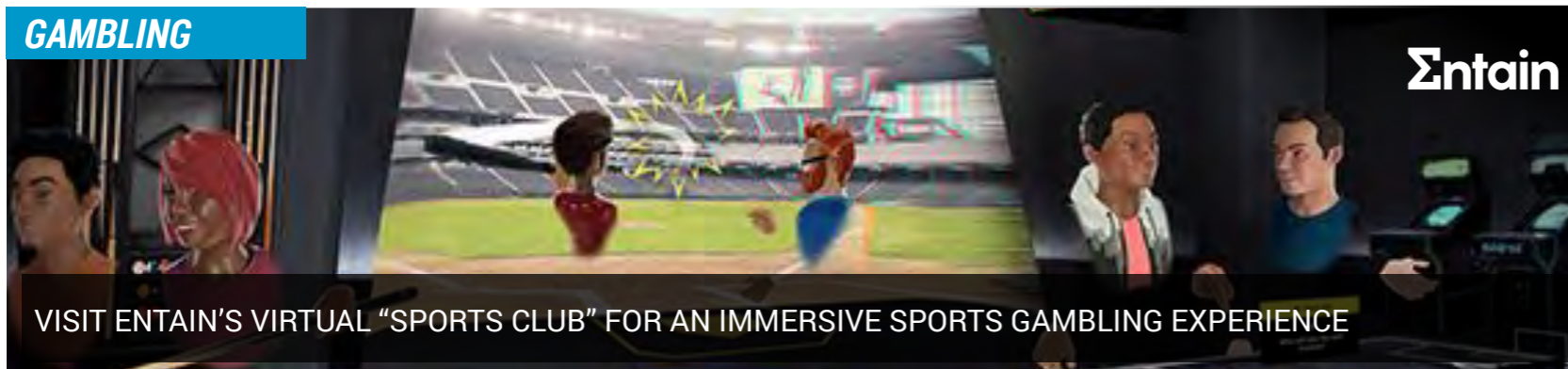
EXPLORE VIRTUAL EXHIBITS FROM THE NATIONAL MUSEUM OF NATURAL HISTORY

SPORTS



VIEW NFL GAMES FROM THE SIDELINES OR PLAYERS' PERSPECTIVES WITH VR

GAMBLING



VISIT ENTAIN'S VIRTUAL "SPORTS CLUB" FOR AN IMMERSIVE SPORTS GAMBLING EXPERIENCE

ACTIVATE PERSPECTIVE

There will be seamless, real-time connection between physical and digital experiences/events (e.g. in-person concert with a "digital twin event" in the virtual world)

Future metaverse media experiences:

- Simultaneous participation in fully immersive events
- Ability to interact with other event-goers and share the experience with friends

Economies: Metaverse economies will be enabled by a robust set of marketplaces where traditional retailers as well as digital-native brands can transact both virtual and physical goods/services

EARLY STAGES OF METAVERSE ECONOMIES

DIGITAL GOODS & SERVICES



DRESSX

PURCHASE VIRTUAL FASHION BY DRESSX

DIGITAL GOODS & SERVICES



REISINGER STUDIO

ACQUIRE DIGITAL FURNITURE NFTS BY ANDRÉS REISINGER

ECOMMERCE: VIRTUAL SHOPPING EXPERIENCE FOR PHYSICAL GOODS



BURBERRY

BROWSE AND SHOP AT THE VIRTUAL BURBERRY STORE IN COLLABORATION WITH ELLE DIGITAL JAPAN

DIGITAL TWINS OF PHYSICAL GOODS



ROBLOX

REDEEM A VIRTUAL ROBLOX VERSION OF A REAL-LIFE NERF TOY GUN PURCHASE

DIGITAL TWINS OF PHYSICAL GOODS



BOSON PROTOCOL

CRUCIBLE

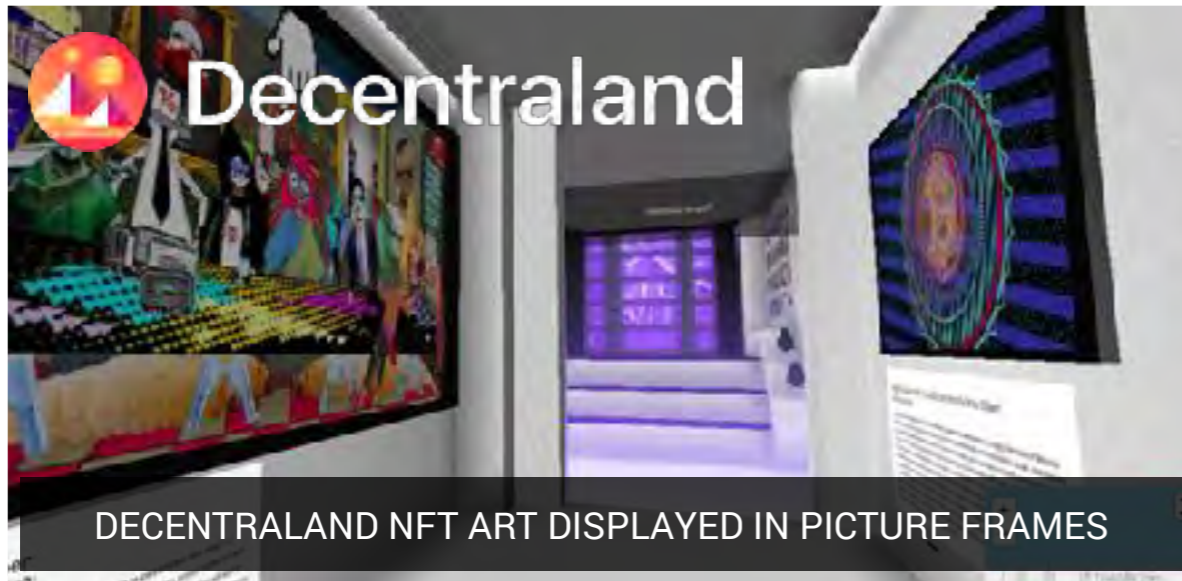
OBTAIN BOTH A DIGITAL AND PHYSICAL VERSIONS OF THE ITEM FOR SALE WITH THE BOSON PROTOCOL AND CRUCIBLE SHOWCASE

ACTIVATE PERSPECTIVE

- **Building blocks of the metaverse economy:**
 - **Digital Goods/Services** (e.g. skins for avatars, virtual fashion, visiting a virtual barber shop)
 - **eCommerce** (e.g. shopping for physical goods in a virtual environment)
 - **Advertising and Sponsorship**
 - **Real Estate and Property Ownership**
- **Users will create and engage with content/experiences that further sustain this economy**
- **NFTs will play a critical role in metaverse economies as a means of authenticating ownership of digital goods**
- **The future of shopping in the metaverse:**
 - Purchases in the physical world (e.g. a designer handbag) will come with a digital twin for your virtual avatar to wear, and purchases in the digital world will result in a tangible item delivered in the physical world

Economies: NFTs will play a critical role in metaverse economies as a means of authenticating ownership of digital goods

NFT IN VIRTUAL WORLDS



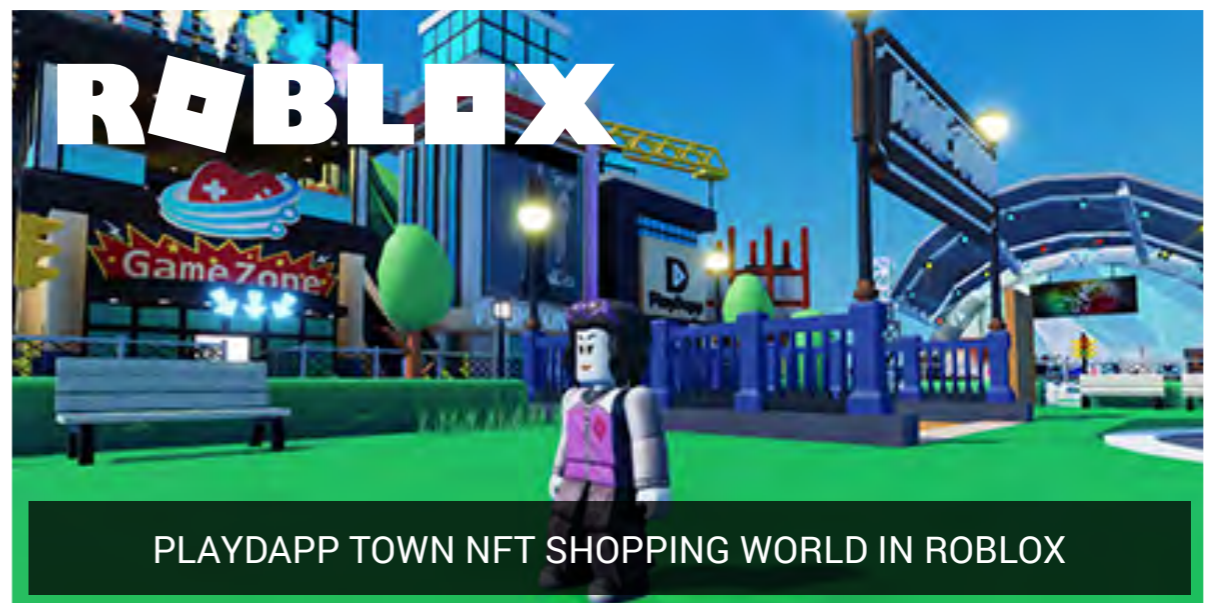
DECENTRALAND NFT ART DISPLAYED IN PICTURE FRAMES



NFT-INTEGRATED GTA 5 ONLINE SERVER



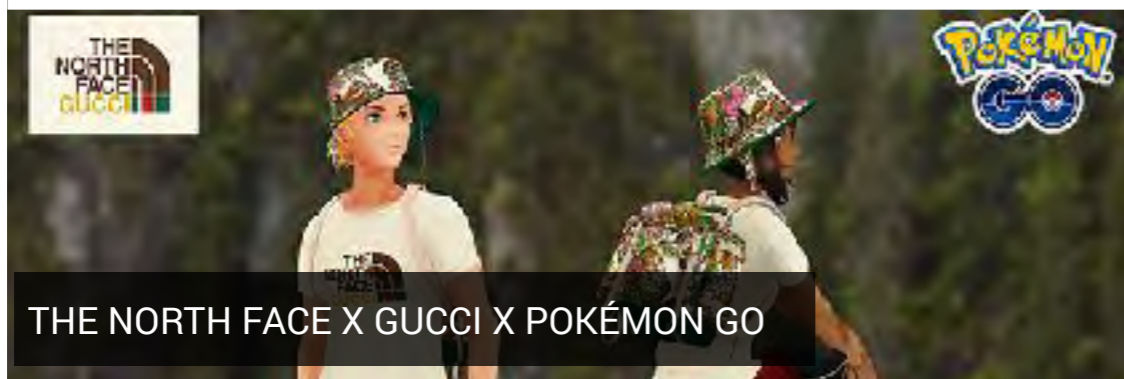
MYMETAVERSE REAL ESTATE MINECRAFT NFTS



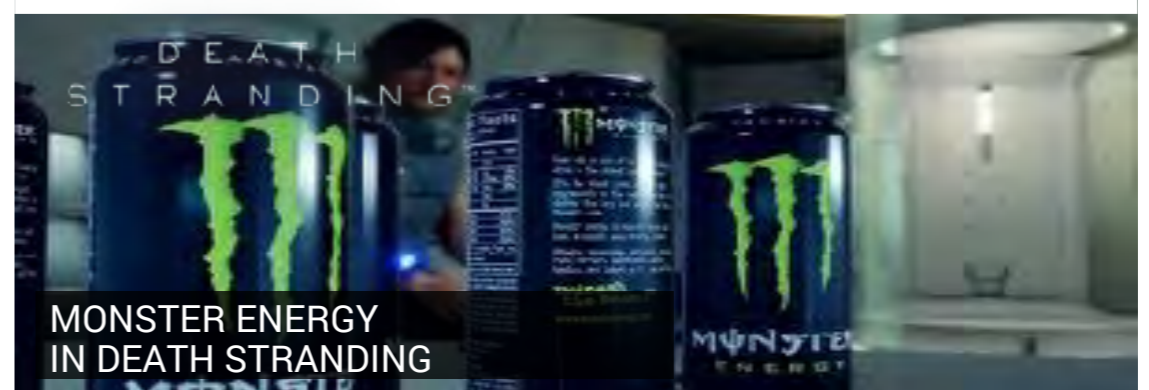
PLAYDAPP TOWN NFT SHOPPING WORLD IN ROBLOX

Economies: early brand participation, through collaborations and sponsorships, demonstrates the potential of the metaverse to build awareness, engage users, and drive purchases

BRAND COLLABORATIONS

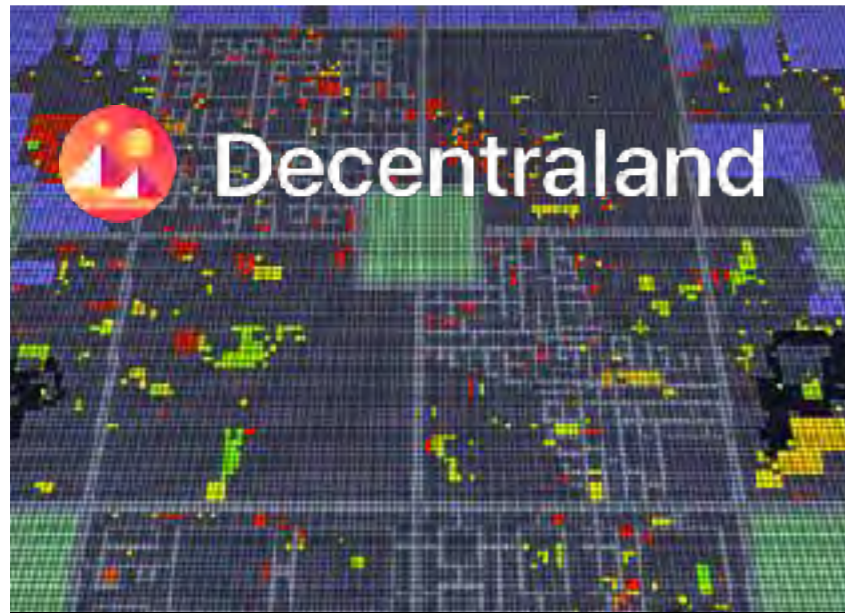


ADVERTISING



Economies: The digital real estate market and ownership of virtual spaces will expand the metaverse economy – real estate ownership in games is already taking shape

EARLY EXAMPLES OF DIGITAL REAL ESTATE MARKETS



\$900K USD: Cost of the most expensive single plot of virtual land, sold in Decentraland



\$8.6M USD: Total cost of virtual land sold in Sandbox from April 2021 to June 2021



1M: Number of unique virtual properties sold in Upland's digital real estate market

- Digital spaces can be **bought, inhabited, built upon, enjoyed, and sold by their owners**
- The buying and selling of **digital real estate as an investment vehicle** will continue to fuel metaverse economies
- By creating a **virtual analog of the physical world**, virtual space can take on the features of physical counterparts but with **infinite detail and the ability to expand**

User creation and agency are lynchpins of participation in the metaverse; user content created within some games already accounts for increased activity and engagement

EXAMPLES OF EARLY METAVERSE USER-GENERATED ECONOMIES



- Roblox revolves around users programming and playing games
- 9.5M developers on the Roblox platform
- Over half of in-game currency spend is being spent on user-generated content
- More than 1,250 developers made at least \$10,000 last year via in-game sales; more than 300 developers earned \$100K or more



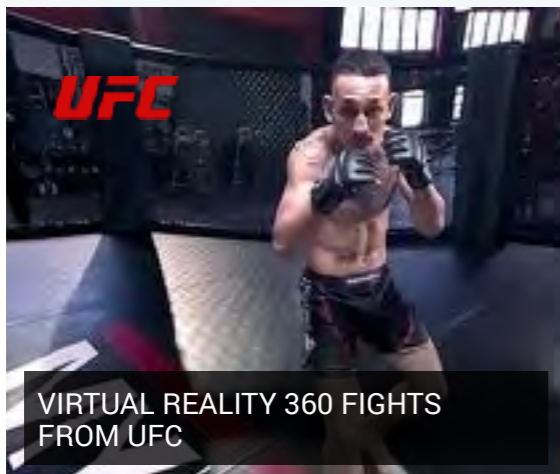
- Rec Room’s integrated game creation system allows users to make their own games inside of the game
- Of the 15M people who have used Rec Room, 2M have made content of some kind
- On average, creators are adding 20K “rooms” per day

Virtual reality will enable users to enter the metaverse, closing the gap between physical and digital realities

EXAMPLE APPLICATIONS OF VR IN THE METaverse: VIRTUALLY IMMERSIVE ENVIRONMENTS

SPORTS & EVENTS

Users will be able to feel an actual **“sense of presence”** as they step into live events like sports, concerts, and performances using VR – the metaverse will allow **digital twin events for any real-world media experience**



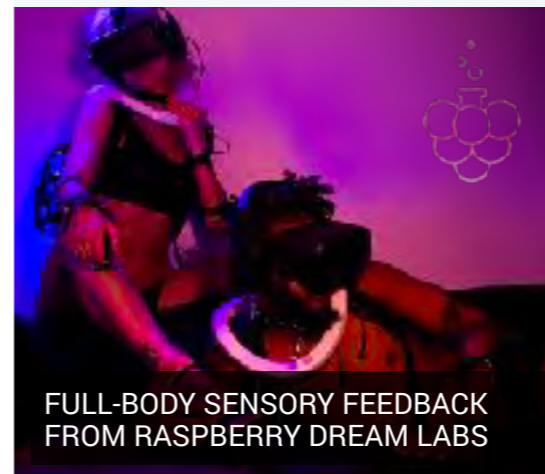
SHOPPING

Virtual versions of physical stores (as well as digital-native stores) will **become the norm for shopping experiences** – users will be able to enter, browse, and effortlessly try on products **using their digital avatar**



SEX & INTIMACY

As VR accelerates, expect the gap from digital to physical sensations to **close**, making it difficult to distinguish the real from the virtual worlds – **metaverse sex and intimacy will be an immersive experience**



EDUCATION & LEARNING

VR will **enable education, learning, and workplace environments** to be interactive and engaging experiences – students and professionals will be able to **enter and participate in simulated situations that mimic the physical world**




EARLY EXAMPLES

With the introduction of new device functionality, augmented reality connects the physical world with metaverse activities

EXAMPLE IMPLICATIONS OF AR IN THE METaverse: SHARED DIGITAL EXPERIENCES



Advances in AR will continue to enable the creation of multiplayer virtual experiences mapped to the physical world

Mixed reality allows objects (e.g. holograms) to be shared virtually or placed within physical settings





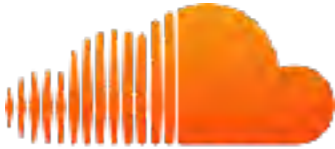





AR overlays on real-world objects and locations provide unique, interactive visual experiences

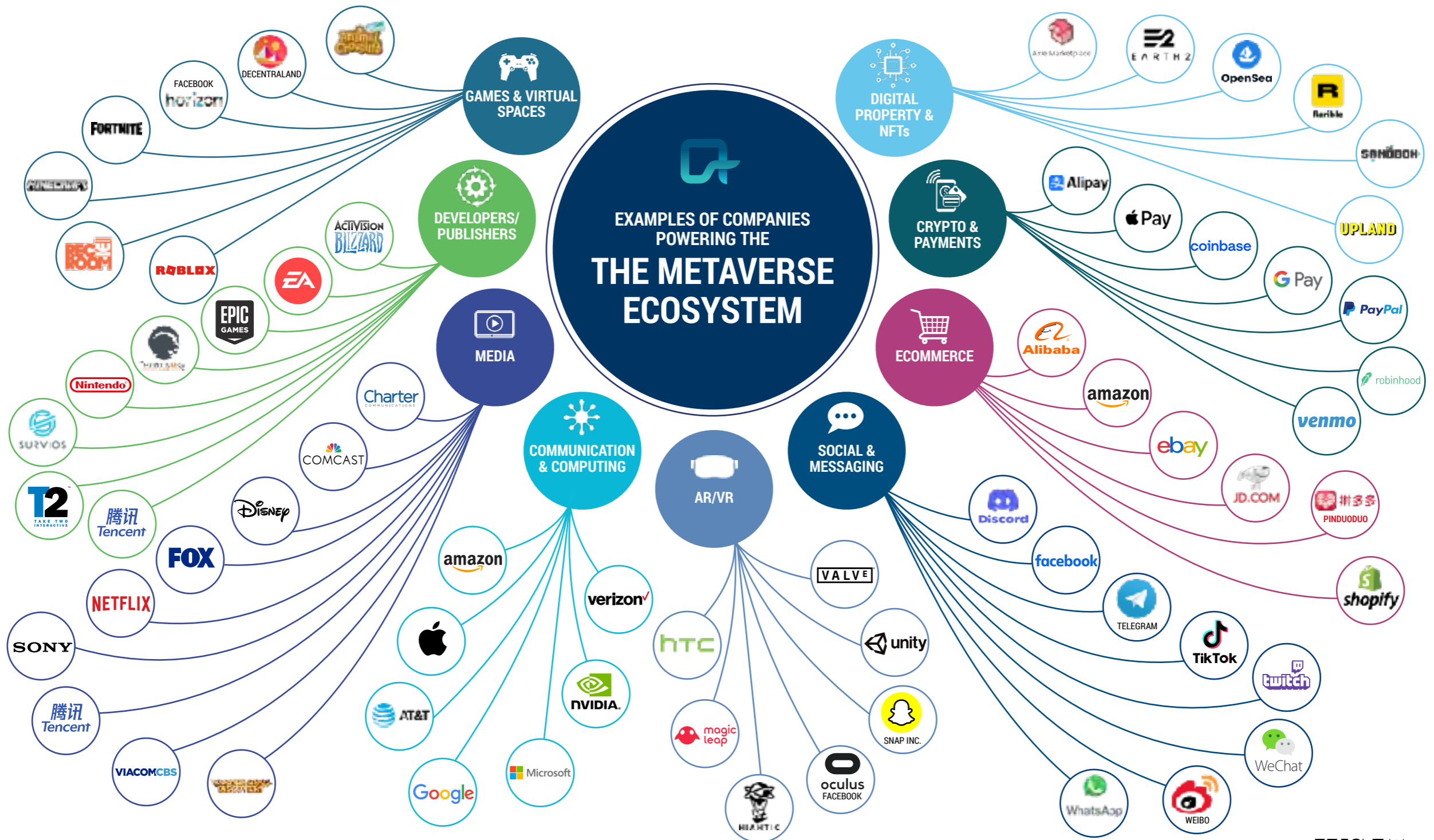


Interoperability between metaverse platforms is not likely to happen anytime soon; third parties, however, will be the first to integrate across metaverse platforms

POTENTIAL THIRD PARTIES FOR METaverse INTEGRATIONS

 Discord	 Spotify [®]	 PayPal	venmo	 ENJIN
 SOUNDCLOUD	 STEAM [®]	twitch	coinbase	 METAMASK

Companies building the metaverse will participate in an extensive ecosystem



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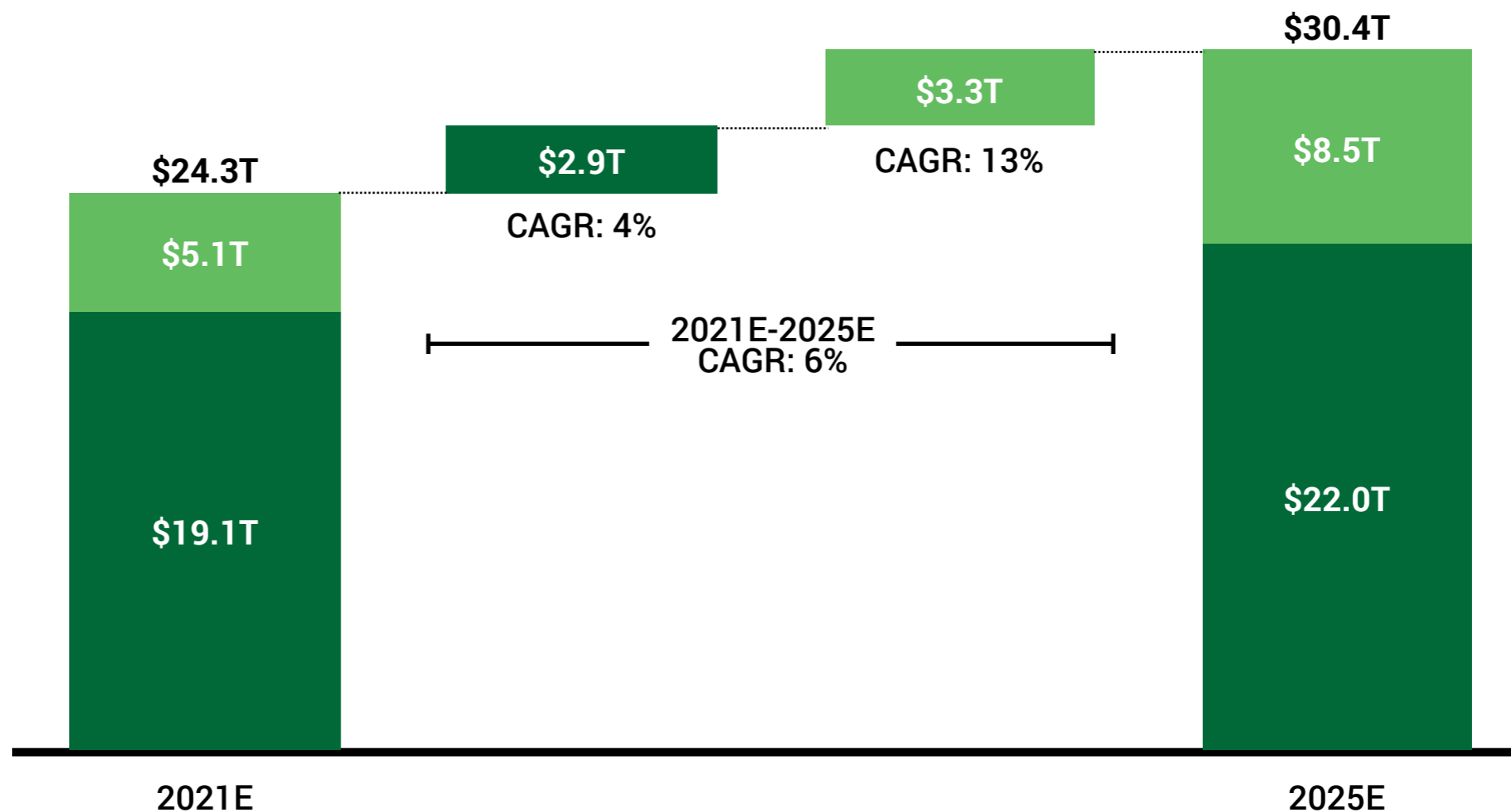
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Audio: More Streaming Services, Live, and Social Drive Growth	170
Data Solutions and Enterprise Automation: Technology Advances Create Breakthrough Capabilities	187

Globally, eCommerce is at an important inflection point: over the next four years, eCommerce will add more absolute dollars than physical retail

RETAIL SALES BY CHANNEL¹, GLOBAL, 2021E VS. 2025E, TRILLIONS USD



eCommerce
Physical Retail



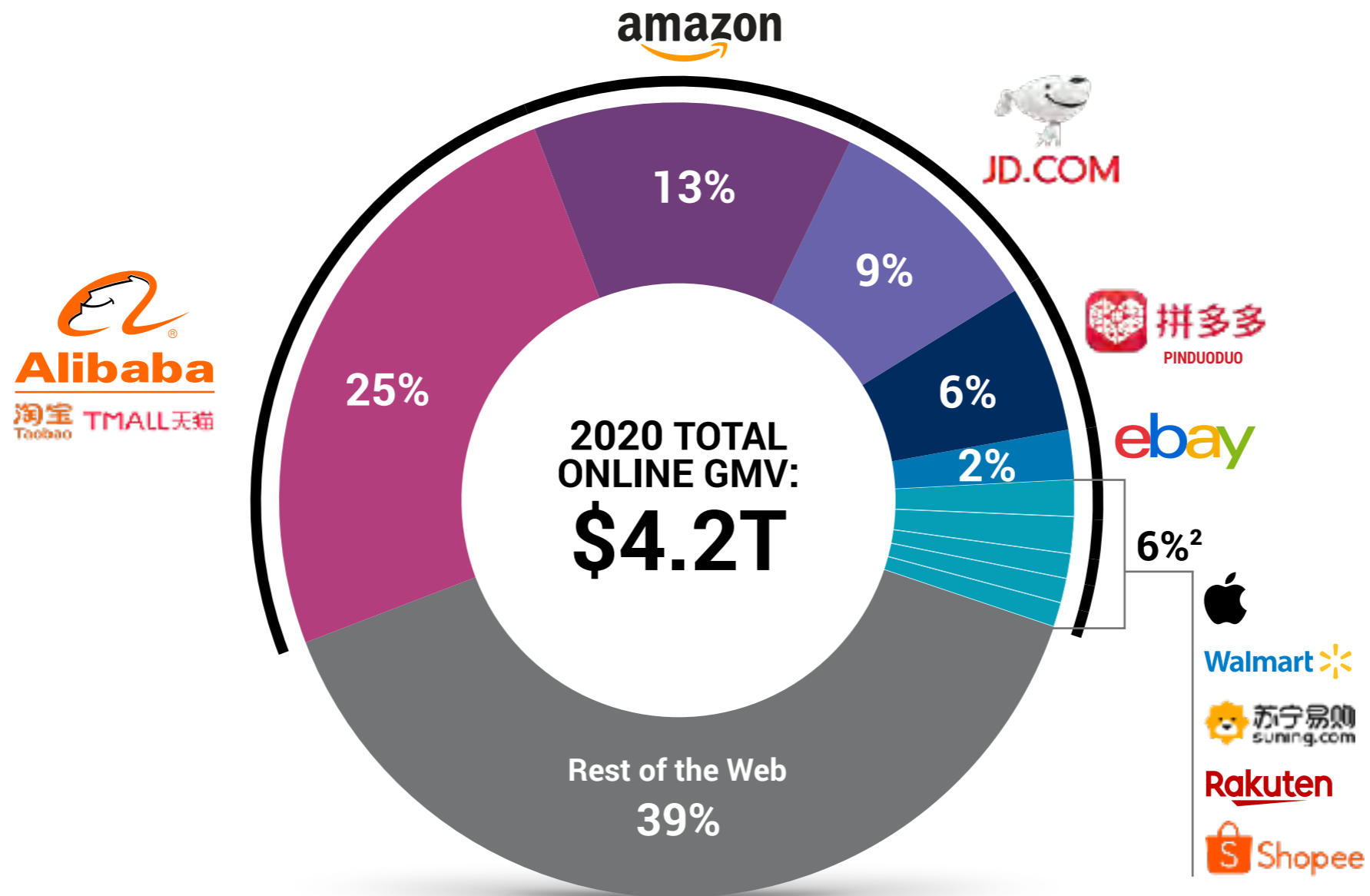
eCommerce Share of Total Retail Sales

21%

28%

The 10 largest eCommerce players make up over 60% of global online gross merchandise volume

ONLINE GROSS MERCHANDISE VOLUME (GMV)¹, GLOBAL, 2020, % TOTAL ONLINE GMV



1. Excludes the combination of individual merchants using eCommerce enablement platforms (e.g. Shopify).
 2. Each company accounts for between approximately 1% and 2% of the total online GMV.
 Sources: Activate analysis, Company filings, Company press releases, Company sites, Digital Commerce 360, eMarketer, U.S. Internal Revenue Service, Research and Markets

New technologies will break down the barriers to higher eCommerce adoption; even the most expensive and complex product categories will now shift to online

CONSUMER PAIN POINT WHEN SHOPPING ONLINE

HOW ECOMMERCE WILL SOLVE

Limited ability to discover and search for products

(primarily text-based, some audio-enabled)



Visual search

(supported by text and audio)

Risk due to inability to test products before purchasing

(especially for more costly and complex product categories, such as auto, furniture, and jewelry)



Virtual try on and visualization

Long delivery wait times

(typically 1 day or more)

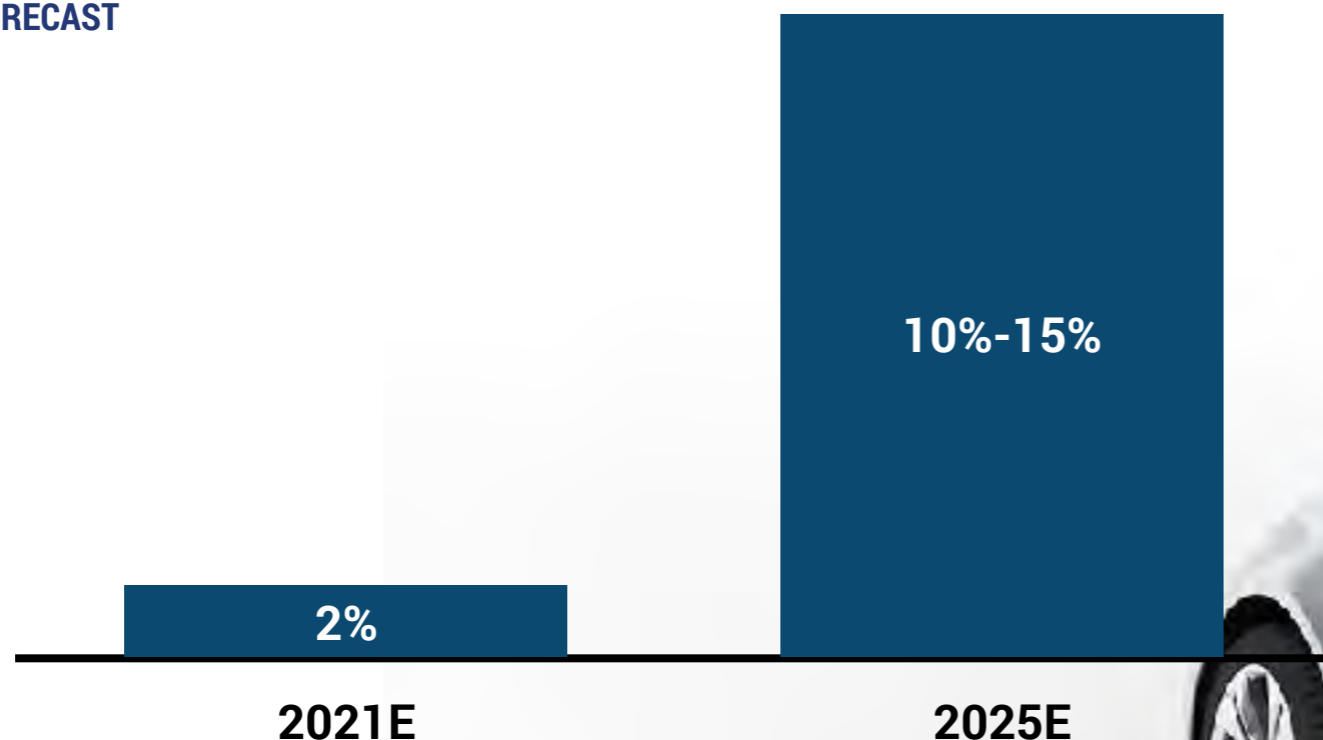


Ultrafast delivery

(2 hours or less)

We forecast that by 2025, 10% to 15% of cars will be purchased online and fulfilled via delivery (up from 2% today); despite the fact that auto has historically been one of the slowest product categories to move to eCommerce

CAR PURCHASES COMPLETED ONLINE AND FULFILLED VIA DELIVERY, U.S., 2021E VS. 2025E, % TOTAL CAR PURCHASES^{1, 2}



Sales from car purchases completed online¹ and fulfilled via delivery will surpass **\$150B** annually by 2025

Total Car Purchases Completed Online¹ and Fulfilled via Delivery

850K

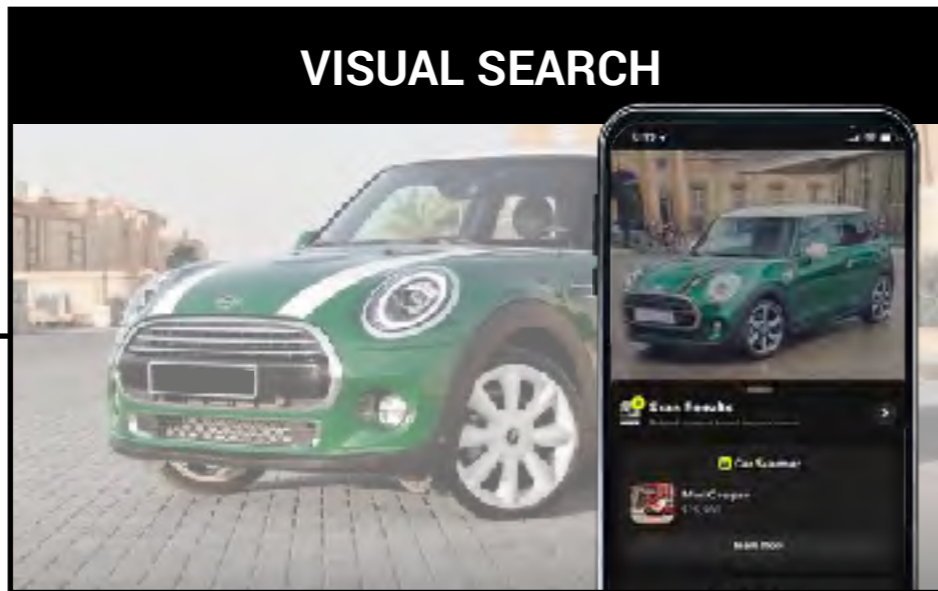
6M-10M

1. "Completed online" is defined as having set up the full car deal online, including the down payment, monthly payment, and trade-in. 2. "Total car purchases" includes both new and used cars.

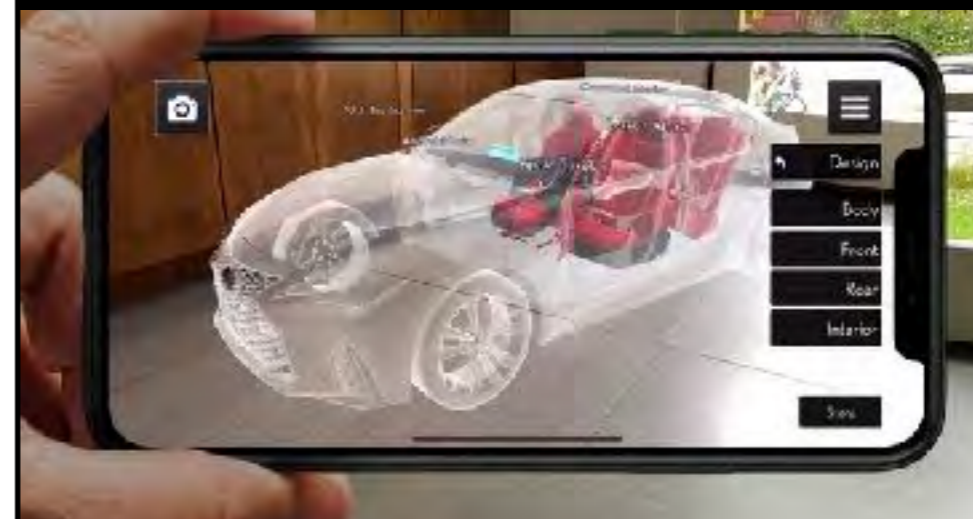
Sources: Activate analysis, Company filings, Company press releases, Company sites, Comscore, Cox Automotive, eMarketer, Federal Reserve Bank of St. Louis, IBISWorld, IHS Markit, Khaveen Investments, U.S. Bureau of Economic Analysis, U.S. Census Bureau, Wells Fargo

This transformation in auto will be enabled by improvements to the online car shopping experience

IMPROVEMENTS TO THE ONLINE CAR SHOPPING EXPERIENCE THAT ARE ENABLING HIGHER ECOMMERCE PENETRATION FOR THE AUTO CATEGORY



▲ Exterior and Interior ▼



Visual search will be the next frontier for product discovery, allowing consumers to find products by scanning an item in person or using an image

EXAMPLE APPLICATIONS OF VISUAL SEARCH



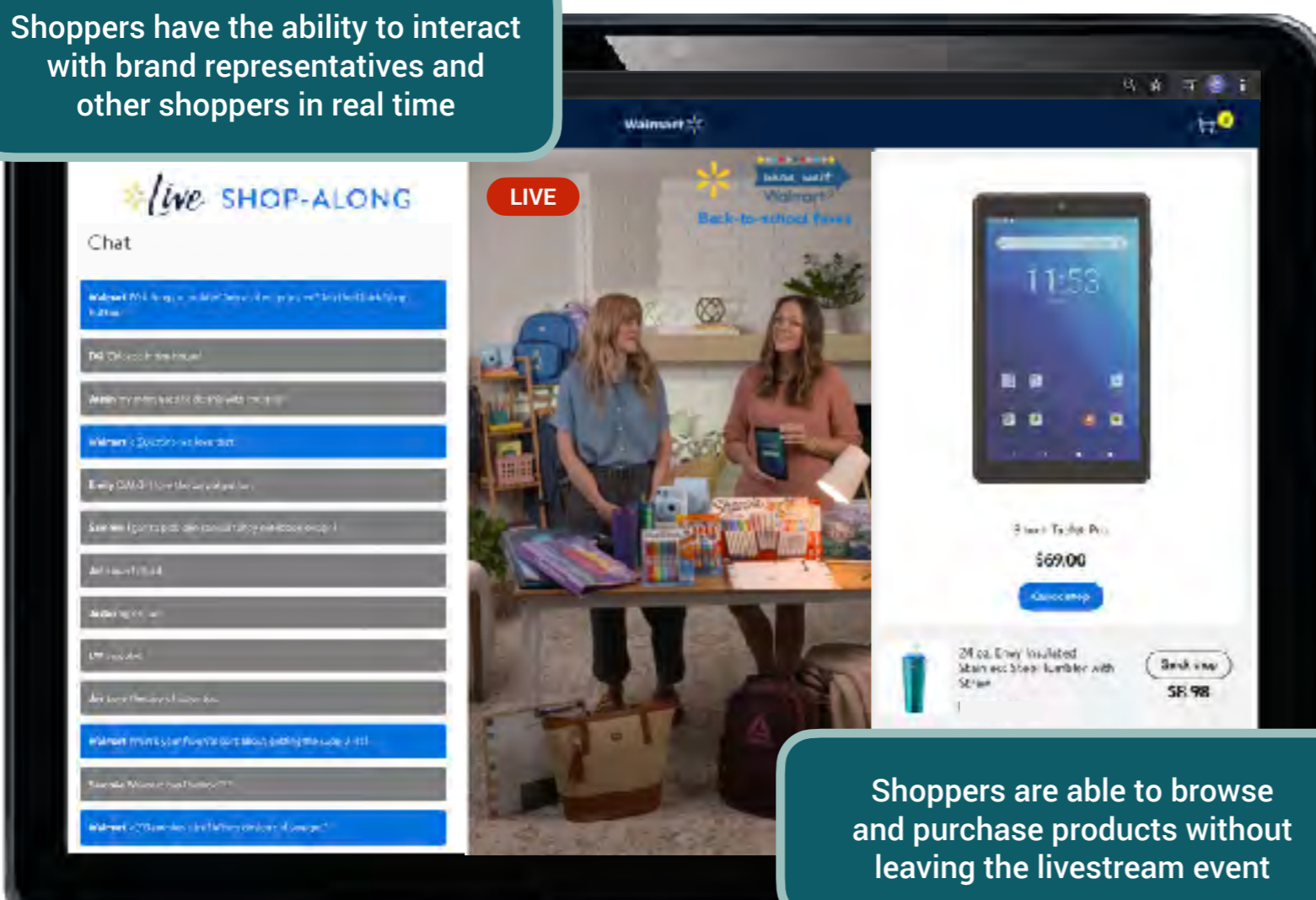
EXAMPLE PLAYERS OFFERING VISUAL SEARCH



To engage with customers and create another way of selling products, a significant number of retailers will participate in livestream shopping

LIVESTREAM SHOPPING EVENT EXAMPLE: Walmart JULY 2021 BACK-TO-SCHOOL EVENT

Shoppers have the ability to interact with brand representatives and other shoppers in real time

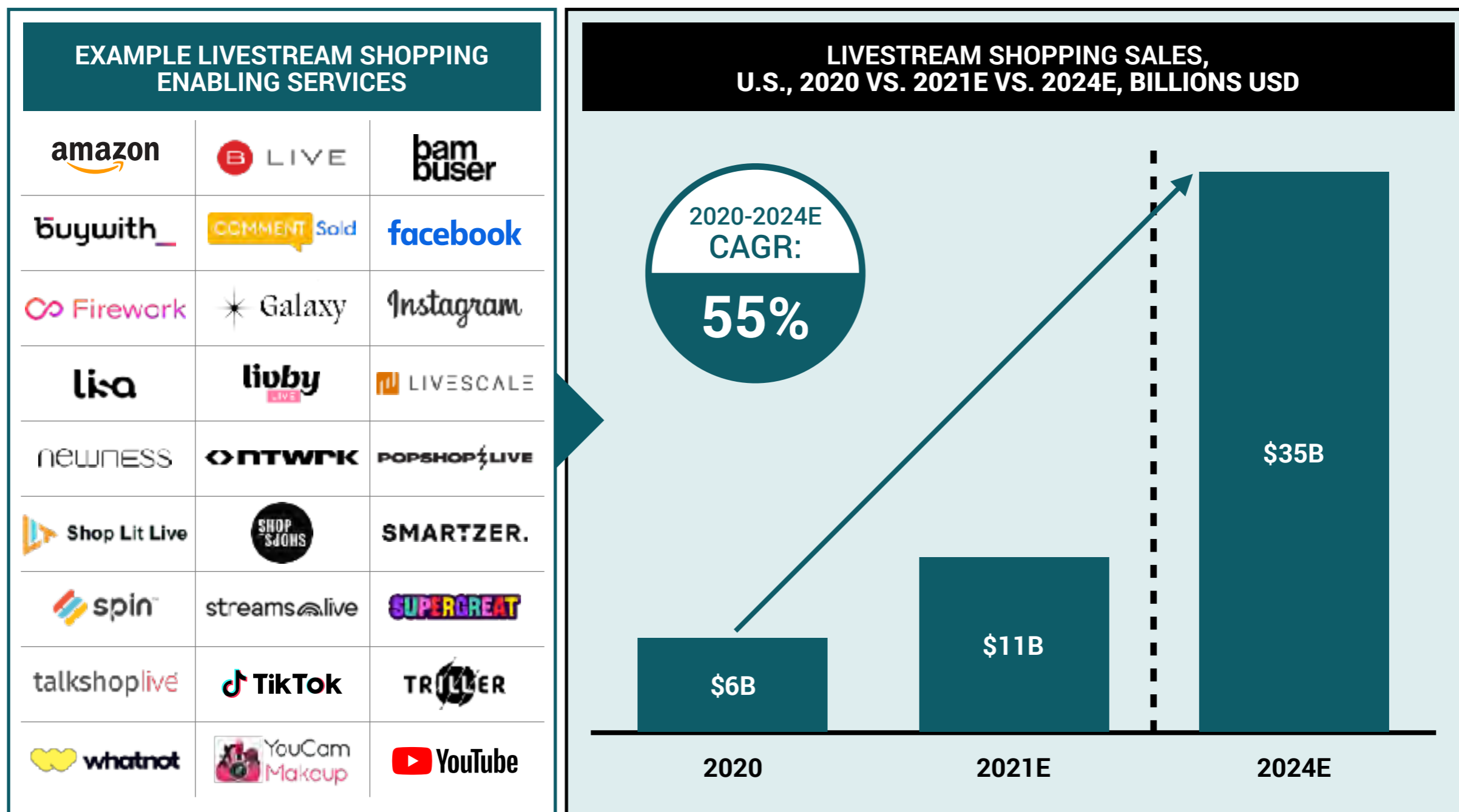


Shoppers are able to browse and purchase products without leaving the livestream event

EXAMPLE RETAILERS THAT HOSTED THEIR FIRST U.S. LIVESTREAM SHOPPING EVENT IN THE LAST 12 MONTHS

Abercrombie & Fitch	ALDO	ANNE KLEIN	BEAUTYCOUNTER
COVERGIRL	Crete	dolce vita	HOLDGEAR
/kit·sch/	knix	KYLIE COSMETICS™ BY KYLIE JENNER	LG
★ macy's	MODA OPERANDI	HET-A-PORTER	NORDSTROM
NYX	Off-White™	Outdoor Voices	PAC SUN
PELTON	petco	Rare Beauty	REBECCA MINKOFF
SEPHORA	VERISHOP	Walmart 	Zappos 

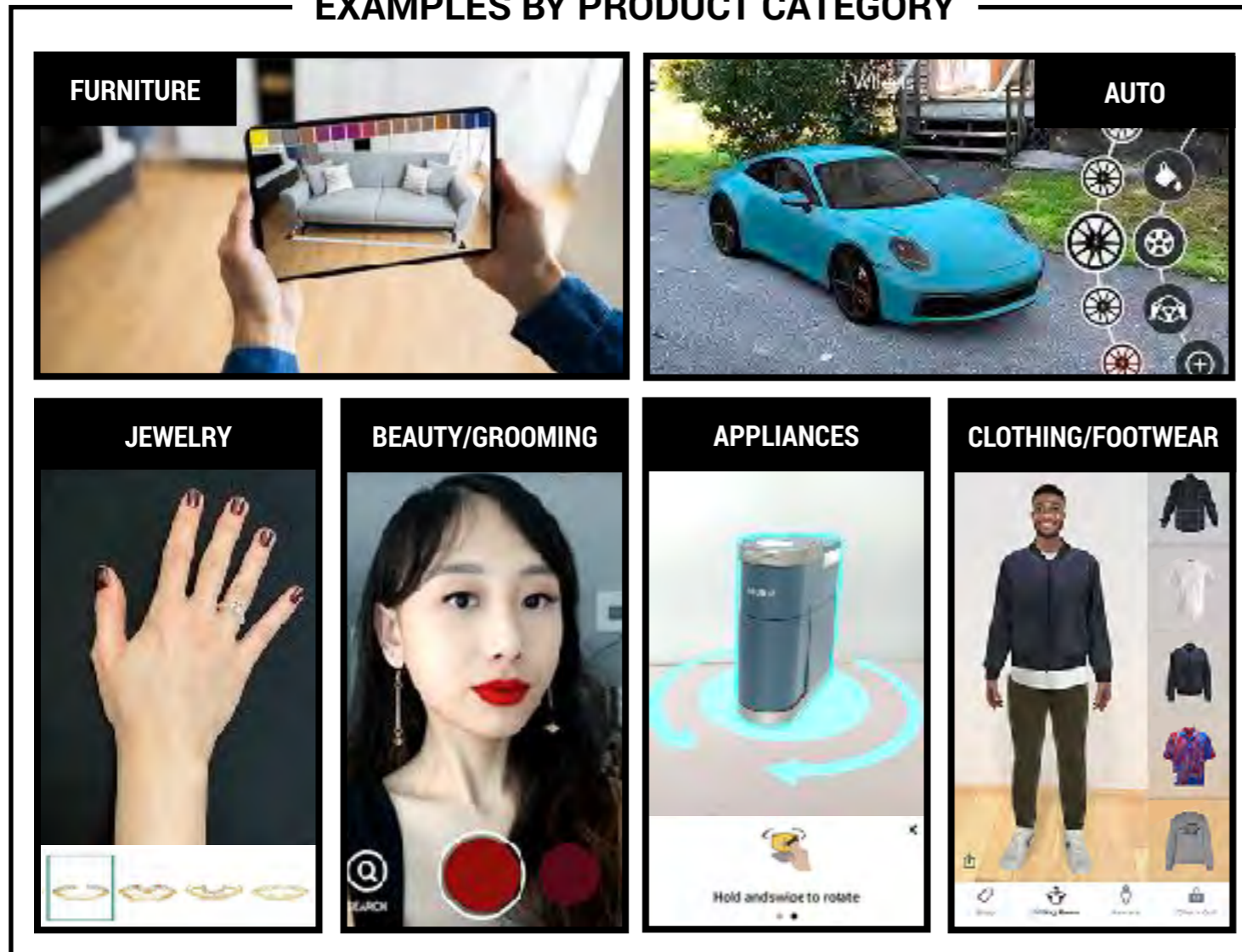
Livestream shopping sales will experience substantial growth, fueled by the large set of enabling services that make it simple for both retailers and individual sellers to host livestream shopping events



Winners in eCommerce will exploit virtual visualization and try on technologies to enhance the online shopping experience

Virtual try on and visualization tools allow consumers to view products in/on their live environment, photos, and/or personalized avatars

EXAMPLES BY PRODUCT CATEGORY



POTENTIAL BENEFITS

- 1 Increased conversion rates

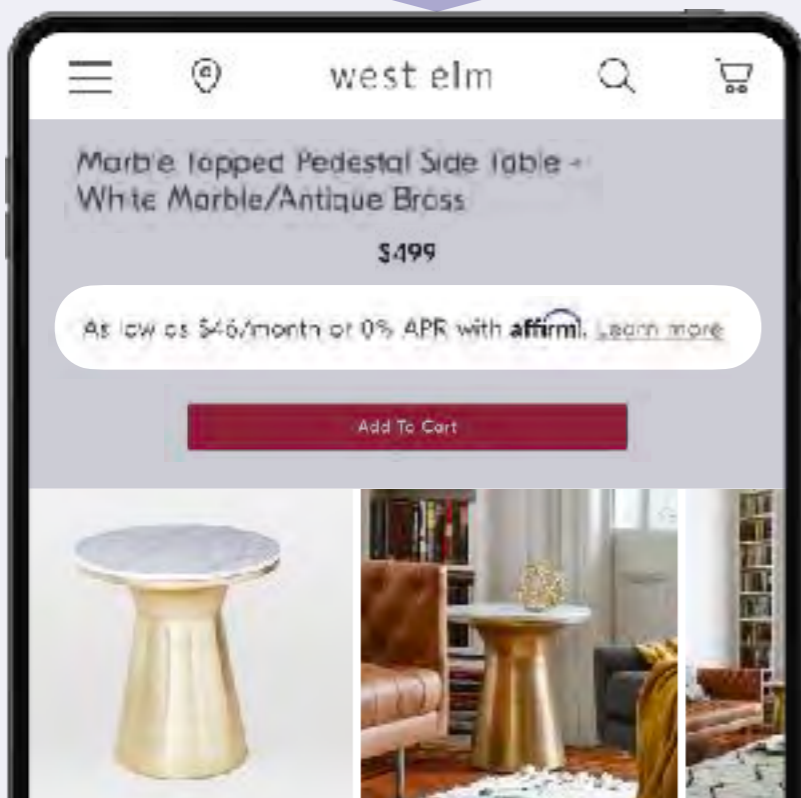
- 2 Reduced return rates

- 3 Valuable data to inform product development and marketing

- 4 Higher awareness and engagement

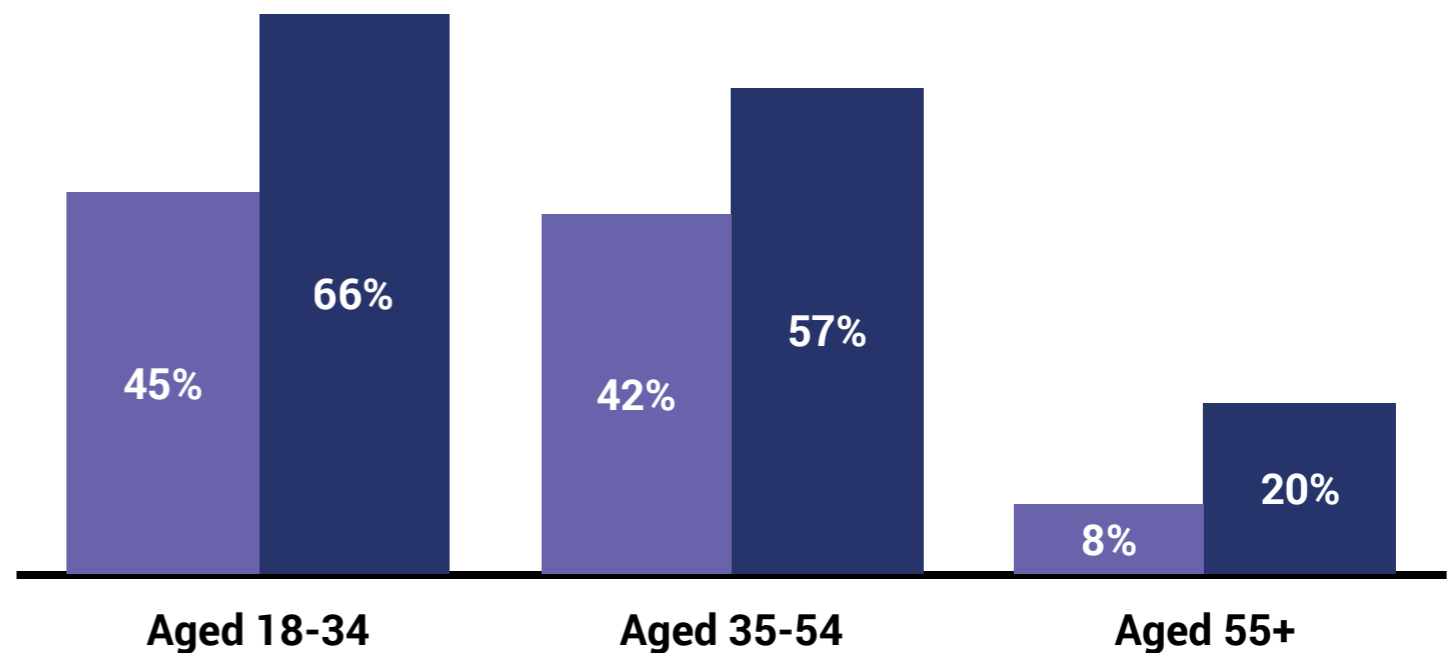
Every major online retailer will offer Buy Now, Pay Later

Buy Now, Pay Later services offer point-of-sale short-term installment plans, allowing consumers to pay for a purchase over time, rather than all at once

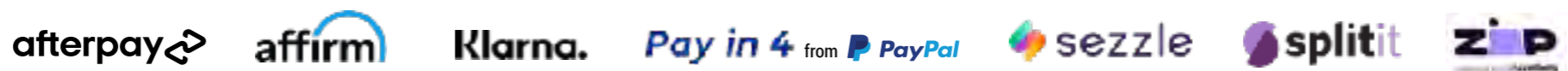


USAGE VS. EXPECTED USAGE OF BUY NOW, PAY LATER SERVICES WHEN SHOPPING ONLINE BY AGE GROUP, U.S., 2021, % ONLINE SHOPPERS¹

- Used Buy Now, Pay Later in the **LAST** 12 months
- Likely² to use Buy Now, Pay Later in the **NEXT** 12 months



EXAMPLE BUY NOW, PAY LATER SERVICES



Social networks will also deploy these technologies to deliver a seamless end-to-end online mobile shopping experience

ECOMMERCE FEATURES OFFERED IN THE U.S. BY SELECT MAJOR COMPANIES

IN-APP FEATURES ¹ FACILITATING AN END-TO-END ONLINE MOBILE SHOPPING EXPERIENCE	AMAZON	EBAY	WALMART	SNAPCHAT	INSTAGRAM	FACEBOOK	PINTEREST	TIKTOK
VISUAL SEARCH (SEARCH)	✓	✓		✓	ANNOUNCED		✓	
BRAND STOREFRONTS (BROWSING)	✓	✓	✓	✓	✓	✓	✓	✓
VIRTUAL TRY ON / VISUALIZATION TOOLS (CONSIDERATION)	✓		ANNOUNCED	✓	✓	✓	✓	IN BETA
CHECKOUT (TRANSACTION)	✓	✓	✓	✓	✓	✓		ANNOUNCED

Amazon and Snapchat have built the full set of capabilities to offer an end-to-end online mobile shopping experience

The ultrafast delivery wars have started, with no end in sight; new entrants claim that they will be able to deliver online orders in as little as 5 minutes

Across product categories, a large share of consumers shop in person primarily because they do not want to wait for delivery/pickup

To address this, a growing number of eCommerce companies are launching ultrafast delivery options

39%

of in-person **grocery** shoppers¹...



44%

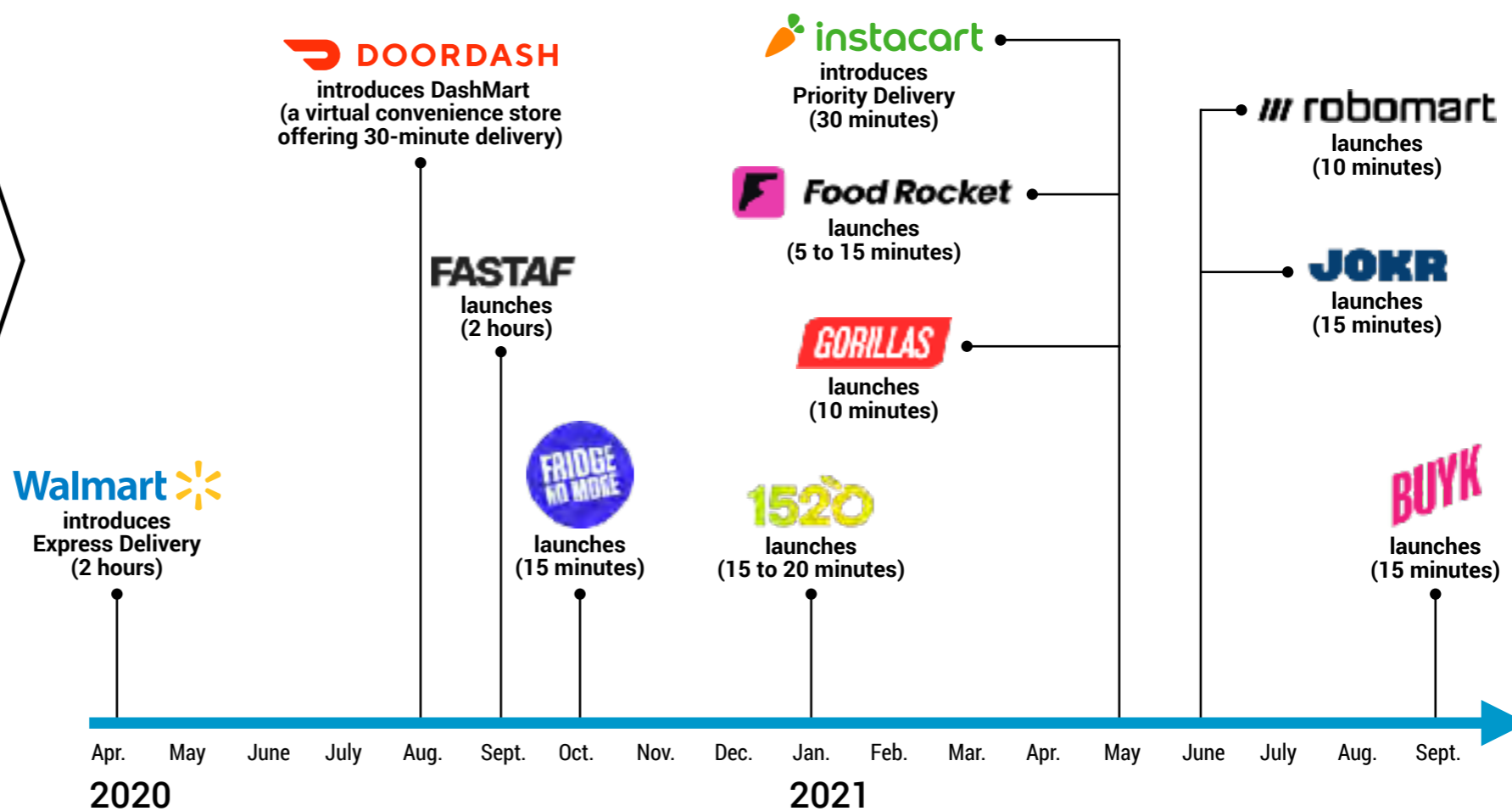
of in-person **beauty/grooming**² shoppers¹...

38%

of in-person **clothing** shoppers¹...

...report that **one of the top reasons**³ that they **shop in person** for the product category is because **they want their items immediately** (e.g. they do not want to wait for shipping or a pickup time slot)

ULTRAFAST DELIVERY OPTIONS LAUNCHED IN THE U.S. IN THE LAST 18 MONTHS⁴



1. "In-person shoppers" are defined as U.S. adults aged 18+ who purchase item(s) in the product category at least once per year and who have shopped in person for item(s) in the product category since the start of the COVID-19 outbreak (i.e. since Mar. 2020). 2. "Beauty/grooming" does not include personal care (e.g. deodorant, toothpaste, contact solution, q-tips, hand sanitizer). 3. Consumers were asked to select up to two top reasons. 4. Not exhaustive.
Sources: Activate analysis, Activate COVID-19 Consumer Technology & Media Study May 2021 (n = 2,913), CNBC, Company press releases, Company sites, Glossy, Grocery Dive, TechCrunch

More than one quarter of households have signed up for a new paid shopping program membership during COVID-19; the average household now pays for nearly two memberships

PAID SHOPPING PROGRAM MEMBERSHIP¹ HOUSEHOLD PENETRATION FOR SELECT MAJOR SHOPPING PROGRAMS, U.S., 2021

27%

Share of households that signed up for a new paid shopping program membership^{1,2} during the COVID-19 outbreak³

83%

Share of these households that plan to keep⁴ at least one of these new paid shopping program memberships^{1,2} over the next 12 months



1.7

Number of shopping program memberships¹ for which the average household pays

80%

Share of households that pay for at least one shopping program membership¹

PAID SHOPPING PROGRAM MEMBERSHIPS¹ TESTED



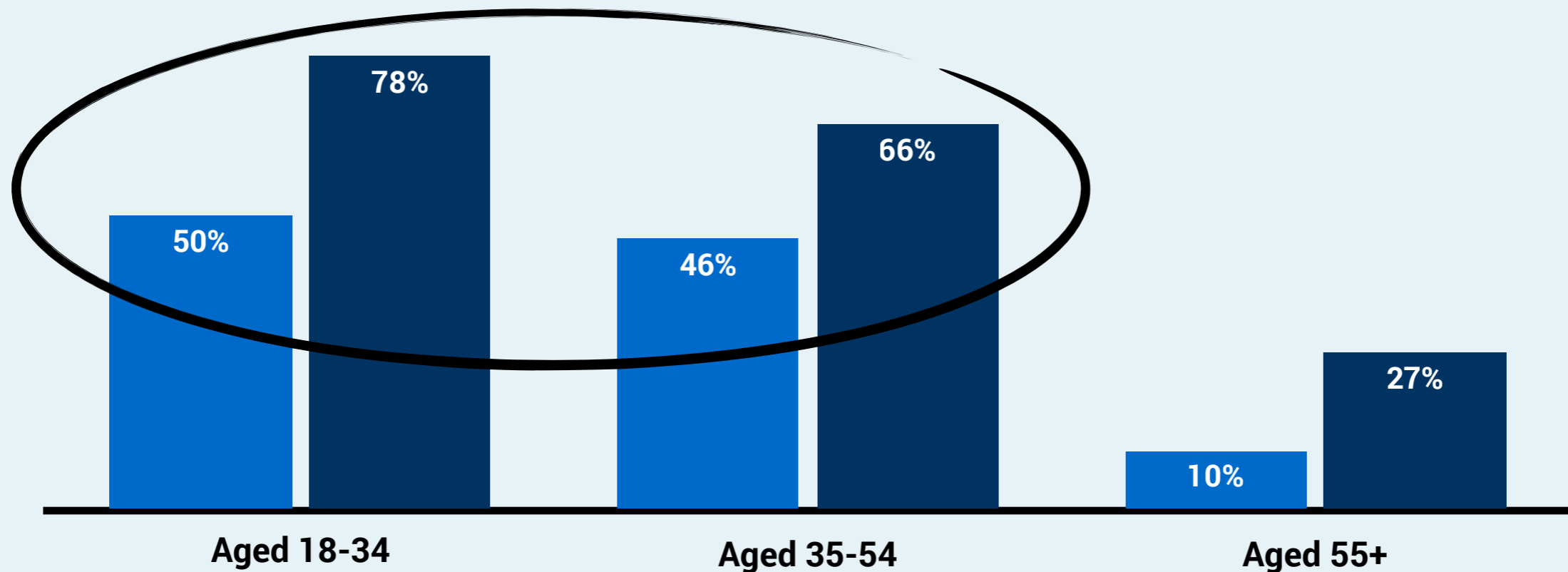
1. "Paid shopping program memberships" do not include free loyalty program memberships. 2. "New paid shopping program membership" is defined as a paid shopping program membership for which the household had not previously signed up. 3. "During the COVID-19 outbreak" refers to the period since the start of the COVID-19 outbreak and subsequent social distancing measures (i.e. since Mar. 2020). 4. "Plan to keep" is defined as definitely planning to keep or likely to keep. 5. Albertsons FreshPass was branded as Albertsons Unlimited Delivery Club during the time of testing. Sources: Activate analysis, Activate COVID Consumer Technology & Media Study May 2021 (n = 2,913)

Online re-commerce is already a mainstream behavior and will grow substantially

PARTICIPATION VS. EXPECTED PARTICIPATION IN ONLINE RE-COMMERCE BY AGE GROUP, U.S., 2021, % ONLINE SHOPPERS¹



- Participated in online re-commerce in the **LAST** 12 months
- Likely² to participate in online re-commerce in the **NEXT** 12 months



“Participation in online re-commerce” is defined as renting, buying, and/or selling used/secondhand clothing and/or accessories online

A large number of retailers are launching online re-commerce programs; this will be a requirement for all retailers going forward

ONLINE CLOTHING AND ACCESSORIES RE-COMMERCE LANDSCAPE¹

BRANDS /
MULTI-BRAND
RETAILERS

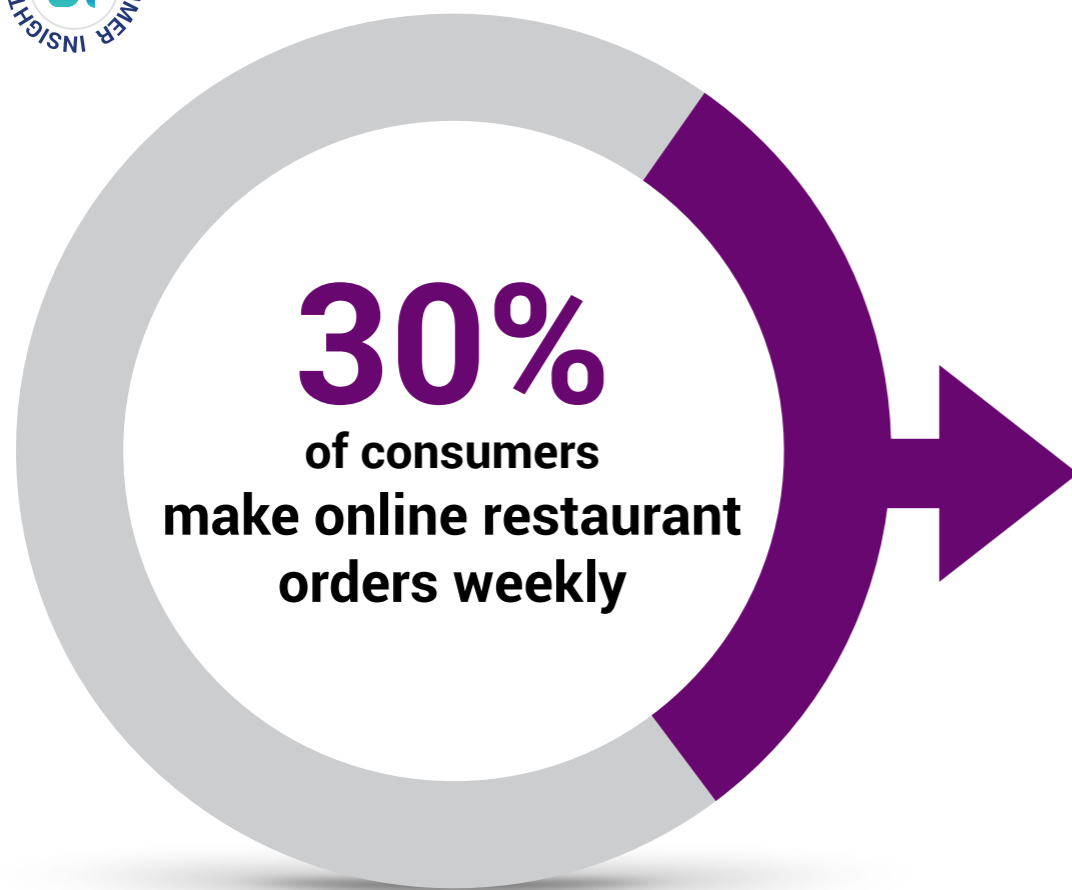
RESALE	RENTAL
Abercrombie & Fitch BALENCIAGA carhartt EILEEN FISHER GUESS M.M. LAFLEUR Michael Kors new balance THE NORTH FACE prAna TAYLOR STITCH TOAD&CO TOMMY HILFIGER Vera Bradley adidas Alexander McQUEEN ARCTERYX ATHLETA BANANA REPUBLIC BRASS BURBERRY COS CUYANA DAGNE DOVER FABLETICS FRAME G.P. GUCCI HOLLISTER LA LIGNE LEVIS LO & SONS lululemon MARA HOFFMAN MERCC MR PORTER Mulberry MYTHERESA NET-A-PORTER THE OUTHET PACSUN patagonia RE/DONE Reebok Reformation REI STELLA MCCARTNEY ANNOUNCED ANNOUNCED	ba&sh BANANA REPUBLIC DRESS THE POPULATION Eddie Bauer ELOQUII EXPRESS FASHION TO FIGURE GANNI H&M NEW YORK & COMPANY nicole miller RALPH LAUREN REBECCA MINKOFF REBECCA TAYLOR SCOTCH & SODA AMSTERDAM VINCE. THE BLK TUX
IEDIBS dotte Galaxy THE LUXURY CLOSET REBELLE THRIFT+ amazon ebay GOAT nuuly thrift REQUIPPER TRADESY Vestiaire Collective Vinted Walmart YOOGI'S CLOSET BAGROMANCE crsiglist Facebook Marketplace FARFETCH FASHIONPHILE GRAILED hewi. kidizen POSHMARK Queenly TheRealReal REBAG STOCKX THREDUP CUDONI CURTSY depop FASHIONPASS LE TOTE MODERN MOM style box NOVA OCTO RENT THE RUNWAY TAELORE teacherstylebox TULRIE vivrelle WARDROBE	ARMOIRE gwynnie bee. modern mom style box NOVA OCTO RENT THE RUNWAY TAELORE teacherstylebox TULRIE vivrelle WARDROBE BAGROMANCE HAVERDASH MOTHERHOOD RENTAL nuulyrent RENT THE RUNWAY SEASONS THE MR. & MS. COLLECTION
ARCHIVE RECURATE THE ARCHIVIST REFLAUNT FLYP THREDUP LUXCLUSIF street TROVE	CaaSle Lizee

THIRD-PARTY
PLATFORMS /
MARKETPLACES

RE-COMMERCE-
AS-A-SERVICE

Although online restaurant ordering behavior has accelerated during the pandemic, there is still considerable growth ahead

SHARE OF CONSUMERS WHO PLACED ONLINE ORDERS FOR RESTAURANT DELIVERY OR PICKUP WEEKLY ON AVERAGE OVER THE LAST 12 MONTHS, U.S., 2021, % ADULTS AGED 18+



EXAMPLES OF RESTAURANT INNOVATION IN RESPONSE TO CONSUMER DEMAND FOR ONLINE ORDER PICKUP/DELIVERY

Online-Only Locations	Entire restaurants or specific areas within restaurants (e.g. drive-thru lanes, parking spots, pickup windows) that are exclusively designated for online order pickup and delivery, streamlining fulfillment and decreasing wait times
Geofencing Technology	Location-based technology that notifies restaurant employees when pickup customers / delivery workers are arriving, facilitating more accurately timed order handoffs to ensure food freshness
Pickup Lockers	Temperature-controlled food lockers that create a fully contactless pickup experience
Ghost Kitchens	Food preparation locations that are solely dedicated to fulfilling online order delivery, enabling the optimization and expansion of delivery services

EXAMPLES



eCommerce will expand beyond physical goods to digital goods; gaming platforms will be the natural place for retailers to start as gamers are already trained to value virtual items

EXAMPLES OF RETAILERS SELLING DIGITAL GOODS



Gucci partnered with gaming platform **Roblox** to launch a virtual exhibition featuring a collection of in-game items for purchase — **one virtual bag resold for \$4K (higher than the price of the physical bag)**



The **NFL** collaborated with the game **Fortnite** to offer player skins — within 2 months, **more than \$50M of skins were sold** (3.3M purchased at \$15 each)



Burberry released its first NFT collection in the game **Blankos Block Party** — the main item, a player skin, **netted close to \$225K and sold out within 20 seconds**



Digital design studio **RTFKT** worked with crypto-artist **FEWOCIOUS** to create a set of NFT sneakers — the limited run **sold out in 7 minutes and generated over \$3M**



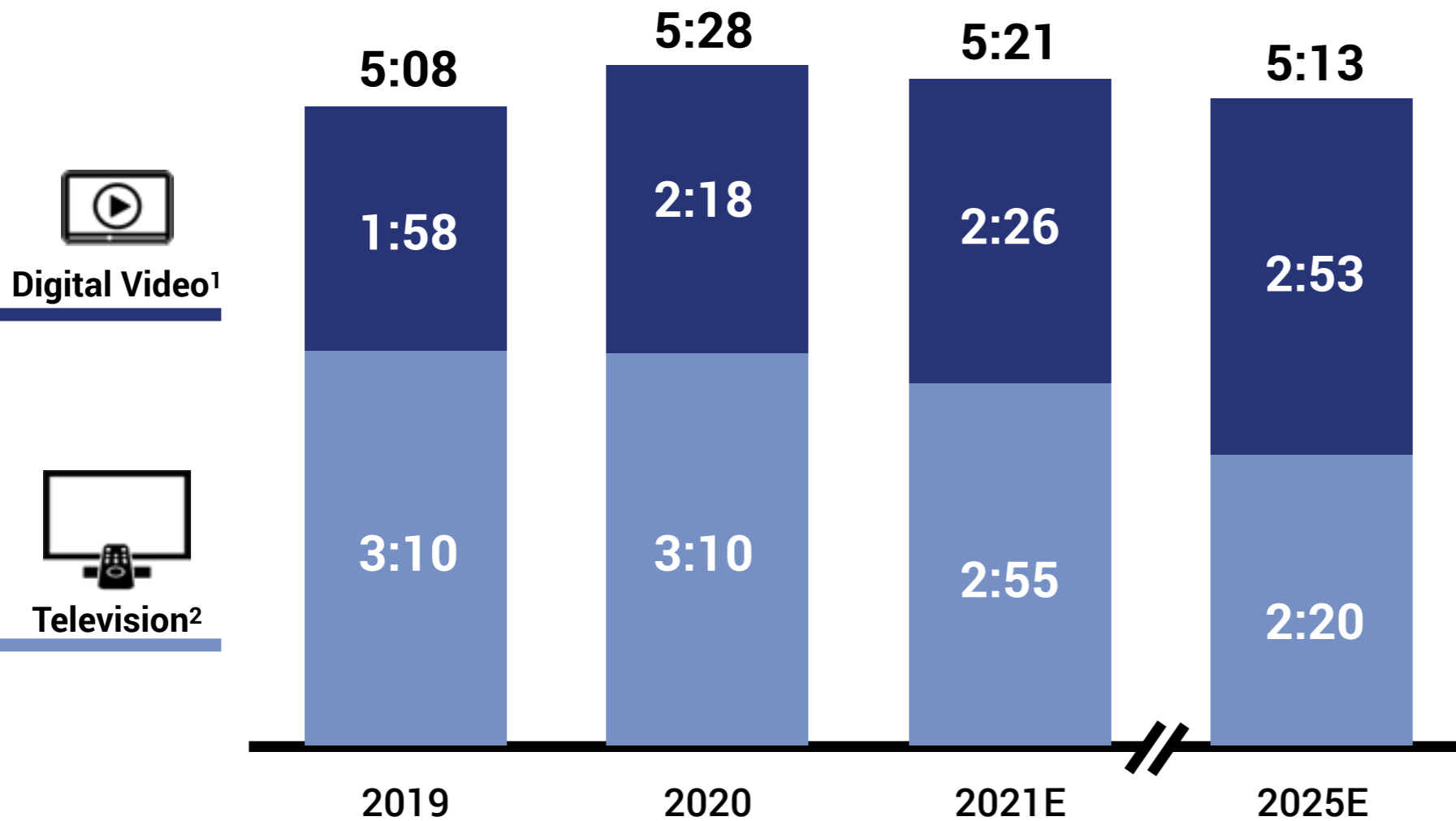
Digital real estate firm **Republic Realm** spent nearly **\$1M** on a plot of land in the virtual world **Decentraland** to develop the shopping mall **Metajuku** (left), where shoppers can purchase from digital-first fashion brands such as **DressX** (right) and **Tribute Brand**

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Digital video time spend will continue to grow and replace television viewing time

AVERAGE DAILY VIDEO TIME SPENT PER ADULT AGED 18+ BY TYPE, U.S., 2019-2021E VS. 2025E, HOURS:MINUTES



2019-2025E CAGR:	2021E-2025E CAGR:
0.2%	-0.7%
6.5%	4.2%
-5.0%	-5.4%

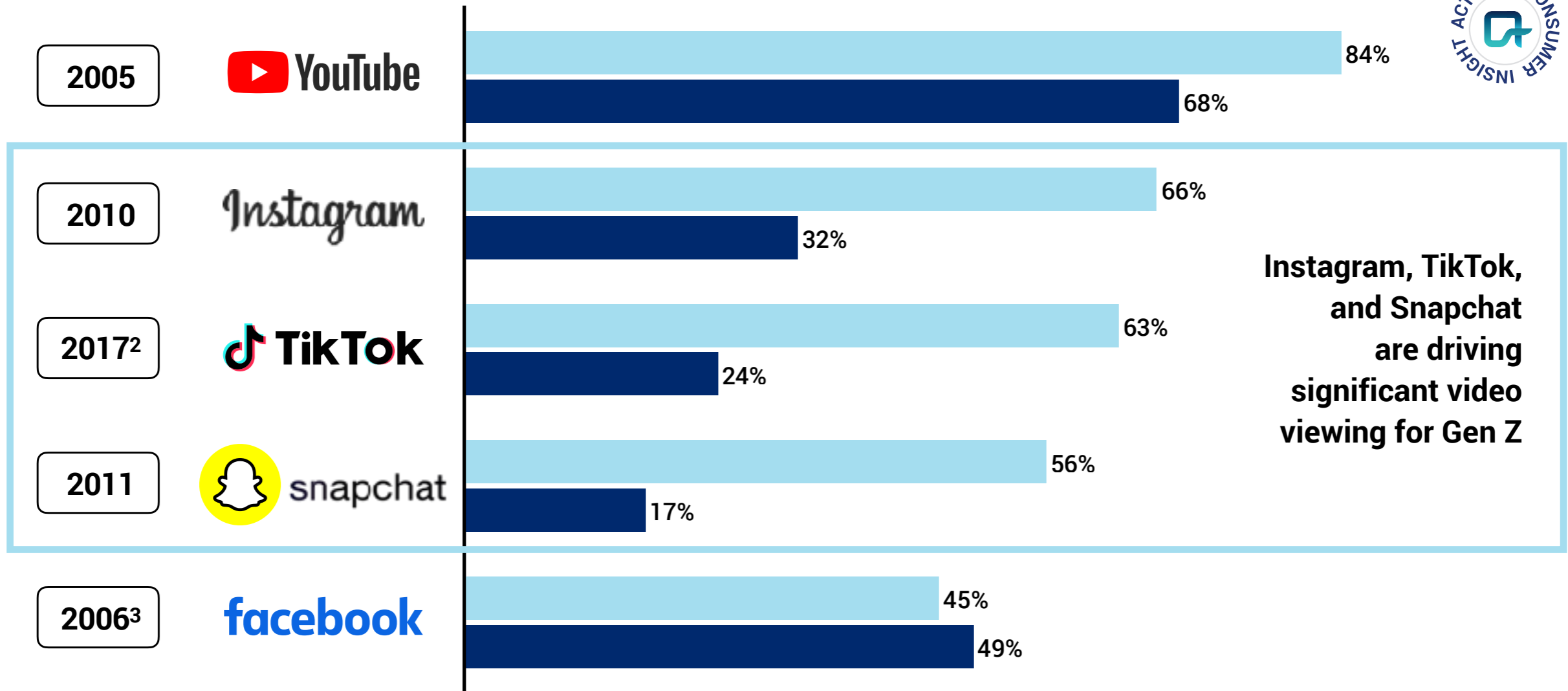
1. "Digital video" includes video watched on a mobile phone, tablet, laptop computer, desktop computer, or Connected TV. Connected TVs are TV sets that can connect to the internet through built-in internet capabilities (i.e. Smart TVs) or through another device such as a streaming device (e.g. Amazon Fire TV, Apple TV, Google Chromecast, Roku), game console, or Blu-ray player. 2. "Television" includes traditional live and time-shifted (e.g. DVR) television viewing. Sources: Activate analysis, eMarketer, GWI, Nielsen, Pew Research Center, U.S. Bureau of Labor Statistics

Social video usage (especially by Gen Z) will continue to contribute to digital video growth

VIDEO VIEWERSHIP ON SOCIAL PLATFORMS BY AGE GROUP, U.S., 2021, % VIDEO WATCHERS¹

YEAR LAUNCHED

AGE GROUP: 18-24 25+



Instagram, TikTok, and Snapchat are driving significant video viewing for Gen Z

1. "Video watchers" are defined as adults aged 18+ who spend any time watching video. 2. Reflects U.S. launch date. 3. Reflects launch date for non-Harvard students.

Sources: Activate analysis, Activate 2021 Consumer Video Research Study (n = 2,014), Company press releases, Company sites



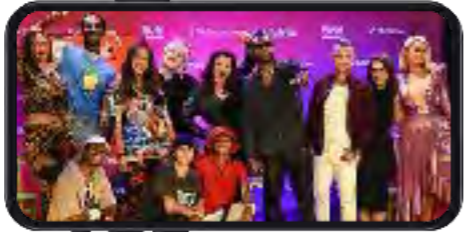

In response to TikTok's growth, other social platforms have launched their own short-form video products

SELECT RECENTLY LAUNCHED SHORT-FORM VIDEO PRODUCTS



<p>Instagram</p>  <p>REELS</p> <p>Date Launched: August 2020</p>	 <p>snapchat</p>  <p>SPOTLIGHT</p> <p>Date Launched: November 2020</p>	 <p>YouTube</p>  <p>SHORTS</p> <p>Date Launched: March 2021¹</p>	<p>facebook</p>  <p>REELS</p> <p>Date Launched: September 2021¹</p>
--	--	--	--

TikTok has followed the path of other social media companies by expanding into premium long-form video with media partners – social platforms will increasingly be hubs for this type of content



<p>VIDEO LENGTH</p>	<p>Increased max video length to 3 minutes, from 60 seconds</p> 
<p>CONNECTED TV¹ DISTRIBUTION</p>	<p>fire tv MORE ON TIKTOK AUG. 2020</p> <p>App available on Amazon Fire TV devices featuring curated TikTok content including compilations and interviews with creators</p> 
<p>PREMIUM VIDEO PARTNERSHIPS</p>	<div style="display: flex; justify-content: space-between;"> <div> <p>tubi #TUBITAUGHTME JUNE 2021</p> <p>Hour-long livestream with trivia and other challenges highlighting '90s and 2000s TV shows and stars</p>  </div> <div> <p>ESPN</p> <p>THE ENCORE JUNE 2020</p> <p>Live aftershow for ESPN's The Last Dance documentary, hosted by SportsCenter's Sage Steele</p>  </div> </div>

TIKTOK COMPETITOR LONG-FORM PREMIUM VIDEO INITIATIVES









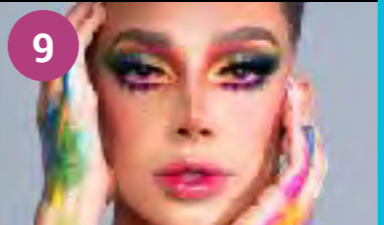

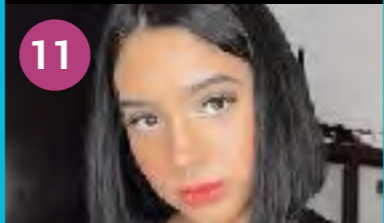
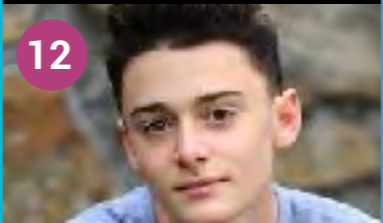
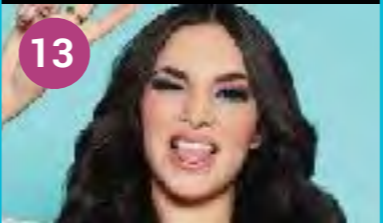


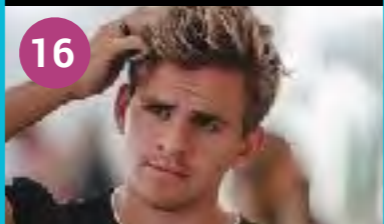
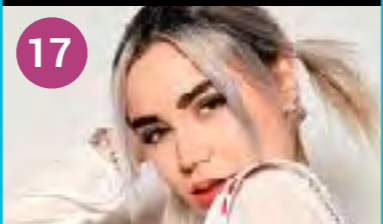


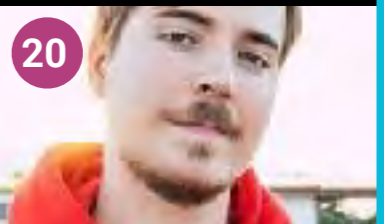
<p>Facebook Watch</p> <p>DATE LAUNCHED: AUG. 2017</p> <p>Hub for long-form, episodic content (in addition to short-form content)</p> <p>SELECT CONTENT PARTNERS</p> 
<p>INSTAGRAM TV</p> <p>DATE LAUNCHED: JUNE 2018</p> <p>Separate app and integrated feature in existing Instagram app that enables video uploads up to an hour long</p>
<p>SNAP ORIGINALS</p> <p>DATE LAUNCHED: OCT. 2018</p> <p>Section within Snapchat Discover for exclusive episodic programming from premium content partners</p> <p>SELECT CONTENT PARTNERS</p> <p>NBCUniversal CONDÉ NAST</p> 

1. "Connected TV" is defined as a TV set that can connect to the internet through built-in internet capabilities (i.e. Smart TVs) or through another device such as a streaming device (e.g. Amazon Fire TV, Apple TV, Google Chromecast, Roku), game console, or Blu-ray player.
Sources: Activate analysis, Company press releases, Company sites

Consumers will use each social video platform for different creators and genres (1/2)



**TOP TWENTY
TIKTOK
INFLUENCERS¹,
U.S., 2021**

 <p>1 Khaby Lama COMEDIC CONTENT CREATOR</p>	 <p>2 BTS K-POP BOY BAND</p>	 <p>3 Kylie Jenner REALITY TV STAR AND SOCIAL MEDIA PERSONALITY</p>	 <p>4 Bella Poarch SINGER AND SOCIAL MEDIA PERSONALITY</p>	 <p>5 Charli D'Amelio DANCER AND LIFESTYLE CONTENT CREATOR</p>
 <p>6 Addison Rae DANCER AND LIFESTYLE CONTENT CREATOR</p>	 <p>7 Nikita Dragun MAKEUP ARTIST AND MODEL</p>	 <p>8 ROSÁ COMEDIC SKIT CREATOR</p>	 <p>9 James Charles MAKEUP ARTIST</p>	 <p>10 Karol G SINGER AND SONGWRITER</p>
 <p>11 Dominik LIFESTYLE CONTENT CREATOR</p>	 <p>12 Noah Schnapp ACTOR</p>	 <p>13 Kimberly Loaiza DANCER AND LIFESTYLE CONTENT CREATOR</p>	 <p>14 Savannah Labrant DANCER AND LIFESTYLE CONTENT CREATOR</p>	 <p>15 Will Smith ACTOR AND RAPPER</p>
 <p>16 Cole LaBrant DANCER AND LIFESTYLE CONTENT CREATOR</p>	 <p>17 Darian Rojas LIFESTYLE CONTENT CREATOR</p>	 <p>18 JoJo Siwa DANCER AND SINGER</p>	 <p>19 Mia Khalifa MEDIA PERSONALITY AND LIFESTYLE CONTENT CREATOR</p>	 <p>20 MrBeast STUNT PERFORMER</p>

Consumers will use each social video platform for different creators and genres (2/2)



TOP TEN FACEBOOK INFLUENCERS¹, U.S., 2021

1 Julius Dein STREET MAGICIAN AND ILLUSIONIST	2 Adley COMEDIC CONTENT CREATOR	3 Dhar Mann FILMMAKER AND ENTREPRENEUR	4 BigDawsTv PRANKSTER	5 Benny Johnson POLITICAL COLUMNIST
6 Steve Harvey ENTERTAINER AND COMEDIAN	7 Brad Mondo HAIRSTYLIST AND ENTREPRENEUR	8 Gaitlyn Rae PET MONKEY	9 Angela Yee RADIO HOST	10 Kendall Rae TRUE CRIME AND CONSPIRACY COMMENTATOR

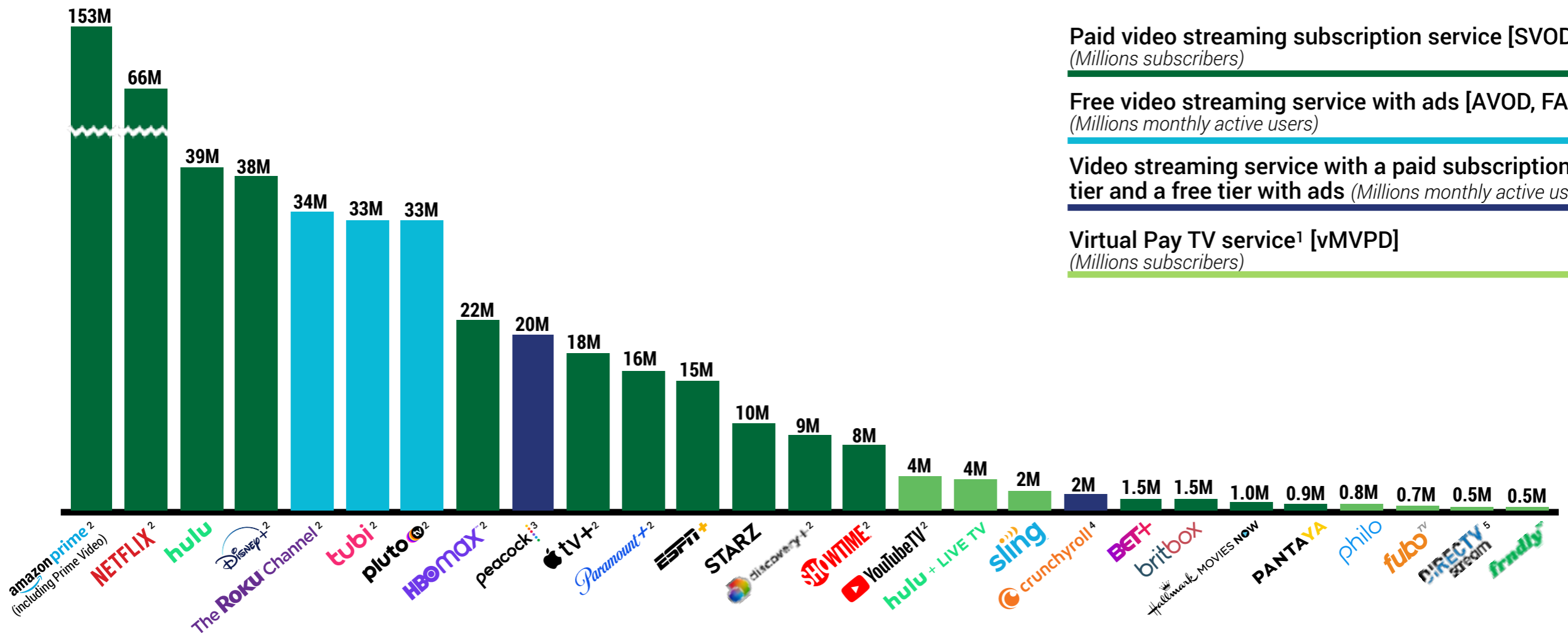


TOP TEN YOUTUBE INFLUENCERS¹, U.S., 2021

1 SSSniper Wolf GAMER AND CREATOR OF REACTION VIDEOS	2 Dhar Mann FILMMAKER AND ENTREPRENEUR	3 CookieSwirlC CHILDREN'S ENTERTAINMENT CONTENT CREATOR	4 Toys and Colors CHILDREN'S ENTERTAINMENT CONTENT CREATOR	5 Ryan's World CHILDREN'S ENTERTAINMENT CONTENT CREATOR
6 Desmond Dennis SINGER AND VLOGGER	7 MrBeast STUNT PERFORMER	8 Dylan Lemay FOOD AND LIFESTYLE CONTENT CREATOR	9 Daniel LaBelle COMEDIC CONTENT CREATOR	10 Therealdarius COMEDIC CONTENT CREATOR

Competition among the major streaming services is intensifying, as new paid and free services compete with other forms of digital video and television for consumer attention

ESTIMATED NUMBER OF SUBSCRIBERS/USERS BY SELECT VIDEO STREAMING SERVICES, U.S., 2021 OR MOST RECENT, MILLIONS SUBSCRIBERS / MILLIONS MONTHLY ACTIVE USERS



Paid video streaming subscription service [SVOD]
(Millions subscribers)

Free video streaming service with ads [AVOD, FAST]
(Millions monthly active users)

Video streaming service with a paid subscription tier and a free tier with ads (Millions monthly active users)

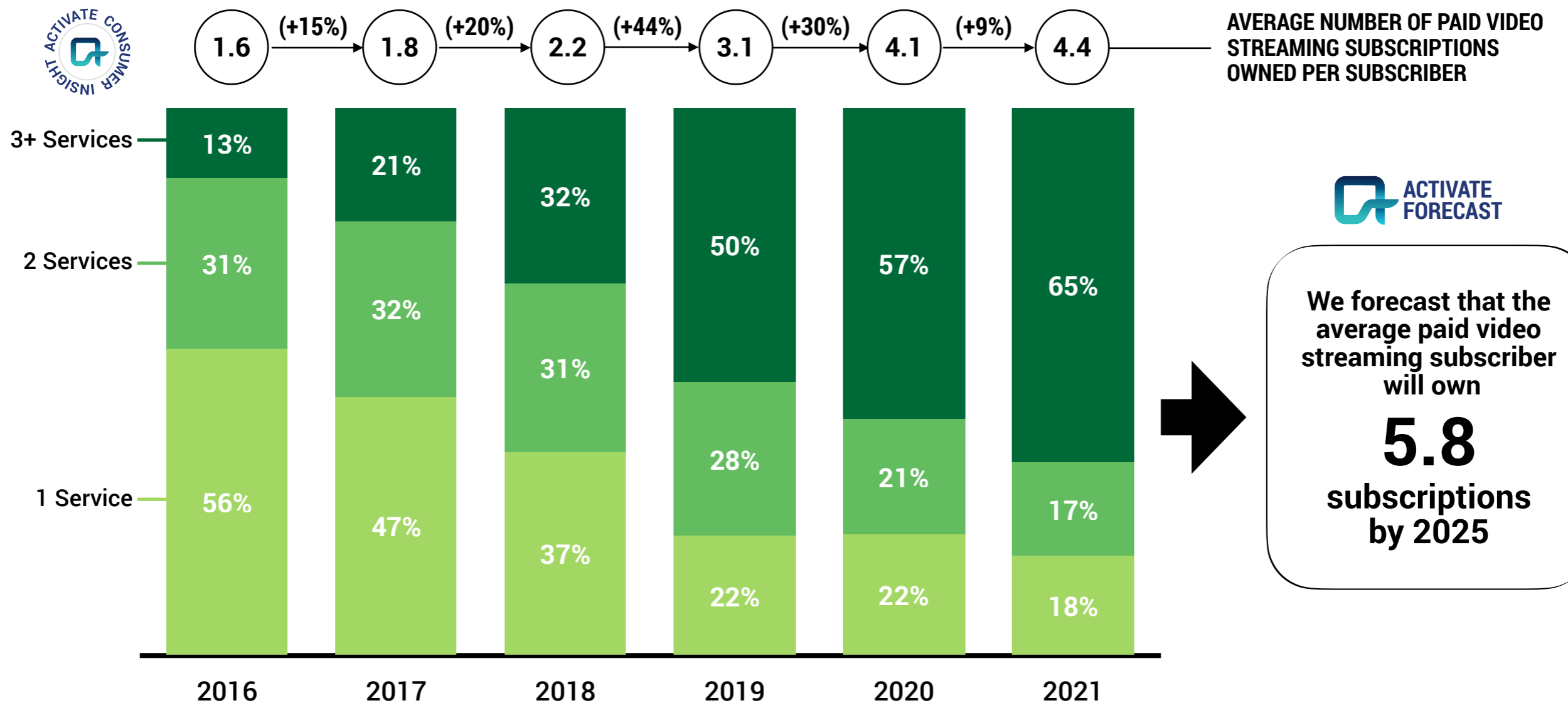
Virtual Pay TV service¹ [vMVPD]
(Millions subscribers)

Note: Figures reflect latest publicly disclosed statistics, unless noted otherwise. 1. "Virtual Pay TV service" is defined as a service that delivers TV through the internet without a set-top box. 2. Reflects estimate. 3. Reflects monthly active users disclosed by Peacock. Total sign-ups reached 54M. 4. Reflects estimated paid subscribers. 5. Reflects paid subscribers to AT&T TV Now, which was rebranded as DirecTV Stream in August 2021.

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Activate 2021 Consumer Video Research Study (n = 2,014), Bank of America, Company filings, Company press releases, Company sites, Consumer Intelligence Research Partners LLC, Deutsche Bank, FierceVideo, J.P. Morgan, Los Angeles Times, MarketScreener, MoffettNathanson, RBC Capital Markets, The Streamable, TechCrunch, Variety, The Verge, The Washington Post

The average paid video streaming subscriber pays for 4.4 subscriptions today; we have been tracking this through our consumer research for the past six years and forecast that the number will increase to 5.8 subscriptions by 2025

NUMBER OF PAID VIDEO STREAMING SUBSCRIPTIONS OWNED PER SUBSCRIBER, U.S., 2016-2021, % PAID VIDEO STREAMING SUBSCRIPTION OWNERS AGED 18+



Sources: Activate analysis, Activate 2016 Consumer Technology & Media Research Study (n = 4,000), Activate 2017 Consumer Technology & Media Research Study (n = 4,047), Activate 2018 Consumer Technology & Media Research Study (n = 4,000), Activate 2019 Consumer Technology & Media Research Study (n = 4,006), Activate 2020 Consumer Technology & Media Research Study (n = 4,003), Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Activate 2021 Consumer Video Research Study (n = 2,014), PricewaterhouseCoopers, U.S. Department of Labor

Genre-specific services will contribute to the growing number of paid services per subscriber; paid video streaming service subscribers show considerable interest in subscribing to these niche services

INTEREST IN PURCHASING GENRE-SPECIFIC VIDEO STREAMING SUBSCRIPTIONS, U.S., 2021, % PAID VIDEO STREAMING SUBSCRIPTION OWNERS AGED 18+



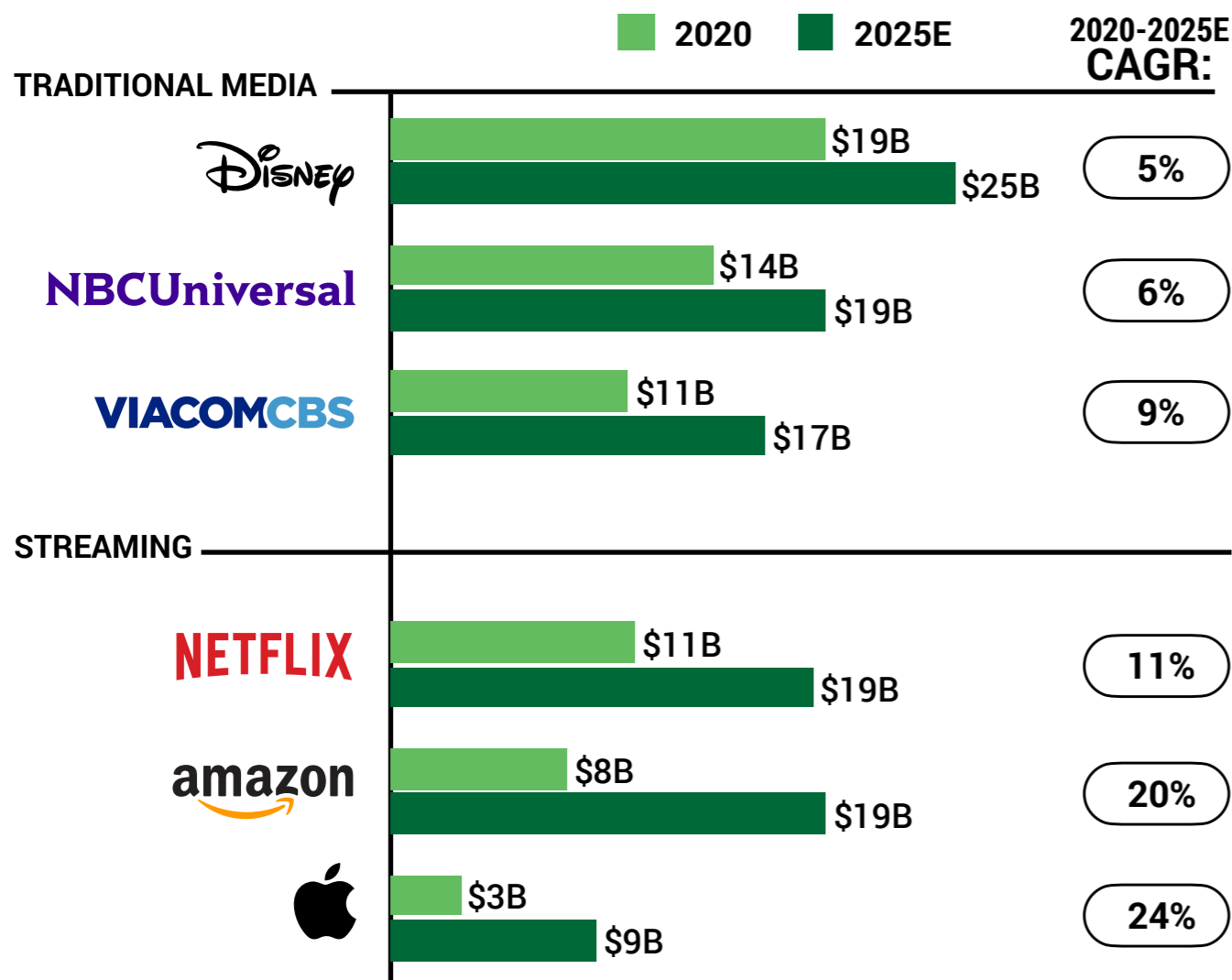
EXTREMELY OR VERY INTERESTED IN PURCHASING A SUBSCRIPTION

EXAMPLE GENRE-SPECIFIC PAID VIDEO STREAMING SUBSCRIPTION SERVICES

Horror/Thriller		37%	SHUDDER	SCREAMBOX	MONSTERS NIGHTMARES
Documentary/Factual		36%	CuriosityStream	BBC SELECT	DocuClub
Kids		24%	PBS Kids	KidoodleTV	noggin
Indie/Classic Movies		23%	THE CRITERION CHANNEL	IFCFilms UNLIMITED	MUBI
Anime		22%	crunchyroll	FUNIMATION	HIDIVE
British		22%	ACORN TV	britbox	MASTERPIECE
Spanish-Language Entertainment		14%	PANTAYA	fliX latino	NOW

Media companies will spend extensively on licensed and original content, including from streaming rivals, to compete in a crowded landscape

OVERALL CONTENT SPEND BY COMPANY¹, GLOBAL, 2020 VS. 2025E, BILLIONS USD



SELECT MAJOR PROGRAMMING INVESTMENTS

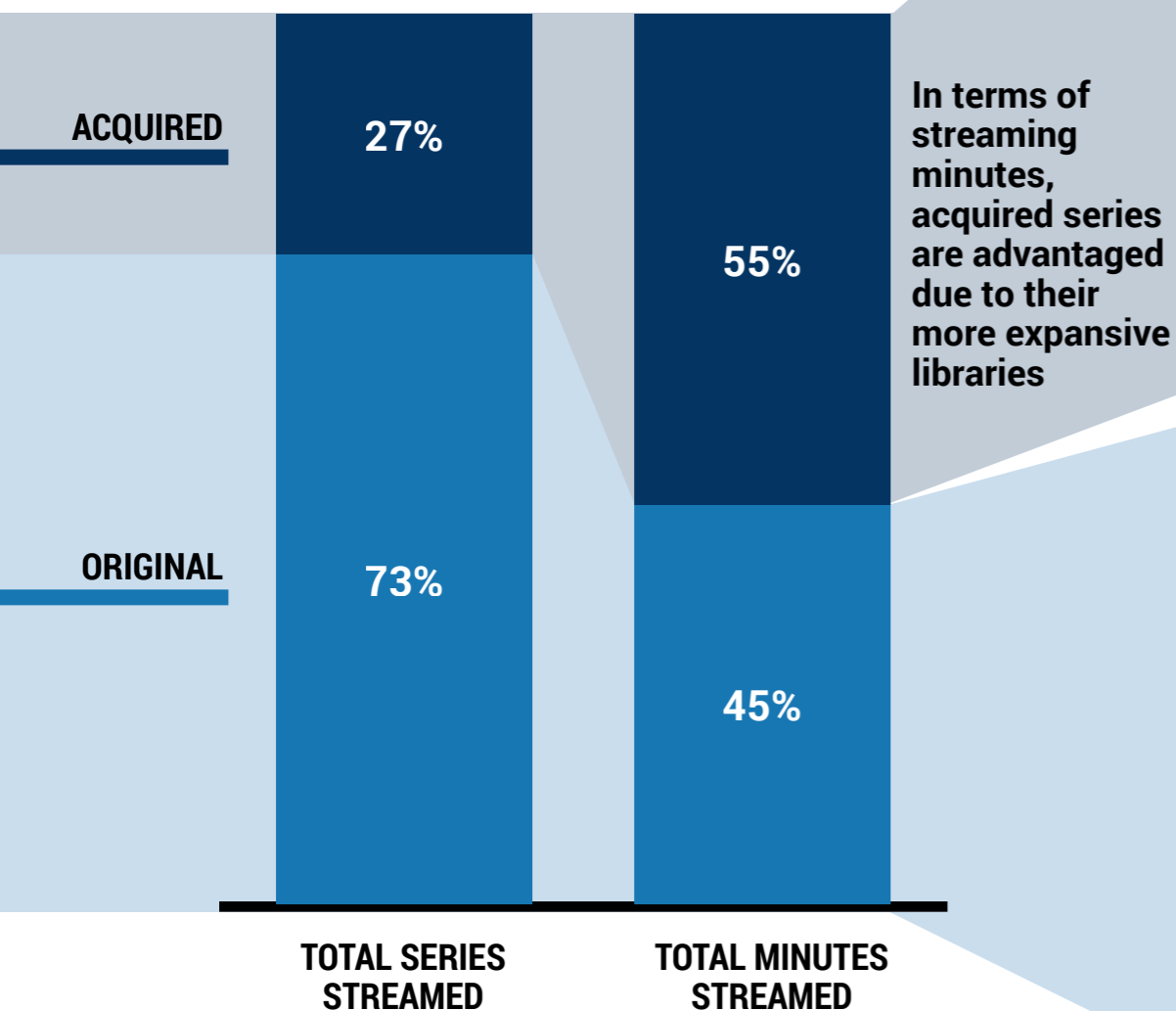
ORIGINAL	
CURRENT	UPCOMING
<p>THE MORNING SHOW SQUID GAME</p> <p>LOKI GIRLS 5EVA THE BOYS</p> <p>THE FLIGHT ATTENDANT</p> <p>the good fight</p>	<p>MACGRUBER THE SHRINK NEXT DOOR</p> <p>HALO LORD OF THE RINGS MC MARVEL</p> <p>TOKYO VICE COWBOY BEBOP</p>
LICENSED	
LIBRARY PROGRAMMING	
<p>IMDb TV</p> <p>DESPERATE HOUSEWIVES NYPD Blue Disney (20+ titles) LOST Mycon</p>	<p>NETFLIX</p> <p>Seinfeld</p>
	<p>HBOMAX™</p> <p>the BIG BANG THEORY FRIENDS</p>
THEATRICAL OUTPUT	
<p>NETFLIX²</p> <p>SONY PICTURES</p>	<p>peacock prime video³</p> <p>UNIVERSAL LIVE ACTION</p>
	<p>STARZ⁴</p> <p>UNIVERSAL LIVE ACTION</p>

1. Represents P&L programming expense. Excludes sports. 2. Deal is for the pay-one window (i.e. first exclusive release window following a film's theatrical release and transactional purchase sell-through period) beginning with 2022 theatrical releases. 3. Traditional 18-month pay-one window will be shared by Peacock (first and last four months of window) and Amazon Prime Video (middle ten months of window) beginning with 2022 theatrical releases. 4. Deal is for the post-pay-one window beginning with 2022 theatrical releases.

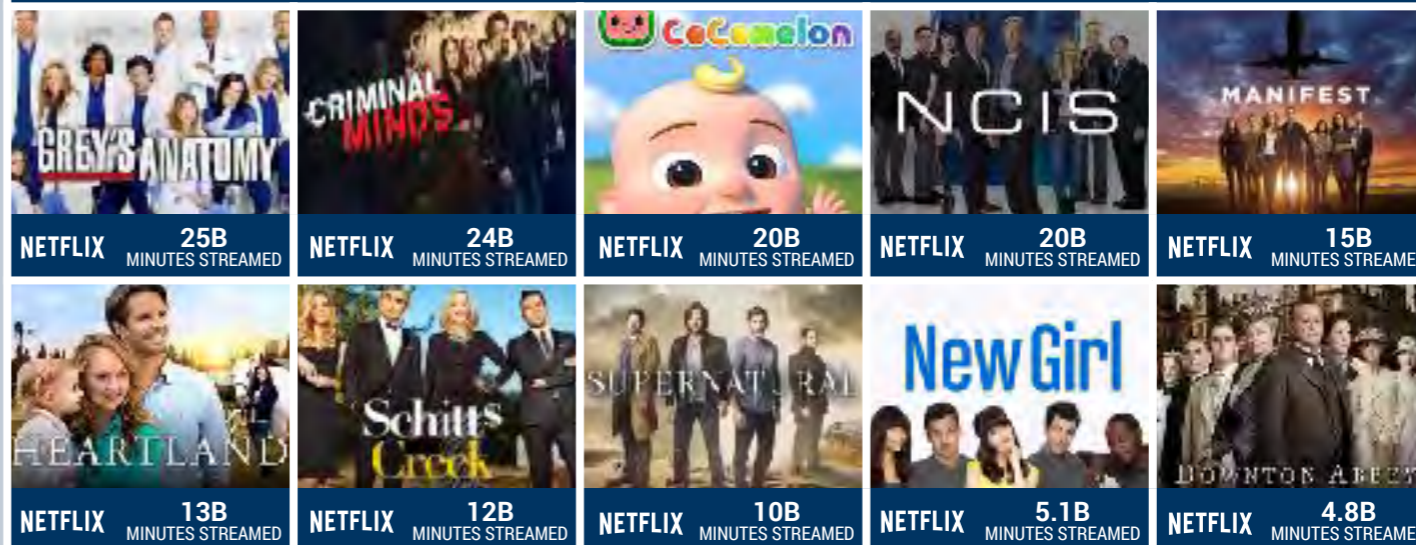
Sources: Activate analysis, Company press releases, Company sites, MoffettNathanson, Wells Fargo

Licensed and original programming are both critical to driving viewing on streaming

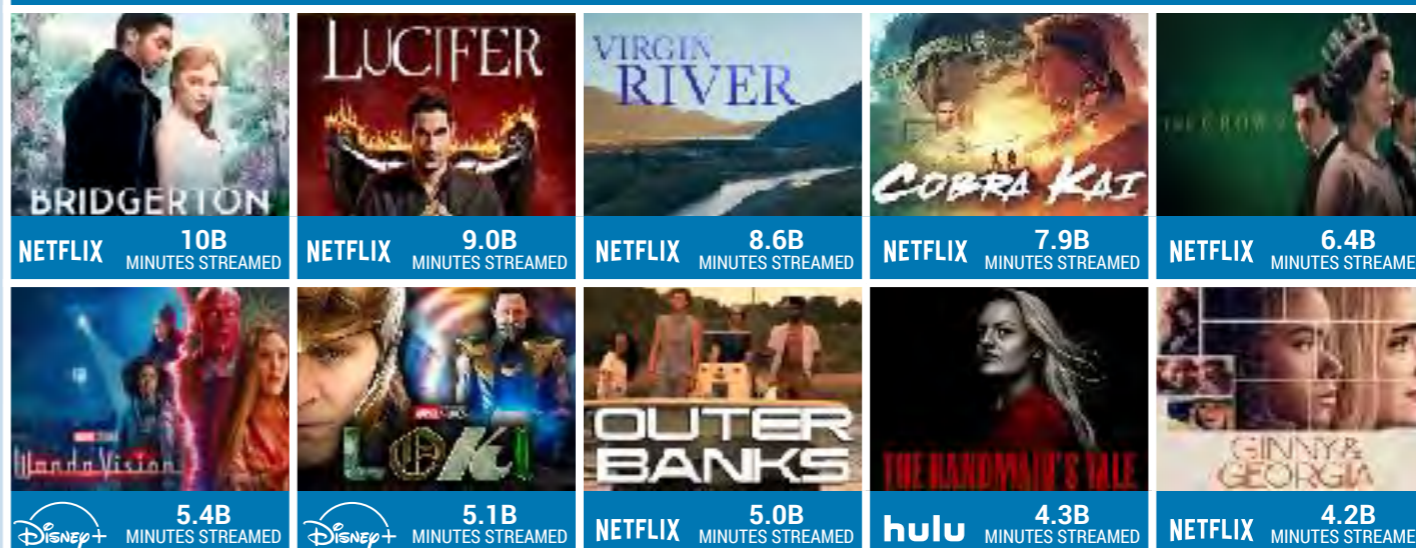
ORIGINAL VS. ACQUIRED VIEWING SHARE OF TOP SERIES STREAMED ON SVOD SERVICES¹, U.S., DEC. 2020-AUG. 2021², % TOTAL SERIES/MINUTES



TOP 10 MOST STREAMED ACQUIRED SERIES ON SVOD SERVICES¹, U.S., DEC. 2020-AUG. 2021², BILLIONS MINUTES STREAMED



TOP 10 MOST STREAMED ORIGINAL SERIES ON SVOD SERVICES¹, U.S., DEC. 2020-AUG. 2021², BILLIONS MINUTES STREAMED



1. Based on aggregate viewership of the weekly top 10 most viewed acquired and original series on SVOD services (as determined by Nielsen Streaming Content Ratings). SVOD services measured were Netflix, Disney+, Amazon Prime Video, and Hulu. Reflects series streamed by persons aged 2+. 2. Reflects period spanning from December 28, 2020, to August 29, 2021. Sources: Activate analysis, Nielsen Streaming Content Ratings

Movie viewing is driven by recently released family-friendly programming; of the top 20 most viewed movies in 2021, 11 are family-friendly, and only 3 were released before 2020

TOP 20 MOST STREAMED FILMS ON SVOD SERVICES¹, U.S., DEC. 2020-AUG. 2021², BILLIONS MINUTES STREAMED

● G or PG movie rating

● PG-13 or higher movie rating




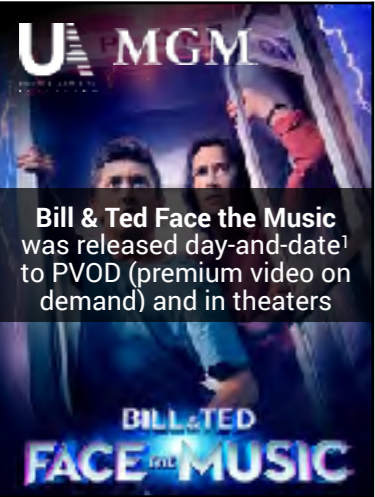



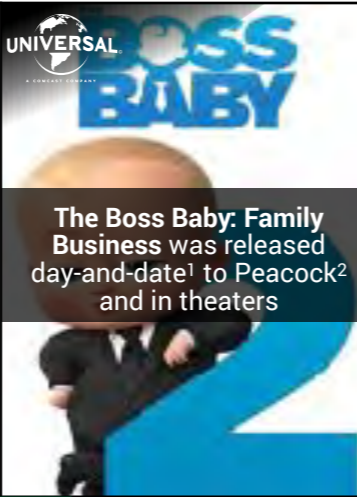


1. Based on aggregate viewership of the weekly top 20 most viewed films on SVOD services (as determined by Nielsen Streaming Content Ratings). SVOD services measured were Netflix, Disney+, Amazon Prime Video, and Hulu. Reflects films streamed by persons aged 2+. 2. Reflects period spanning from December 28, 2020, to August 29, 2021.

Sources: Activate analysis, Nielsen Streaming Content Ratings

COVID-19 restrictions accelerated the simultaneous release of films to streaming and theaters; going forward it is unclear the extent to which this will be sustained


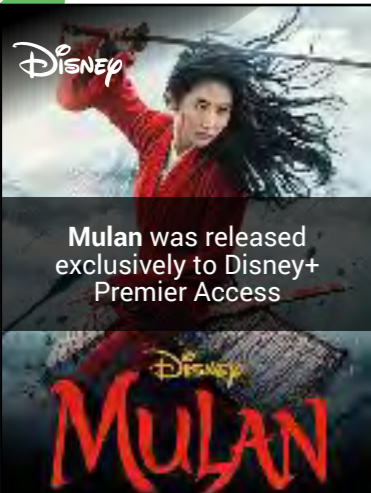



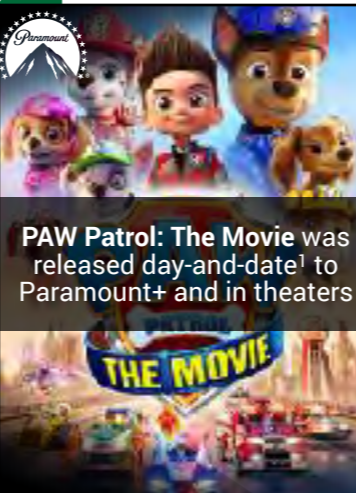
2020-2021 MOVIE RELEASE MODELS FOR SELECT FILMS BY STUDIO

● Online and Theatrical Release ● Online Release Only ● Theatrical Release Only

 <p>Bill & Ted Face the Music was released day-and-date¹ to PVOD (premium video on demand) and in theaters</p>  <p>AUGUST</p>	 <p>Wonder Woman 1984 was released day-and-date¹ to HBO Max and in theaters</p>  <p>DECEMBER</p>	 <p>The Boss Baby: Family Business was released day-and-date¹ to Peacock² and in theaters</p>  <p>JULY</p>	 <p>Shang-Chi and the Legend of the Ten Rings was released exclusively in theaters</p>  <p>SEPTEMBER</p>
---	--	---	---

2020

2021

 <p>Mulan was released exclusively to Disney+ Premier Access</p>  <p>SEPTEMBER</p>	 <p>Peter Rabbit 2: The Runaway was released exclusively in theaters</p>  <p>JUNE</p>	 <p>PAW Patrol: The Movie was released day-and-date¹ to Paramount+ and in theaters</p>  <p>AUGUST</p>
--	---	--

WARNER BROS. & DISNEY ONLINE STREAMING STRATEGIES

HBOmax™

All 2021 Warner Bros. movies are made available to stream through HBO Max for 31 days on the same day as their theatrical releases
Cost: Included with ad-free subscription (\$14.99/month)


HBO MAX WARNER BROS. 2020-2021 PREMIERES:



Disney+

Select Disney movies are made available for purchase through Disney+ Premier Access on the same day as their theatrical releases³
Cost: \$29.99/movie plus price of Disney+ (\$7.99/month)

DISNEY+ PREMIER ACCESS 2020-2021 PREMIERES:



1. "Day-and-date" is defined as the release of a film/movie on multiple platforms on the same day or in close proximity to each other. 2. Only available on Peacock paid tiers (i.e. Peacock Premium, Peacock Premium Plus). 3. Mulan was not released in theaters.

Sources: Activate analysis, Company press releases, Company sites

For Disney+ and HBO Max, our research suggests that simultaneous releases expanded the audiences for films, drove streaming service subscriptions, and encouraged subscriber retention

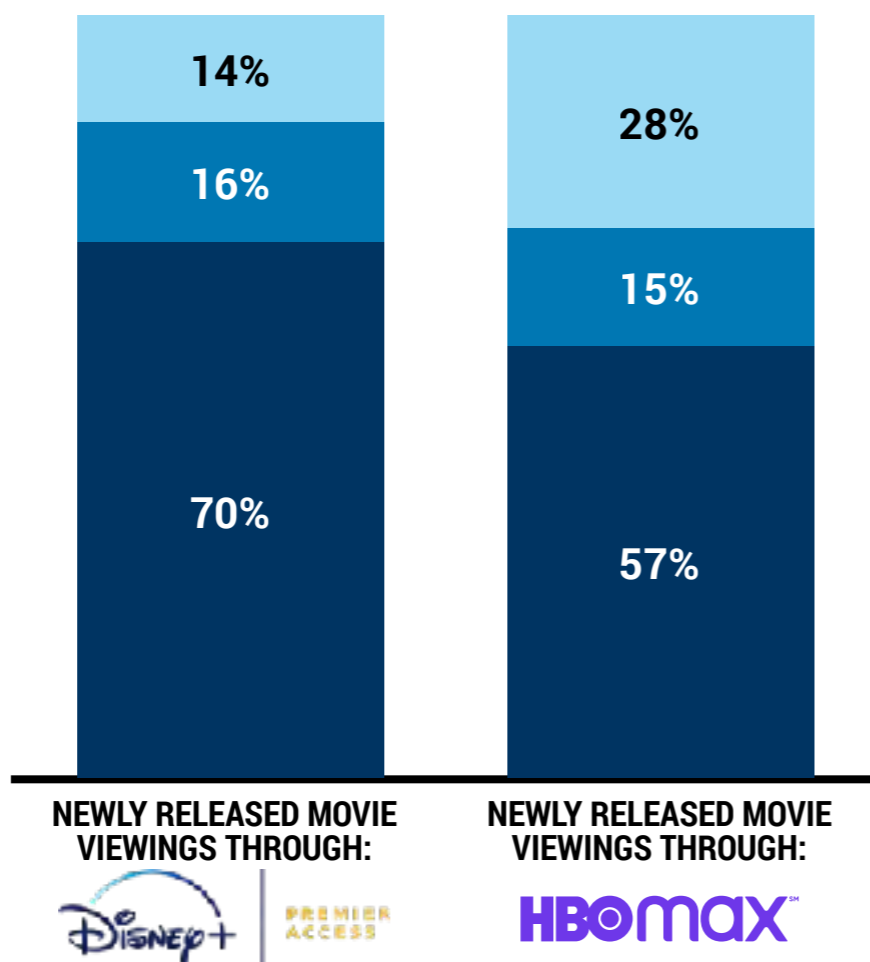
HYPOTHETICAL LIKELIHOOD OF GOING TO A THEATER TO WATCH NEWLY RELEASED MOVIES¹ VIEWED ON DISNEY+ PREMIER ACCESS OR HBO MAX², U.S., 2021, % VIEWINGS OF NEWLY RELEASED MOVIES¹ ON DISNEY+ PREMIER ACCESS OR HBO MAX³

Had the movie not been available through Disney+ Premier Access or HBO Max and assuming personal health due to COVID-19 was not a concern...

Definitely/likely would not have watched in theaters

Not sure if would have watched in theaters

Definitely/likely would have watched in theaters



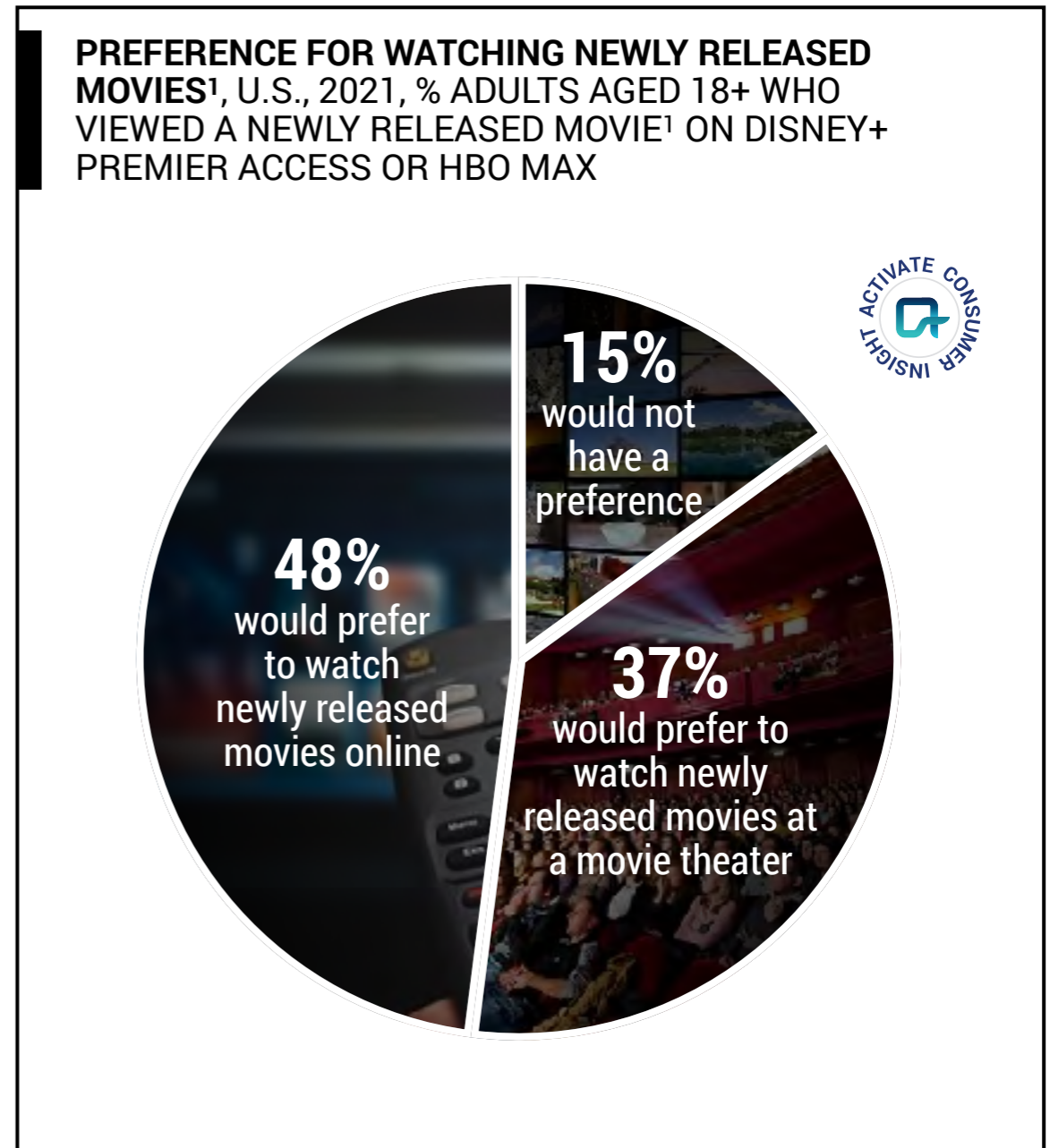
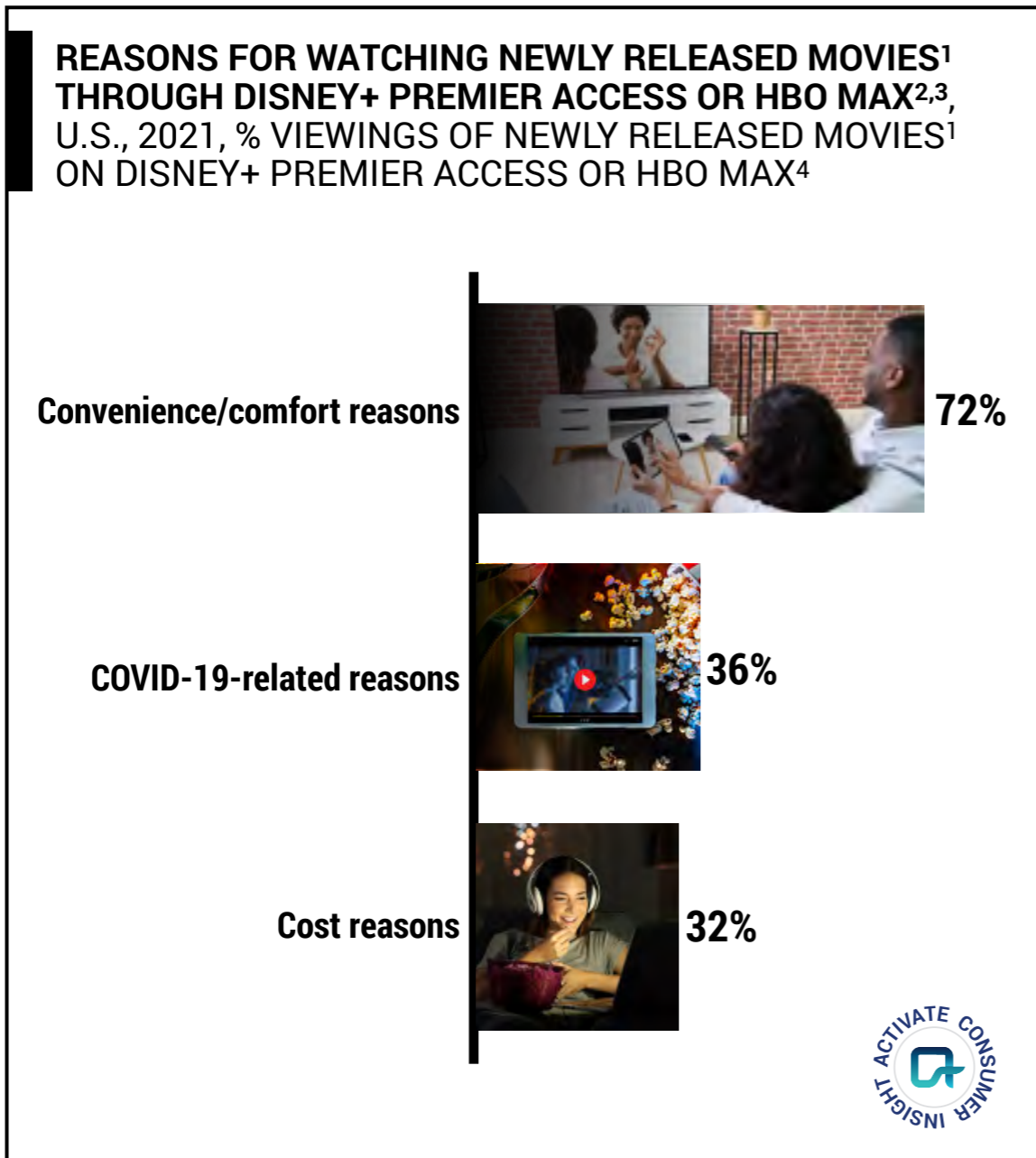
IMPACT OF ACCESS TO NEWLY RELEASED MOVIES¹ ON DISNEY+ AND HBO MAX SUBSCRIPTIONS², U.S., 2021, % ADULTS AGED 18+ WHO VIEWED A NEWLY RELEASED MOVIE¹ ON DISNEY+ PREMIER ACCESS OR HBO MAX

Of those who watched newly released movies through Disney+ Premier Access or HBO Max, access to these movies influenced...



1. "Newly released movies" are defined as movies that are not yet widely available (e.g. only available in theaters or on HBO Max). 2. If multiple newly released movies were viewed on Disney+ and/or HBO Max, answers for each movie/service were counted separately. 3. Viewings by adults aged 18+. Sources: Activate analysis, Activate 2021 Consumer Video Research Study (n = 2,014)

Convenience, rather than COVID-19-related concerns, was the primary driver for consumers to watch new films on streaming instead of in theaters; consumers are split on future preferences regarding theatrical vs. streaming



To expand their audiences and drive engagement, streamers are bundling their services and expanding across media types

BUNDLING OF OWNED SERVICES

MEDIA COMPANY	BUNDLE
	 <p>Price: \$13.99¹ Unbundled Price: \$21.97¹</p>
	 <p>Price: \$9.99¹ Unbundled Price: \$15.98¹</p>
	 <p><i>Anticipated due to forthcoming merger</i></p>

EXPANDING ACROSS MEDIA TYPES

NETFLIX



Stranger Things: 1984 and Stranger Things 3: The Game

In August 2021, Netflix launched Stranger Things-themed mobile Android games to subscribers in Poland



Night School Studio Acquisition



In September 2021, Netflix acquired game developer Night School Studio, indicating further ambitions in gaming

Paid video streaming subscription owners² are **1.3x** more likely to play video games than non-owners

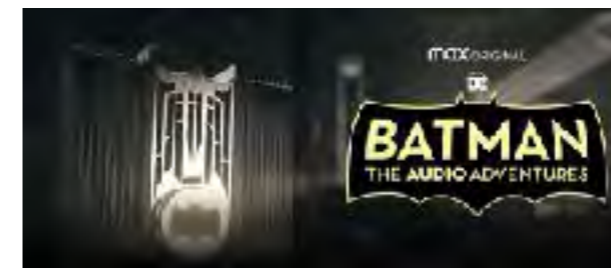


HBOmax



Batman: The Audio Adventures

HBO Max launched an original Batman podcast exclusively for HBO Max subscribers

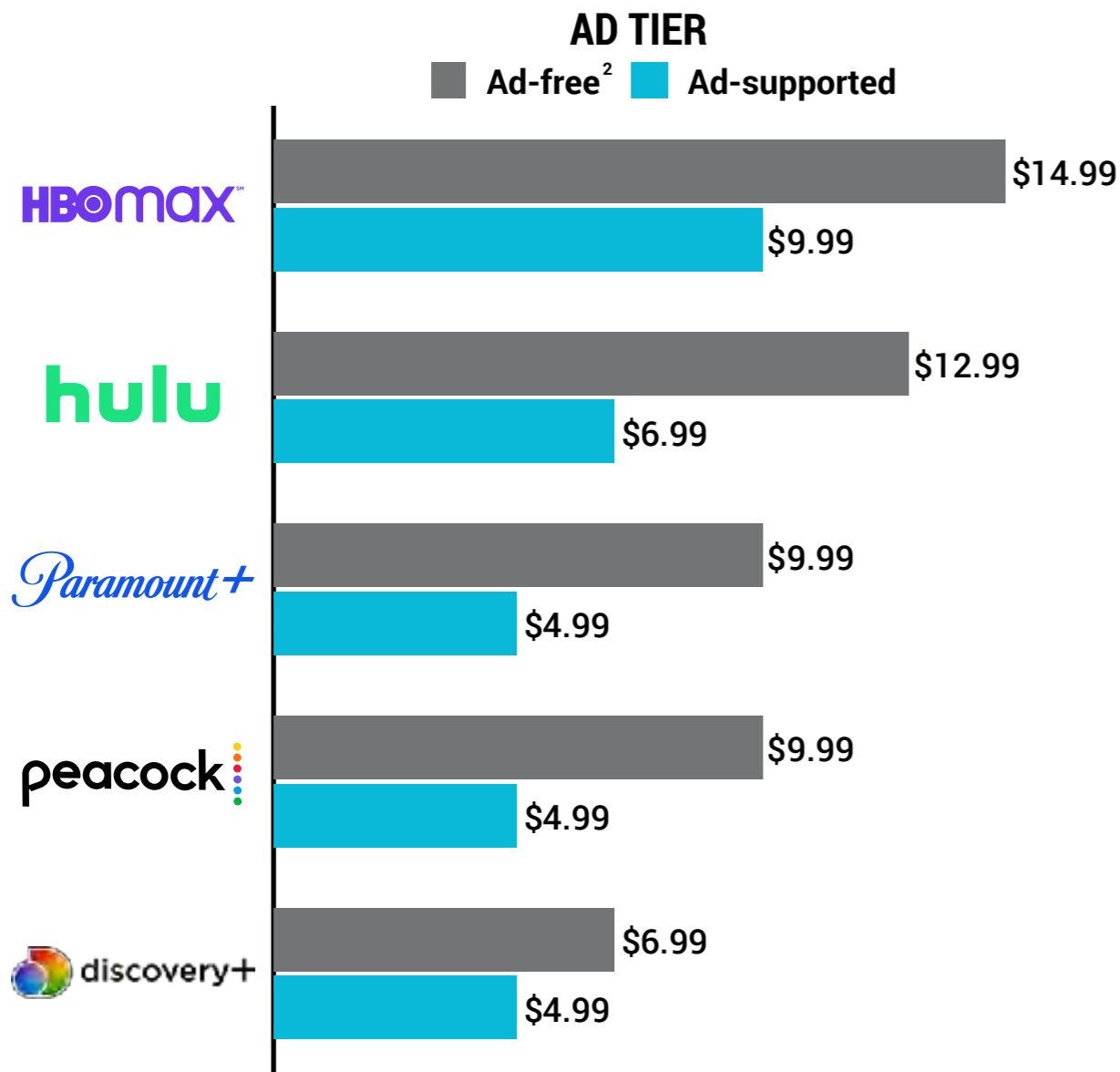


Paid video streaming subscription owners² are **3.5x** more likely to listen to podcasts than non-owners

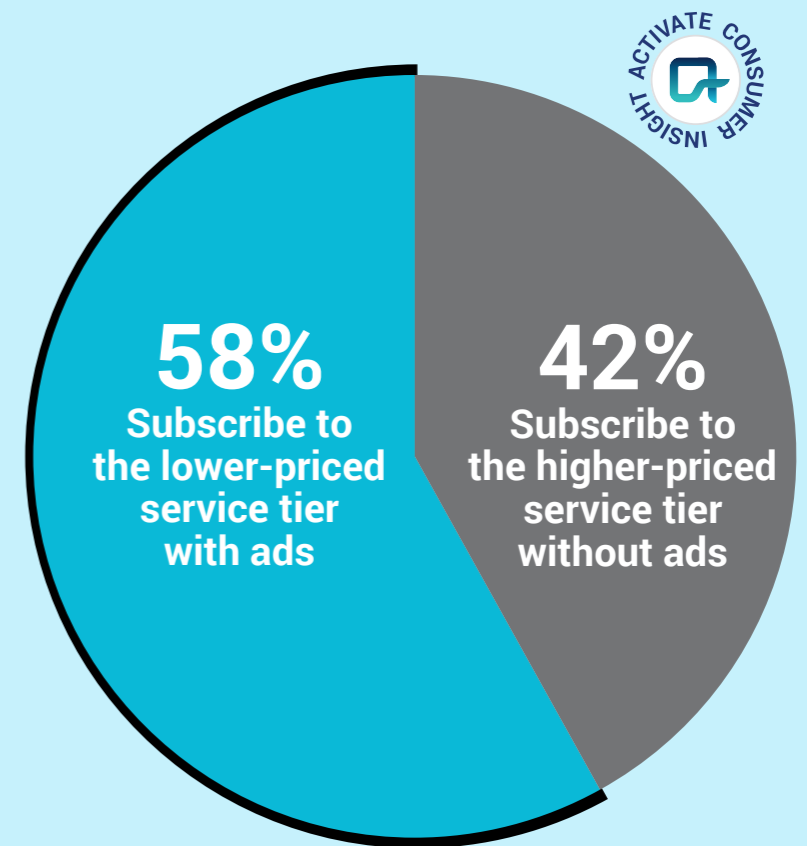
1. Prices reflect the ad-supported service tiers when applicable. Prices as of October 13, 2021. 2. "Paid video streaming subscription owners" are defined as adults aged 18+ who own at least one paid video streaming subscription. Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Company press releases, Company sites, TechCrunch, TVLine

Streaming services have launched less expensive ad-supported tiers to drive subscriptions, which are favored by consumers

MONTHLY SUBSCRIPTION PRICE OF MAJOR PAID VIDEO STREAMING SUBSCRIPTION SERVICES WITH AD TIERS, U.S., 2021¹, USD

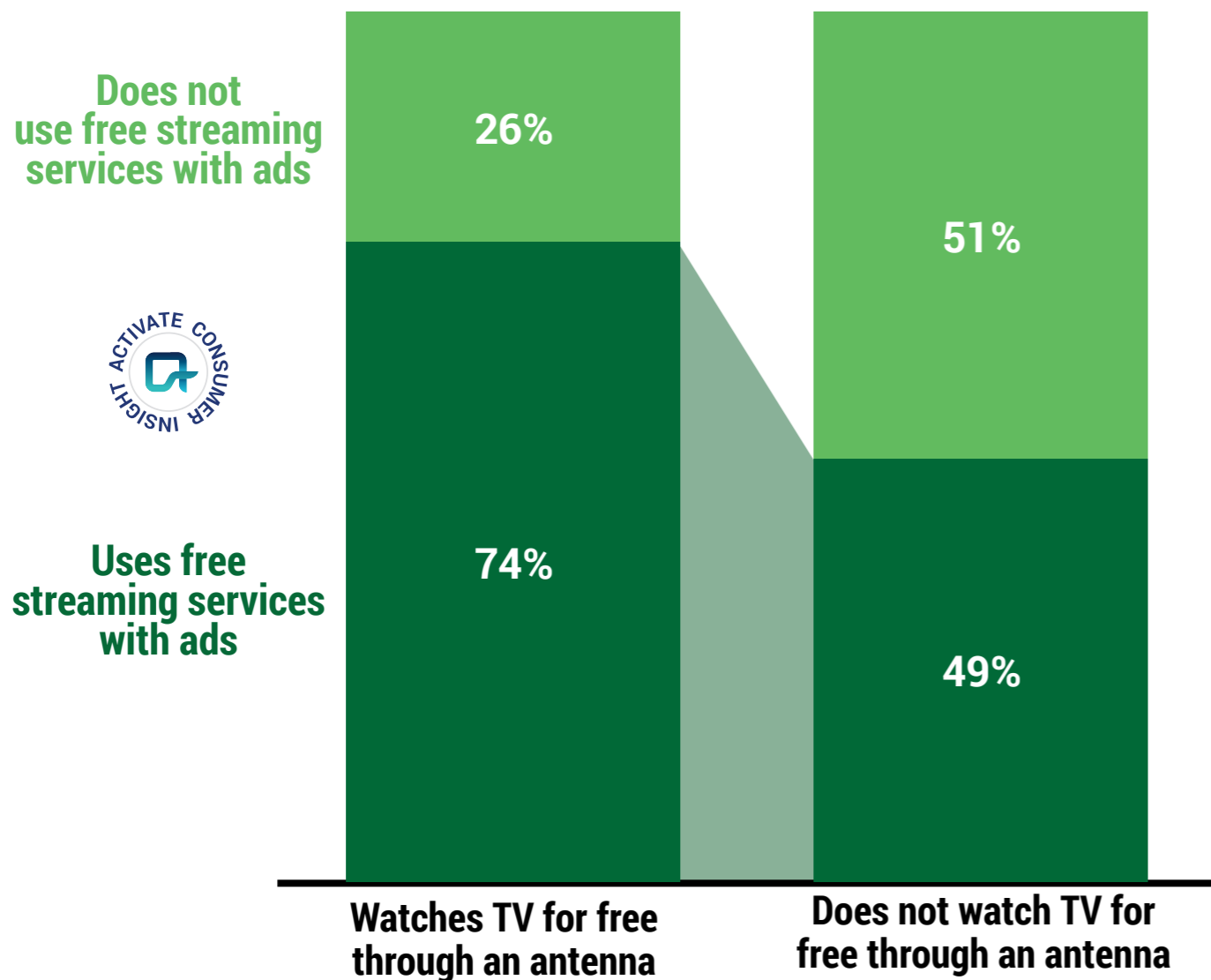


AVERAGE PAID SUBSCRIBER SHARE FOR AD-SUPPORTED TIER VS. AD-FREE TIER³, U.S., 2021, % SELECT PAID VIDEO STREAMING SERVICE SUBSCRIBERS AGED 18+



Ad-supported free streaming has also taken off, particularly for over-the-air viewers (viewers who watch free TV through an antenna), prompting station groups to launch and acquire their own free streaming services

USAGE OF FREE VIDEO STREAMING SERVICES WITH ADS¹ BY FREE TV VIEWERSHIP, U.S., 2021, % VIDEO WATCHERS²



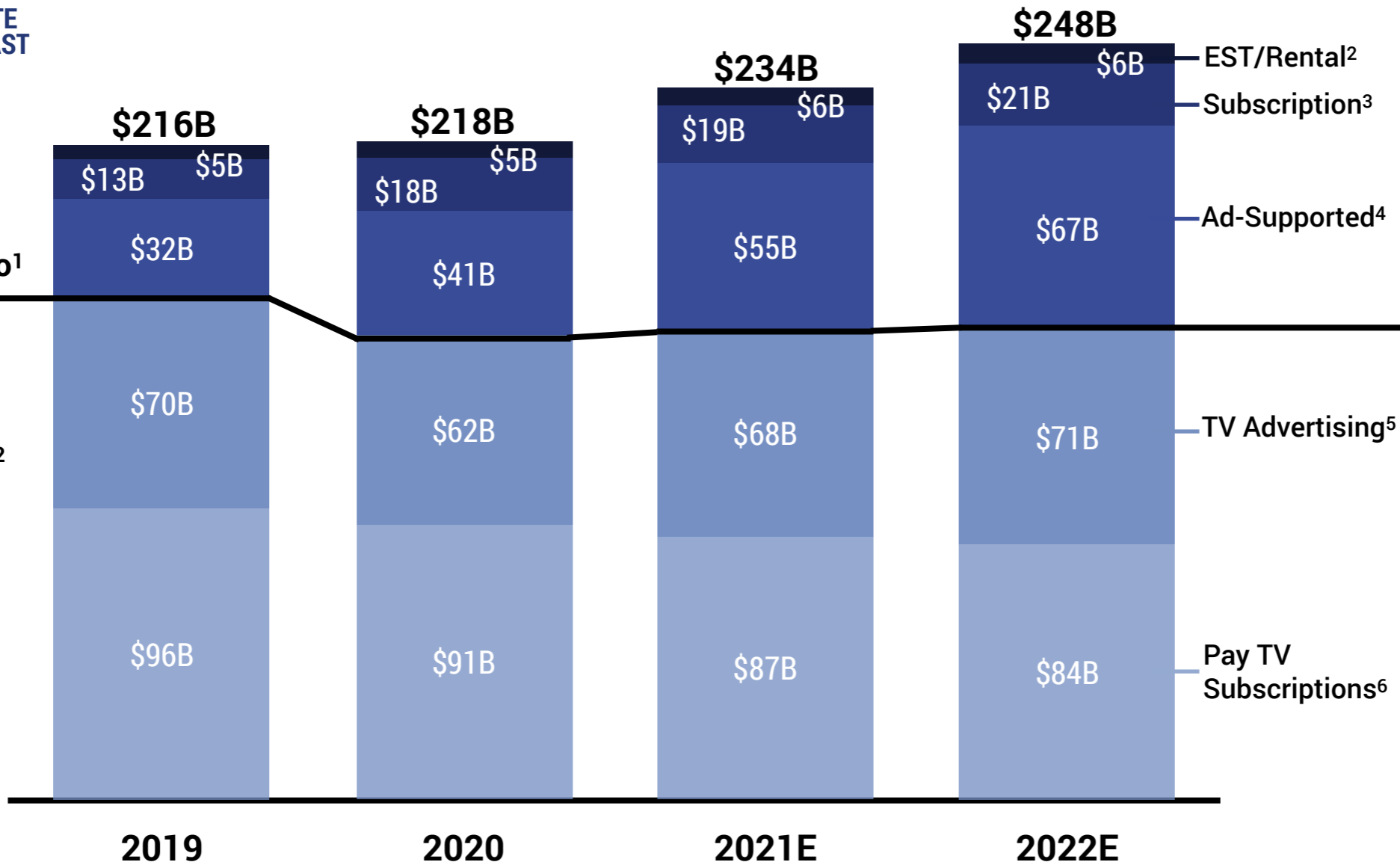
FREE STREAMING SERVICES WITH ADS LAUNCHED BY LOCAL STATION GROUPS

LOCAL STATION GROUP PARENT COMPANY	FREE STREAMING SERVICE WITH ADS
AMB <small>ALLEN MEDIA & RESEARCH PARTNERS</small>	local LOW
FOX	tubi
gray ³	VUit
HEARST	VERY LOCAL
COMCAST NBCUNIVERSAL	peacock ⁴ xumo
SINCLAIR BROADCAST GROUP	STR8
VIACOMCBS	pluto tv

1. YouTube and Twitch excluded due to emphasis on user-generated video. 2. "Video watchers" are defined as adults 18+ who spend any time watching video. 3. Meredith Corporation was also a launch partner for Very Local, but Gray Television is currently in the process of acquiring Meredith's local TV station group. 4. Peacock has both a paid subscription tier and a free tier with ads. Sources: Activate analysis, Activate 2021 Consumer Video Research Study (n = 2,014), Company press releases, Company sites

While digital is growing rapidly, most of the dollars in video will remain in traditional television

VIDEO REVENUE BY TYPE¹, U.S., 2019-2022E, BILLIONS USD



2019-2022E CAGR:

4.8%

7.6%

16.3%

28.2%

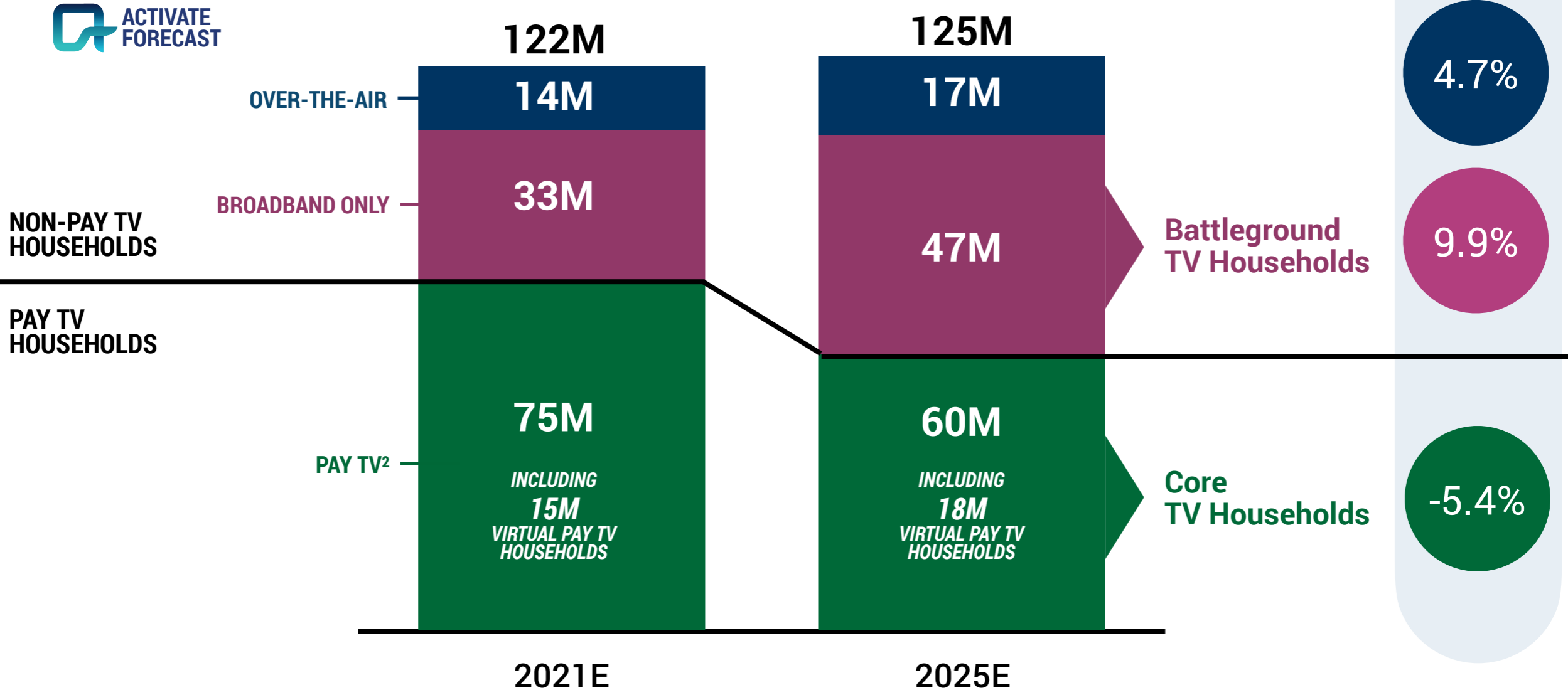
0.3%

-4.4%

1. Figures do not sum due to rounding. 2. Includes spend on online video on-demand transactions (e.g. purchases and rentals). 3. Includes spend on paid video streaming subscriptions. 4. Includes in-stream video advertising (e.g. pre-roll, mid-roll, post-roll) on digital video content, including on social networks and out-stream video advertising (e.g. native, in-feed, in-article, in-banner, interstitial). 5. Includes advertising on broadcast TV and Pay TV. 6. Includes revenue from Pay TV subscriptions. Sources: Activate analysis, BMO Capital Markets, eMarketer, PricewaterhouseCoopers

Pay TV households will continue to decrease, reaching 60M by 2025

TELEVISION HOUSEHOLD BREAKDOWN¹, U.S., 2021E VS. 2025E, MILLIONS HOUSEHOLDS



1. Figures do not sum due to rounding. 2. "Pay TV" includes traditional Pay TV (i.e. TV delivered through a set-top box) and virtual Pay TV (i.e. TV delivered through the internet without a set-top box).

Sources: Activate analysis, Activate 2016 Consumer Technology & Media Research Study (n = 4,000), Activate 2017 Consumer Technology & Media Research Study (n = 4,047), Activate 2018 Consumer Technology & Media Research Study (n = 4,000), Activate 2019 Consumer Technology & Media Research Study (n = 4,006), Activate 2020 Consumer Technology & Media Research Study (n = 4,003), Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Activate 2021 Consumer Video Research Study (n = 2,014), eMarketer, MoffettNathanson, Nielsen, S&P Global, U.S. Census Bureau

The traditional cable bundle and OTT streaming will continue to converge: video streaming services are increasingly adding news and sports, two large audience drivers for the traditional cable bundle

20%+
of Pay TV subscribers¹ identify **live sports** as a top reason² for subscribing to Pay TV



25%+
of Pay TV subscribers¹ identify **live cable news** as a top reason² for subscribing to Pay TV

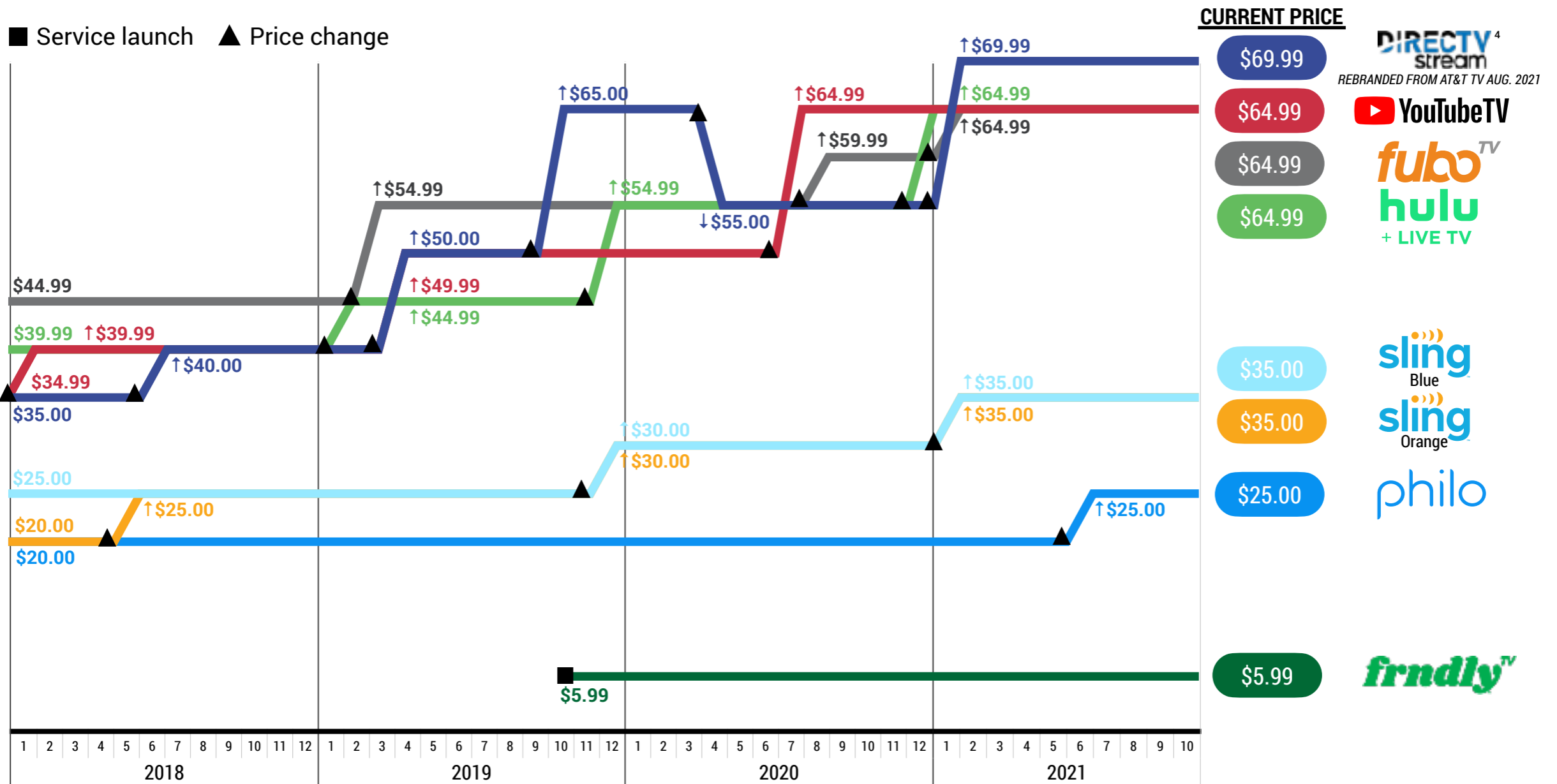
SELECT MAJOR SPORTS AND NEWS INITIATIVES ACROSS VIDEO STREAMING SERVICES		
PREMIUM SPORTS RIGHTS DEALS WITH PAID VIDEO STREAMING SUBSCRIPTION SERVICES	/ 11-year exclusive deal for "Thursday Night Football," which will stream on Amazon Prime Video	 88% of sports watchers ³ own at least one paid video streaming subscription
	/ 7-year deal for NHL games, allowing for up to 72 regular-season games per season to stream on HBO Max	
	/ U.S. rights until 2024 for exclusive coverage of AFC club competitions and national team matches; around 300 matches per year will stream on Paramount+	
FREE AD-SUPPORTED STREAMING NEWS CHANNELS	 	59% of news watchers ⁴ use at least one free video streaming service with ads ⁵
NEWS-FOCUSED PAID VIDEO STREAMING SUBSCRIPTION SERVICES	⁶ Launching 2022	34% of news watchers ⁴ are extremely or very interested in purchasing a subscription to a news-specific video streaming service

1. "Pay TV subscribers" are defined as adults aged 18+ who own a traditional and/or virtual Pay TV subscription. 2. Consumers were asked to select up to three top reasons for owning each type (traditional and/or virtual) of Pay TV. 3. "Sports watchers" are defined as adults aged 18+ who watch sports programming (including live sports games/events and sports talk shows). 4. "News watchers" are defined as adults aged 18+ who watch news programming (including live news and political talk shows). 5. Does not include YouTube and Twitch due to emphasis on user-generated video. 6. Fox Nation provides entertainment content in addition to news programming.

Sources: Activate analysis, Activate 2021 Consumer Video Research Study (n = 2,014), Company press releases, Company sites

For the most part, Virtual Pay TV services are no longer low cost alternatives to cable and satellite, as Virtual Pay TV providers have steeply increased prices since their initial launches

MONTHLY SUBSCRIPTION PRICE¹ OF VIRTUAL PAY TV SERVICES², U.S., JAN. 2018-OCT. 2021³, USD



1. Price reflects each service's base package. 2. "Virtual Pay TV services" are defined as services that deliver TV through the internet without a set-top box. 3. Pricing information as of October 13, 2021. 4. Includes prices from previously rebranded services (i.e. DirecTV Now, AT&T TV Now, and AT&T TV).
Sources: Activate analysis, Company press releases, Company sites

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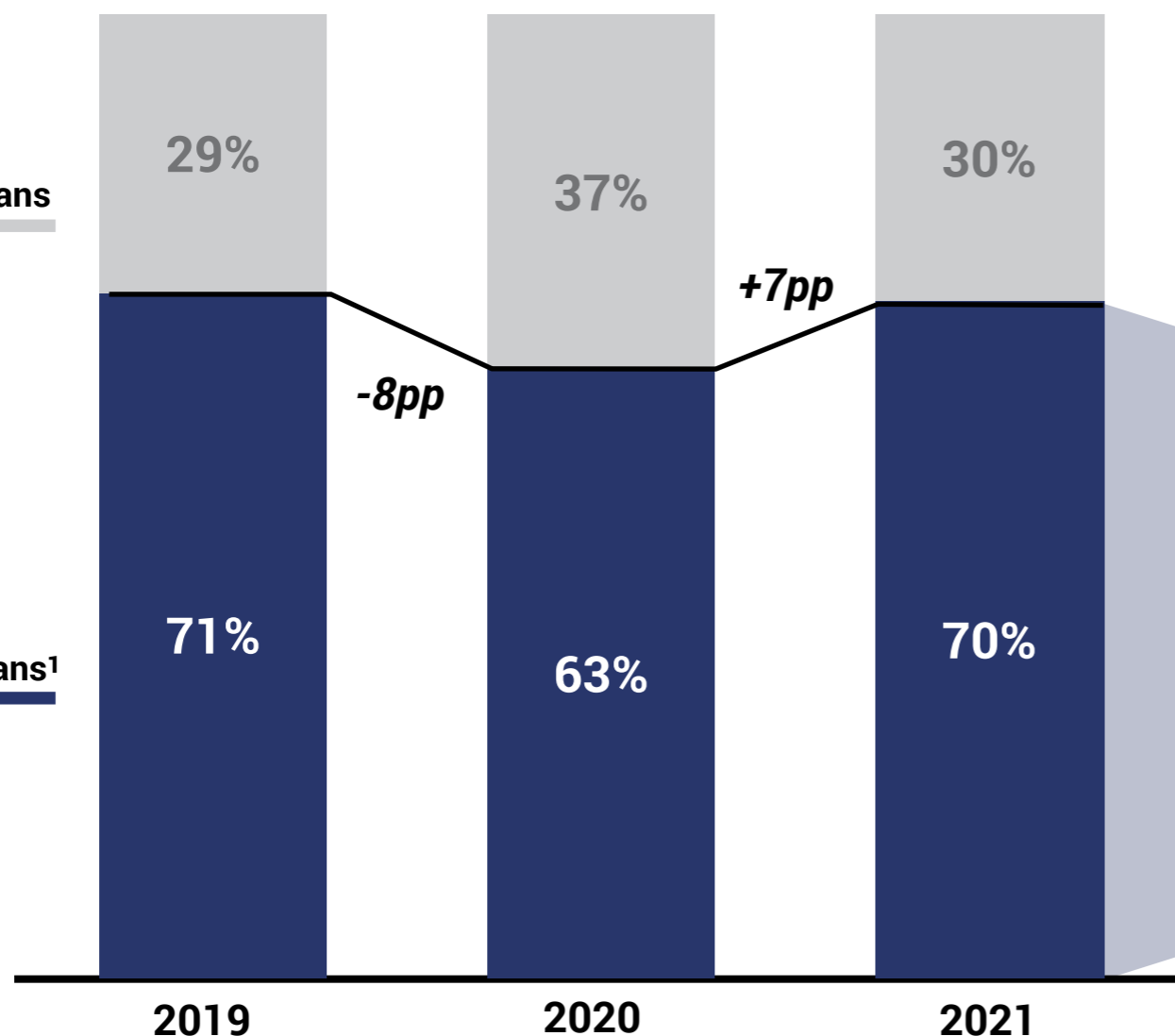
Fans are coming back to sports following the dip during the pandemic

SPORTS FANS VS. NON-SPORTS FANS, U.S., 2019-2021, % ADULTS AGED 18+



Non-Sports Fans

Sports Fans¹



RETURN TO MORE REGULAR SPORTS SCHEDULES
 COVID-19 caused irregular/shortened schedules; in 2021, most have returned to regular programming

There are **180M** sports fans in the U.S.

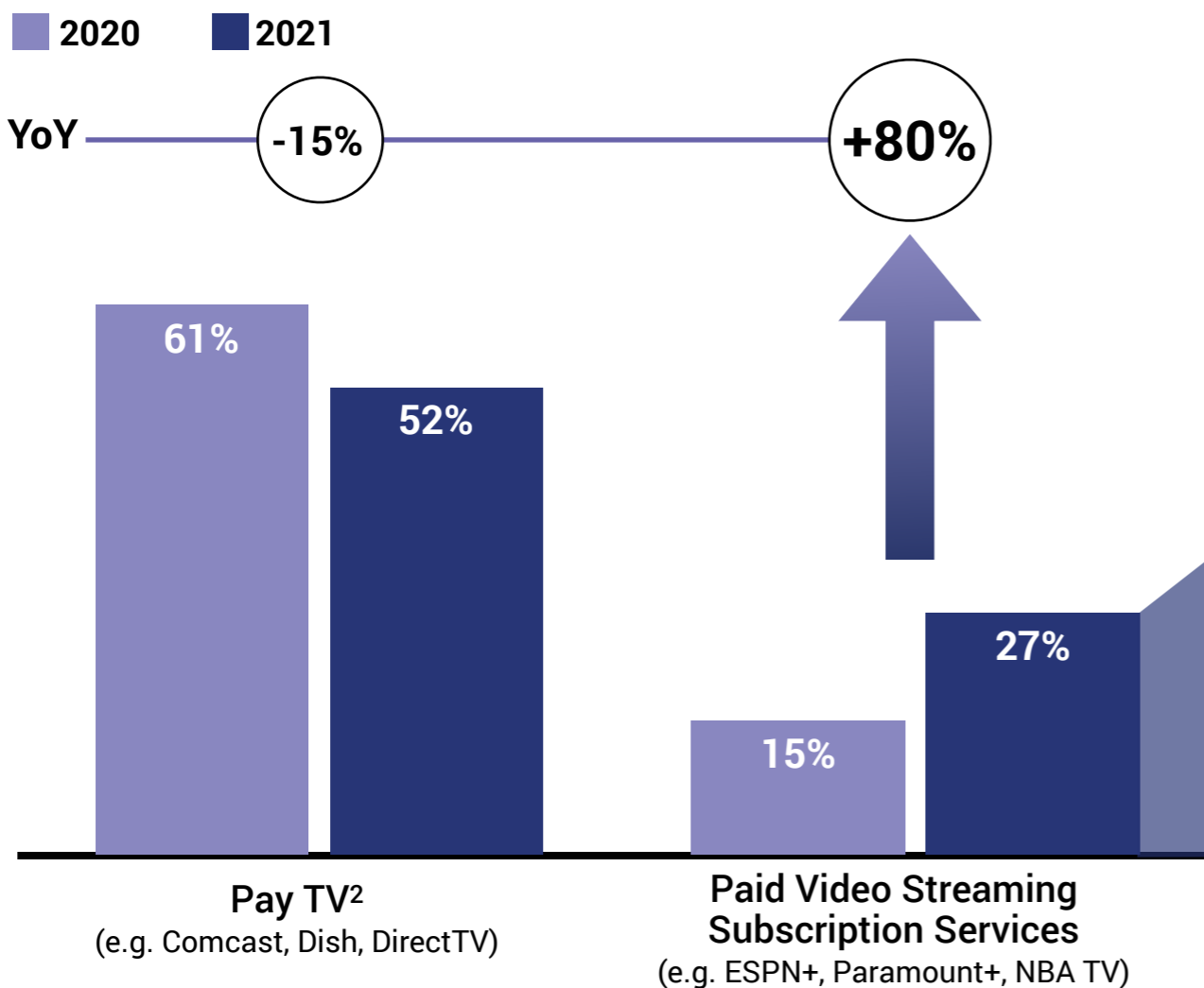


1. "Sports fans" are defined as adults aged 18+ who followed at least one sport in the last 12 months (e.g. attending live games in person, watching live games or game highlights, reading articles or statistics).

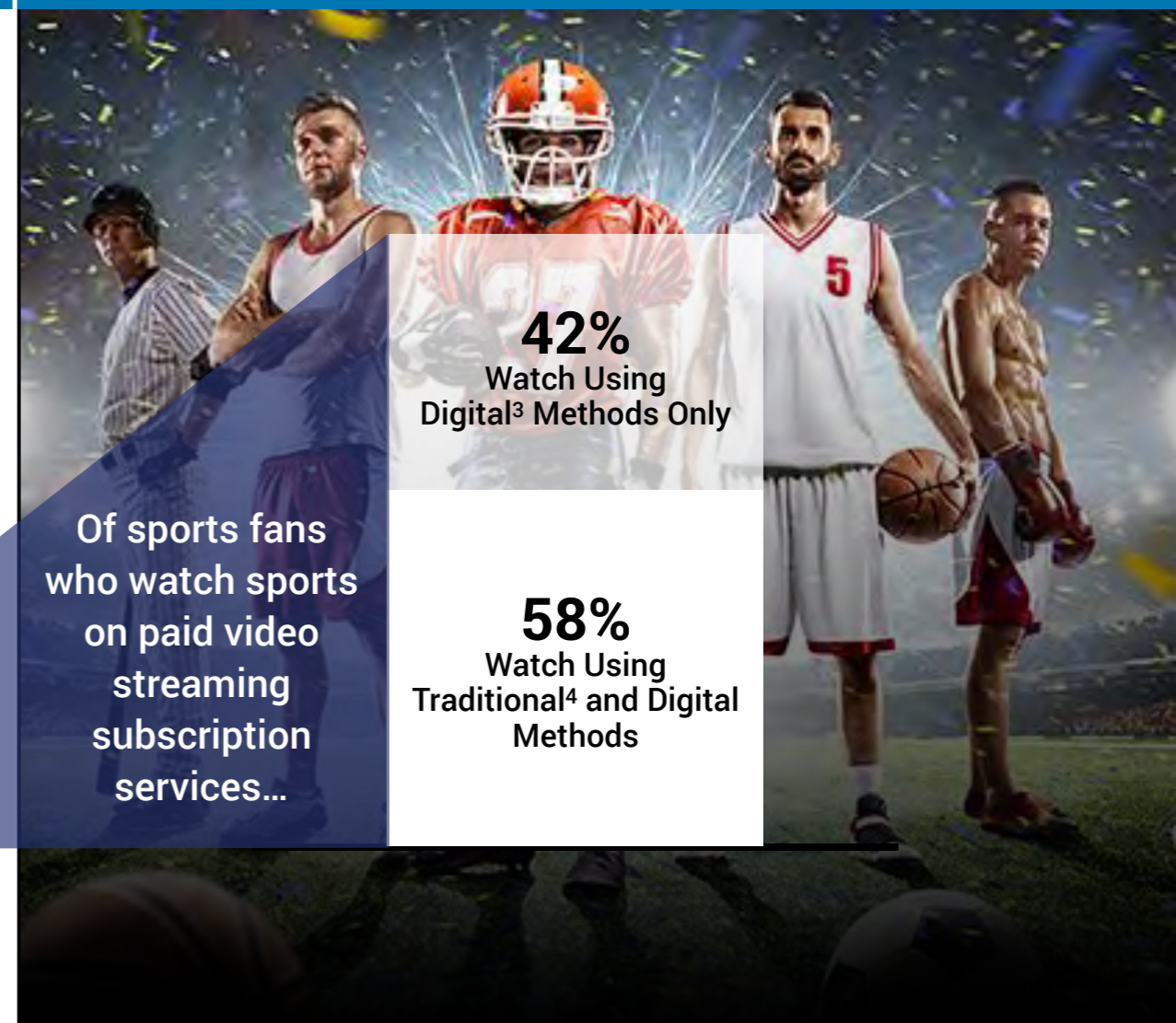
Sources: Activate analysis, Activate 2019 Consumer Technology & Media Research Study (n = 4,006), Activate 2020 Consumer Technology & Media Research Study (n = 4,003), Activate 2021 Consumer Technology & Media Research Study (n = 4,018), U.S. Census Bureau

More fans are using streaming services to watch sports, although Pay TV continues to account for the majority of viewership

LIVE SPORTS VIEWERSHIP BY VIEWING METHOD, U.S., 2020 VS. 2021, % SPORTS FANS¹ WHO WATCH SPORTS



DIGITAL³ VS. TRADITIONAL⁴ VIEWING METHODS, U.S., 2021, % SPORTS FANS¹ WHO WATCHED SPORTS THROUGH A PAID VIDEO STREAMING SUBSCRIPTION SERVICE



1. "Sports fans" are defined as adults aged 18+ who followed at least one sport in the last 12 months (e.g. attending live games in person, watching live games or game highlights, reading articles or statistics). 2. "Pay TV" includes traditional Pay TV and virtual Pay TV. 3. "Digital viewing methods" include paid digital streaming services, free video streaming services with ads, and social media. 4. "Traditional viewing methods" include Pay TV and over-the-air viewing.
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

New rights deals for 2022-23 will bring more live games to streaming; growing availability of games across sports will drive the continued shift to streaming

KEY CONTENT RIGHTS¹ TIMELINES OF LEGACY TOP 4 SPORTS LEAGUES AND ANNUAL VALUE BY SPORT, U.S., 2019-2034, BILLIONS USD

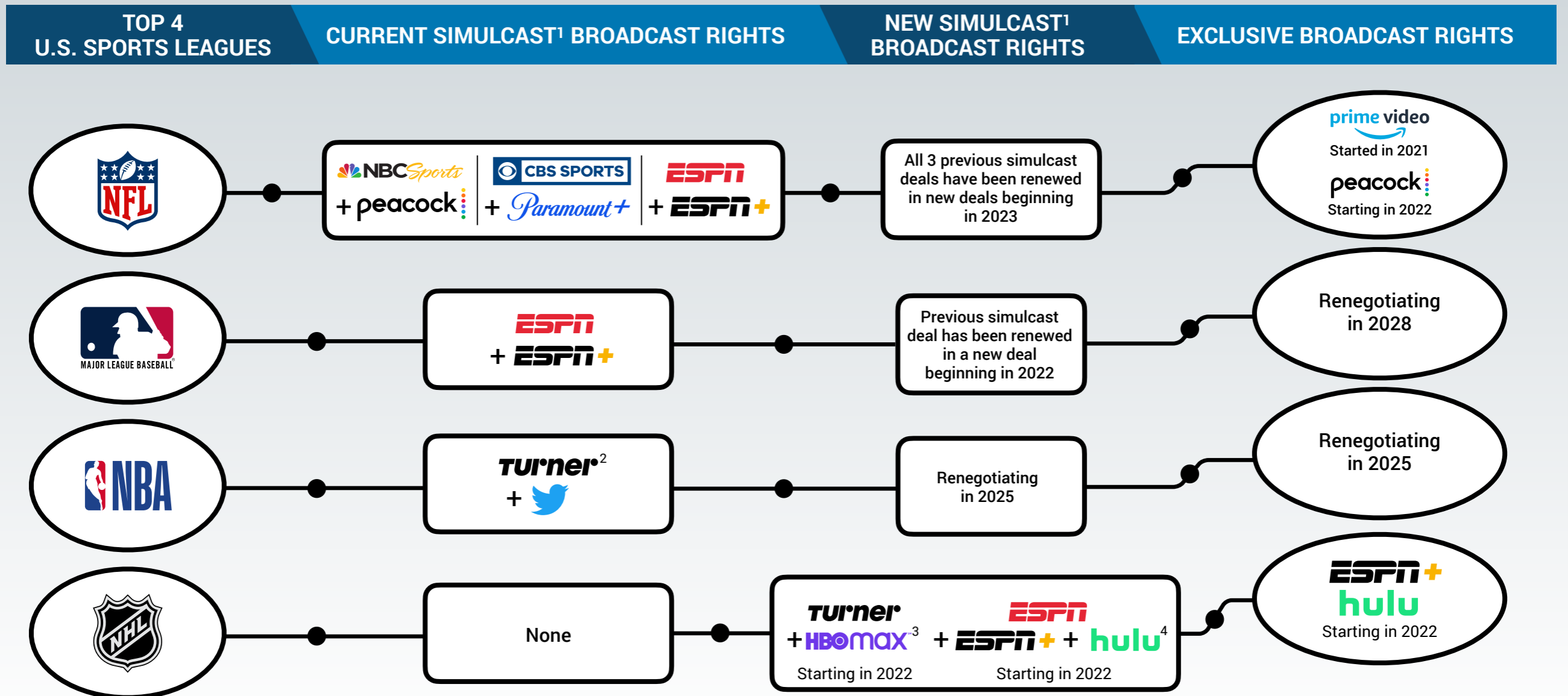
■ Indicates previous deal in place with same distributor (that has since been renewed) ■ Indicates deal with streaming service component

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	ANNUAL VALUE	
		■			■ ESPN abc ESPN+													\$2.7B
		■			■ prime video													\$1.0B
		■			■													\$0.7B
		■ <i>Paramount+</i>			■ CBS SPORTS <i>Paramount+</i>													\$2.1B
		■			■ FOX SPORTS													\$2.3B
	■ NBC Sports peacock			■ NBC Sports peacock													\$2.0B	
	■ ESPN ESPN+			■ ESPN ESPN+													\$0.6B	
	■ TURNER			■ TURNER													\$0.5B	
	■ FOX SPORTS			■ FOX SPORTS													\$0.7B	
	■ ESPN abc			■													\$1.4B	
	■ TURNER			■													\$1.2B	
	■ NBC Sports			■													\$0.2B	
	■			■ ESPN abc ESPN+ hulu													\$0.4B	
	■			■ TURNER HBOMAX²													\$0.2B	

1. Rights deals included in chart include regular-season only and exclude league-owned channels (e.g. NBA league pass, MLB.TV). As of Oct. 2021. 2. Turner deal includes the option to broadcast through HBOMax but has yet to schedule live games. Sources: Activate analysis, AXIOS, CNBC, Company sites, Engadget, NY Post, SportsProMedia, The Streamable, USA Today, The Verge

The top sports leagues already simulcast their linear broadcasts on streaming services; going forward, we expect more competition for streaming exclusives

SELECT U.S. DIGITAL BROADCAST RIGHTS DEALS AND PARTNERSHIPS OF LEGACY TOP 4 SPORTS LEAGUES





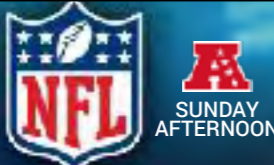

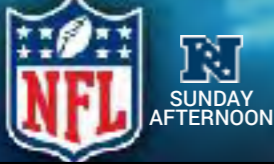



1. "Simulcast" is defined as a simultaneous transmission of the same program on two or more platforms. 2. Player-focused camera stream during the second half. 3. Turner deal includes the option to broadcast through HBO Max but has yet to schedule live games. 4. Hulu has partnered with ESPN to make live sports and events on ESPN+ available to watch on the Hulu app.

Sources: Activate analysis, AXIOS, CNBC, Company sites, SportsProMedia, USA Today, The Verge

In the case of the NFL, while a growing number of live games are now available for streaming, a Pay TV package, supplemented by an NFL Sunday Ticket subscription, provides the broadest access to all games

REGULAR SEASON BROADCAST ACCESSIBILITY BY NFL GAME TIME SLOT, U.S., 2021-2022 SEASON

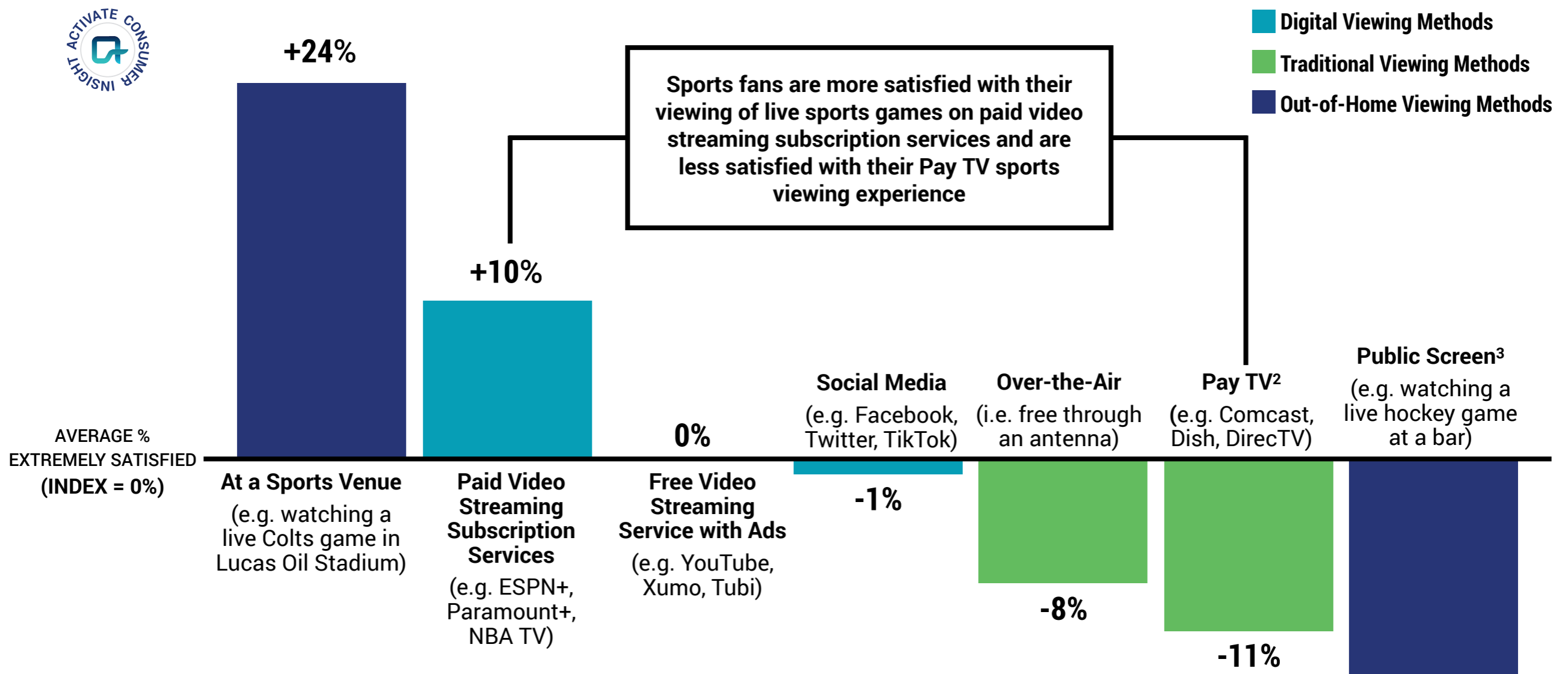
TYPE OF GAME	IN-MARKET ¹ / OUT-OF-MARKET ²	OVER-THE-AIR	PAY TV ³ + SUNDAY TICKET ⁴	PAY TV SUNDAY TICKET	PAID VIDEO STREAMING SUBSCRIPTION SERVICES
	In-Market	✓	✓	✓ N/A	 (Limited number of games)
	Out-of-Market	✗	✓	✓ N/A	
	In-Market	✓	✓	✓ N/A	
	Out-of-Market	✗	✓	✓ N/A	
	In-Market	✓	✓	✓ ✗	
	Out-of-Market	✗	✓	✗ ✓	
	In-Market	✓	✓	✓ ✗	✗
	Out-of-Market	✗	✓	✗ ✓	
	In-Market	✓	✓	✓ N/A	 (Premium or Premium Plus Plans)
	Out-of-Market	✗	✓	✓ N/A	

Pay TV + Sunday Ticket is the only way football fans can watch every NFL game

1. "In-Market" is available within the designated broadcast region of an individual's physical location. 2. "Out-of-Market" is available outside of the designated broadcast region of an individual's physical location. 3. "Pay TV" includes traditional Pay TV and virtual Pay TV that include a standard sports package. 4. Sunday Ticket is an out-of-market sports package provided through DirecTV that broadcasts NFL regular season games that are unavailable on local affiliates.
Sources: Activate analysis, Company sites

Streaming services deliver experiences that are winning over fans; we expect streaming to become consumers' go-to viewing method in the future as live games become available on streaming services across sports

FAN SATISFACTION BY EXPERIENCE TYPE, U.S., 2021,
% SPORTS FANS¹ WHO USE EACH VIEWING METHOD INDEXED TO AVERAGE SATISFACTION ACROSS VIEWING METHODS



1. "Sports fans" are defined as adults aged 18+ who followed at least one sport in the last 12 months (e.g. attending live games in person, watching live games or game highlights, reading articles or statistics). 2. "Pay TV" includes traditional Pay TV and virtual Pay TV. 3. "Public screen" is defined as a screen within a public setting outside of the home that is not at a sports venue.

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)


Streaming services are hubs that serve all consumer needs for the full set of sports programming types; more services will soon follow suit, significantly expanding sports streaming offerings


EMERGENCE OF DIGITAL STREAMING SERVICES IN LIVE AND NON-LIVE SPORTS PROGRAMMING

ESPN+ is leading the way to become a full-service streaming sports hub

VARIETY OF SPORTS, LEAGUES, AND CONFERENCES

ESPN+ subscribers can access a **wide variety of sports programming** across many top sports leagues (e.g. NFL, MLB, NHL) in addition to more niche sports (e.g. Cricket, MMA, Tennis)



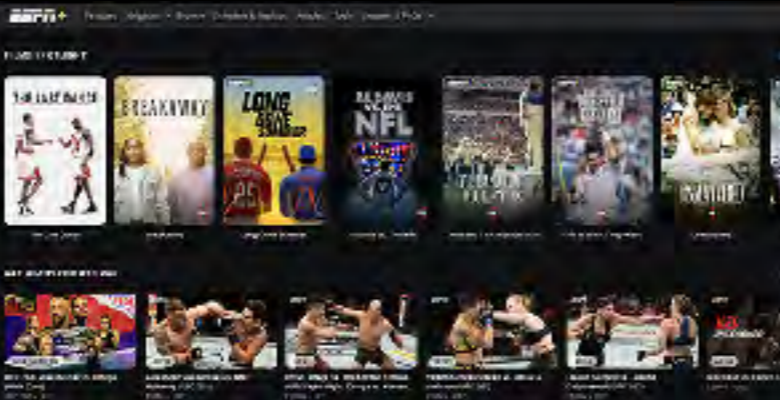


Subscribers can browse a comprehensive list of **live game broadcasts and streams of game replays**

STREAMS OF LIVE GAMES & GAME REPLAYS














LARGE LIBRARY OF SPORTS CONTENT AND MEDIA

ESPN+ provides its subscribers with access to a **large selection of sports-related content** (e.g. sports movies and documentaries) in addition to game broadcasts





NEW ENTRANTS

In recent broadcast rights deal negotiations, many streaming services have gained rights to exclusive and simulcast broadcasts of live games and developed additional sports-adjacent programming available to paying subscribers

<div style="text-align: right; font-weight: bold; font-size: small;">2021</div>  <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div>	<div style="text-align: right; font-weight: bold; font-size: small;">2023</div>  <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div>	<div style="text-align: right; font-weight: bold; font-size: small;">2022</div>  <div style="margin-top: 10px;">  </div>
<div style="text-align: right; font-weight: bold; font-size: small;">2023</div>  <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div>	<div style="text-align: right; font-weight: bold; font-size: small;">2022</div>  <div style="margin-top: 10px;">  </div>	

COULD BE NEXT...

As broadcast rights are up for renegotiation, other digital platforms are looking to get involved and add broadcasts of live sports games to their offering

Streaming services and social platforms will expand their deployment of new technology innovations to deliver interactive experiences and drive fan engagement











IMPORTANCE OF INNOVATIVE EXPERIENCE FEATURES AND CONTENT, U.S., 2021, % SPORTS FANS¹

CONSIDER FEATURE OR CONTENT EXTREMELY OR VERY IMPORTANT



50%	50%	38%	32%	31%
SINGLE-PLAYER-FOCUSED VIEWING ANGLES	ALTERNATE BROADCASTS WITH DIFFERENTIATED FEATURES AND/OR EFFECTS	INTERACTIVE ANALYTICAL FEATURES	SOCIAL CHAT	BETTING-THEMED ALTERNATE BROADCASTS

EXAMPLES

  <p>During select NBA games on TNT, Twitter broadcasts an alternate stream where fans vote on which player to follow – the stream focuses on that single player, tracking him around the court</p>	  <p>Nickelodeon’s alternate “Slime Time” broadcasts of 2021 NFL games showcased special effects that target younger audiences, such as slime cannons and Nickelodeon cartoon character references</p>	  <p>Amazon Prime Video’s extended X-Ray feature during Thursday Night Football games enables viewers to access AWS-powered Next-Gen stats, on-demand replays, and in-depth player analyses</p>	  <p>Amazon Prime Video broadcasts select Thursday Night Football games on Twitch, where users are able to experiment with beta-stage in-game analytical features and chat with other viewers</p>	  <p>NBABet Stream, an alternate betting-focused broadcast, features analysts from NBA partners (e.g. Yahoo Sports, Bleacher Report) and complements the platform’s weekly betting show</p>
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1. “Sports fans” are defined as adults aged 18+ who followed at least one sport in the last 12 months (e.g. attending live games in person, watching live games or game highlights, reading articles or statistics). Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Bleacher Report, Company sites, GeekWire, TechCrunch

Sports technology innovation, and sports tech company partnerships, will deliver new digital sports experiences and likely deepen fan engagement

EXAMPLES OF SPORTS TECH PARTNERSHIPS THAT ENABLE NEW SPORTS VIEWING EXPERIENCES AND FEATURES

NEW DELIVERY METHODS & AUDIENCES

- Creates new ways to watch and consume sports content as well as target new audience segments
- Delivers personalized viewing experiences and recommendations to subscribers



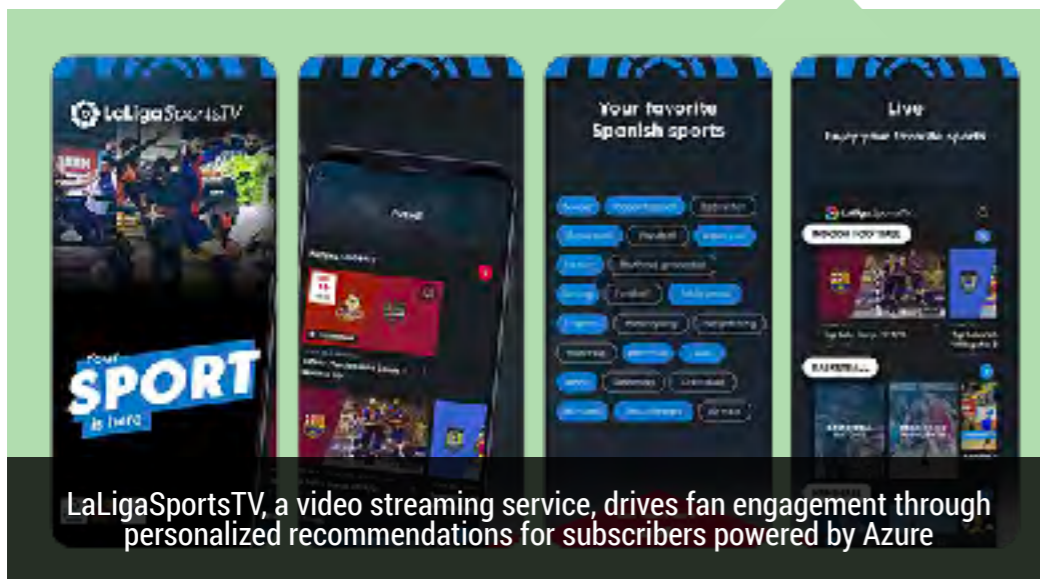
SPORTS DATA

- Integrates real-time official sports league data to enable all-in-one entertainment experiences for customers of sports betting operators and media companies

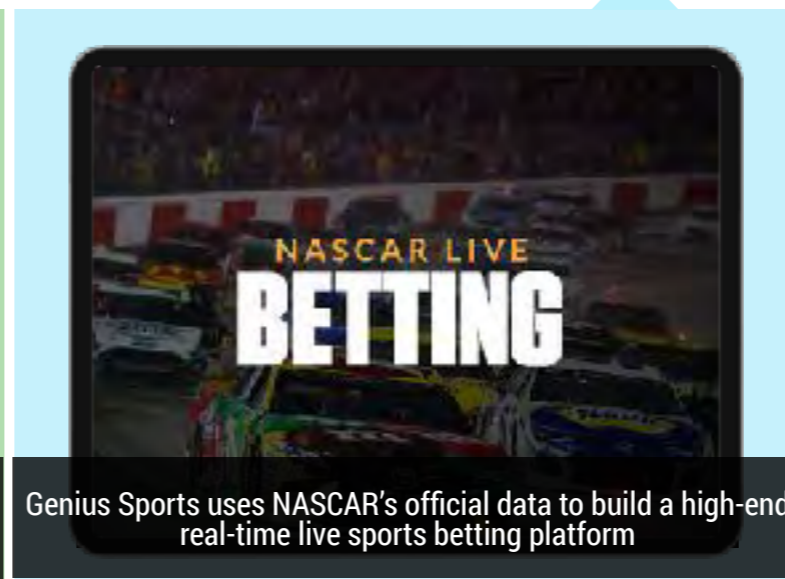


SPORTS BETTING PROGRAMMING

- Develops original betting-focused content
- Integrates sports betting odds within broadcasts



LaLigaSportsTV, a video streaming service, drives fan engagement through personalized recommendations for subscribers powered by Azure



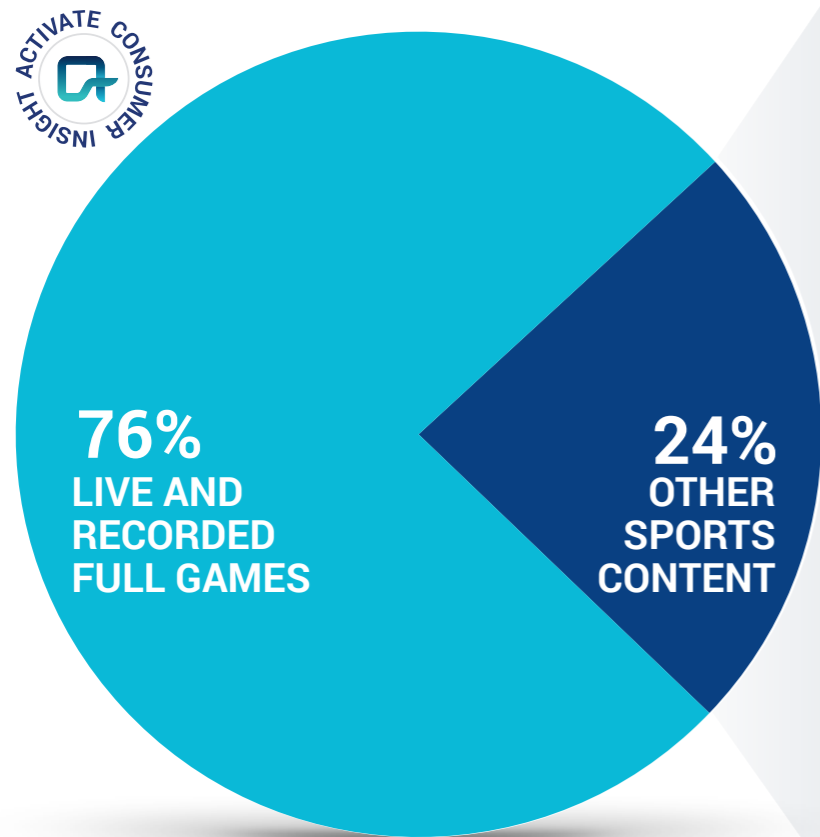
Genius Sports uses NASCAR's official data to build a high-end real-time live sports betting platform



NBC Sports Edge BetCast on Peacock features analysts discussing potential bets using PointsBet odds

Sports programming beyond live and recorded games will be critical to expand fan engagement

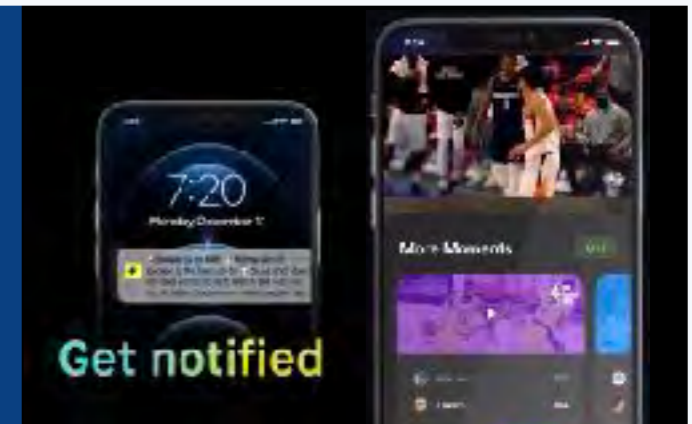
SHARE OF LIVE AND RECORDED FULL GAMES VS. OTHER SPORTS CONTENT CONSUMED, U.S., 2021, % TOTAL TIME SPENT WATCHING SPORTS CONTENT BY SPORTS FANS¹



EXAMPLES OF OTHER SPORTS CONTENT AND PROGRAMMING

NBA League Pass **BUZZER**
ON-DEMAND GAME HIGHLIGHTS & KEY MOMENTS

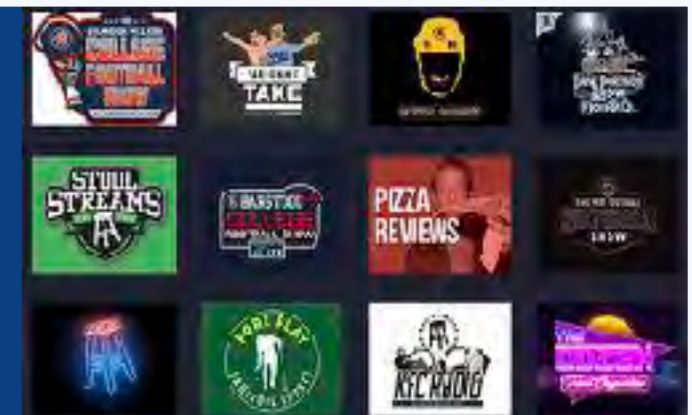
Buzzer customers receive alerts for **key game moments and games they indicate interest in** and are able to **purchase segments of games and watch them on-demand** through its partnership with NBA League Pass



sling **BARSTOOL SPORTS**

SUBSCRIBER-EXCLUSIVE PROGRAMMING

Sling TV subscribers receive **access to Barstool Sports Channel**, which hosts **subscriber-exclusive programs** (e.g. Brandon Walker's College Football Show) **and other live content** (e.g. Pardon My Take podcast)



MLB.TV **BETMGM**

BETTING-RELATED PROGRAMMING

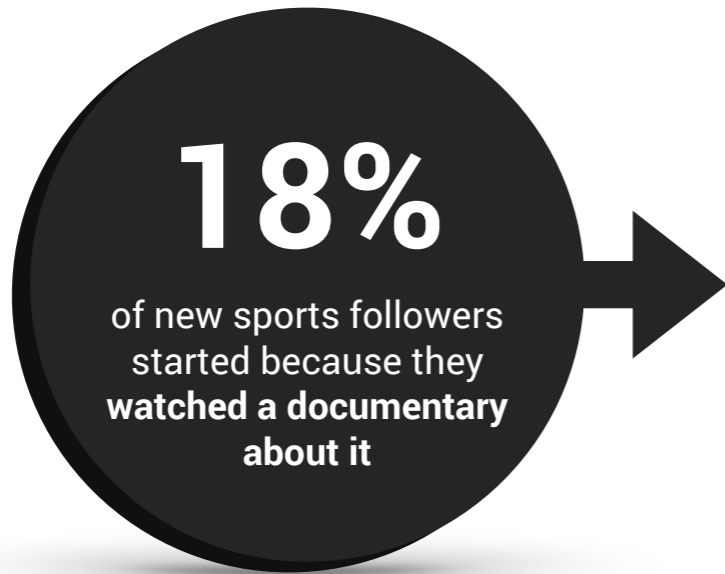
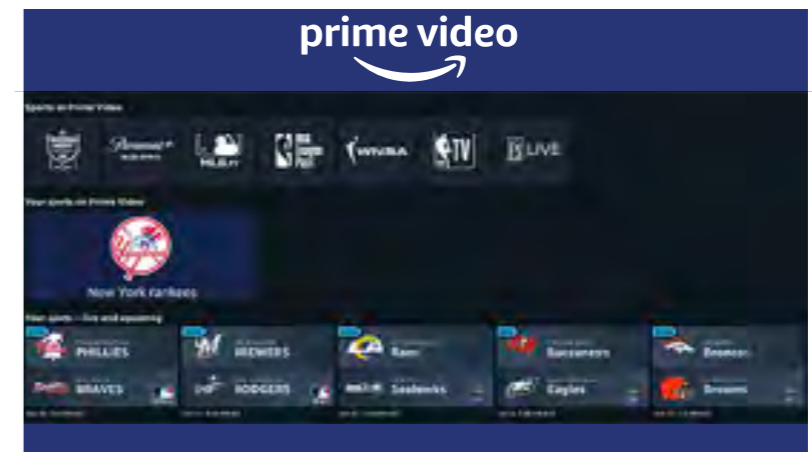
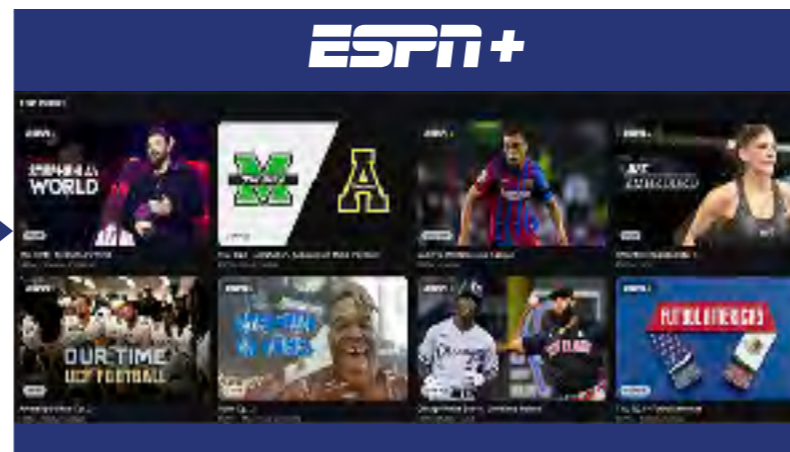
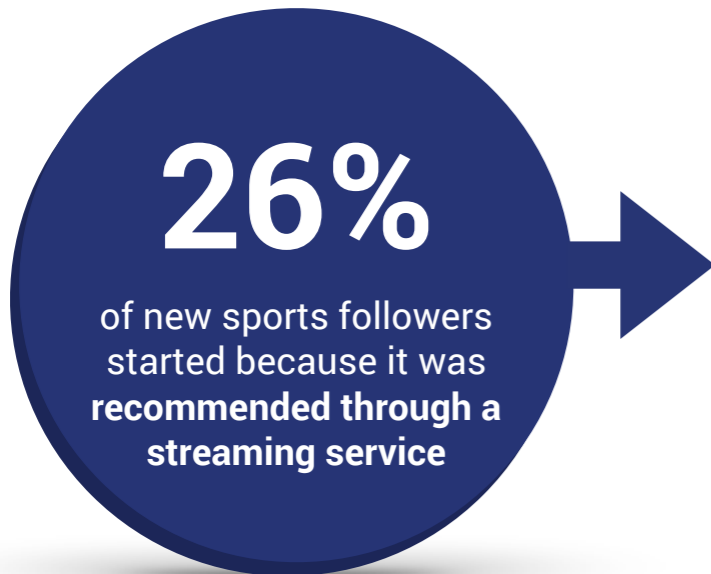
"**Bettor's Eye**," a daily betting-focused MLB pregame show, is sponsored by BetMGM and is only available to MLB.TV subscribers



Recommendations and expanded sports programming will increase the number of sports followers on streaming services

REASONS FOR FOLLOWING NEW SPORTS, U.S., 2021, % NEW SPORTS FOLLOWERS¹

EXAMPLES:



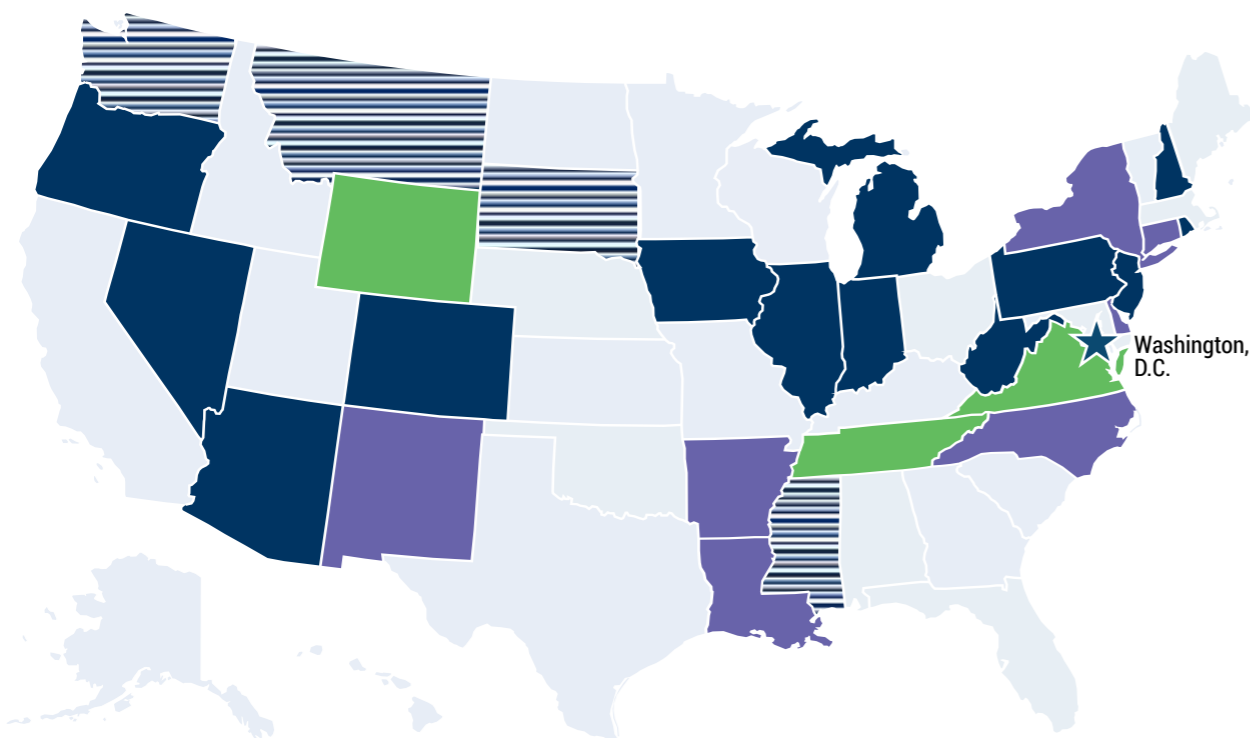
1. "New Sports Followers" are defined as adults aged 18+ who started following at least one new sport in the last 2 years (e.g. attending live games in person, watching live games or game highlights, reading articles or statistics).
Sources: Activate analysis, Company sites, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

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In the U.S., 28 states have legal and live sports betting, with the market surpassing \$20B in total wagers in the first half of 2021

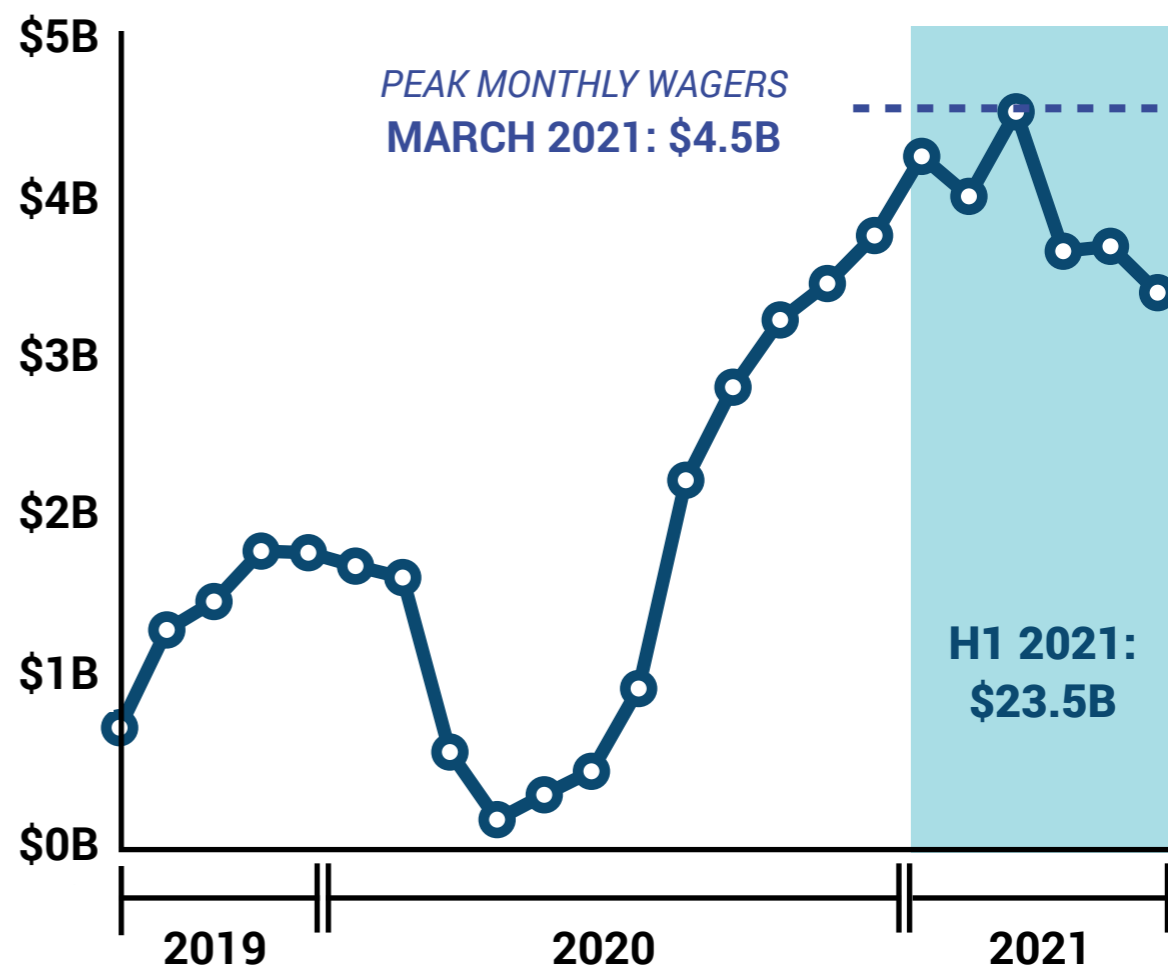
SPORTS BETTING MARKET LIVE STATES¹ BY CHANNEL, U.S., SEPT. 2021



Channel	# States:
Online & Retail	14
Geofenced Online ² & Retail	4
Online Only	3 ³
Retail Only	7 ⁴
Not Live	23

28 Live States¹

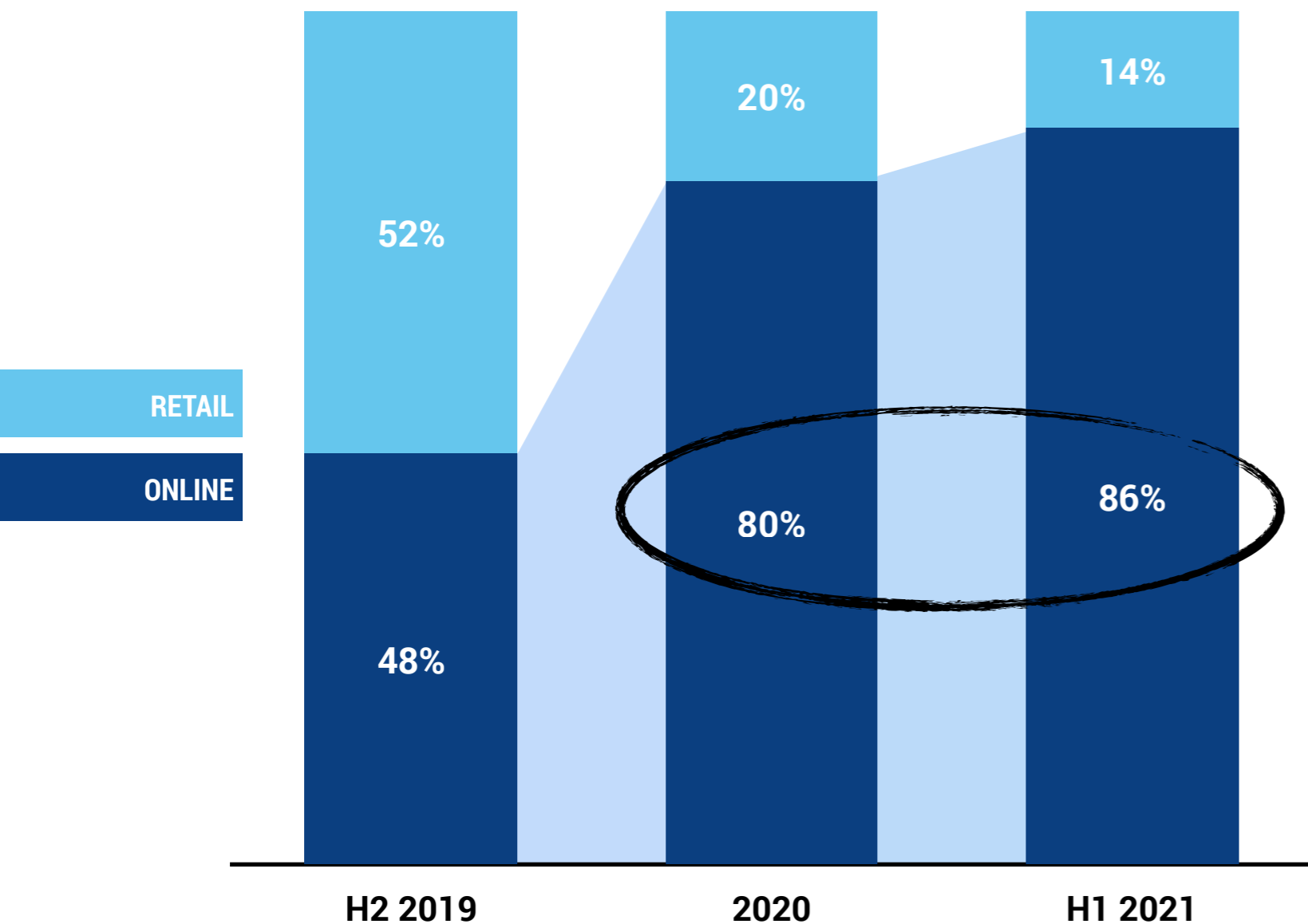
TOTAL SPORTS BETTING WAGERS BY MONTH, U.S., AUG. 2019-JUNE 2021, BILLIONS USD



Note: Sports betting excludes fantasy sports. 1. "Live states" are defined as states in which sports betting is legal and currently operational as of Sept. 2021. Includes Washington, D.C. as a state. 2. Online sports betting is legal and live, but permitted only within the physical boundaries of a retail-licensed sports betting operator (e.g. sports venues, casinos, hotels, restaurants). 3. Retail sports betting is legal in VA, but not live. 4. Online sports betting is legal in CT, LA, and NY, but not live. Sources: Activate analysis, Legal Sports Report, State regulator sites

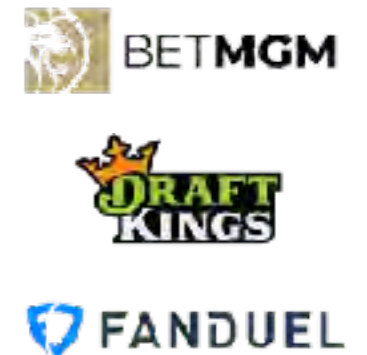
The pandemic has accelerated the shift to online sports betting

TOTAL SPORTS BETTING WAGERS BY CHANNEL¹, U.S., H2 2019-H1 2021, % TOTAL DOLLARS WAGERED

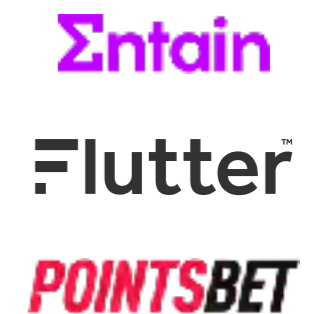


DRIVERS OF ONLINE SPORTS BETTING GROWTH

The majority of regulated and regulating states have more licenses (i.e. "skins") for the online channel compared to retail, enabling several U.S.-based brands to grow even in states where they do not have retail presence



Global sports betting brands are successfully entering the U.S. online sports betting market, either individually or through partnerships with U.S. entities to develop more advantaged offerings



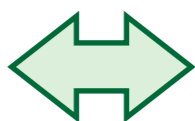
Betting operators are forging partnerships with and pursuing investments in media and content to gain relevance and brand awareness, while technology innovators are also entering the space

SELECT RECENT PARTNERSHIPS, ACQUISITIONS, AND INVESTMENTS AND NOTABLE SPORTS BETTING TECHNOLOGY COMPANIES

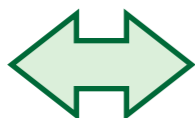
PARTNERSHIPS, ACQUISITIONS, AND INVESTMENTS



DraftKings acquired VSiN to build out its content capabilities; VSiN produces and distributes up to 18 hours of live linear sports betting content daily



SportsGrid integrated FanDuel odds and data in original branded and non-branded shows and collaborated on 50+ hours of original content



NBA TV created a weekly show that integrates betting-focused content from BetMGM across NBA.com, the NBA app, and social platforms



Penn National Gaming invested in Barstool Sports to drive customer acquisition – in 2023 Penn will pay an additional \$62M to increase their stake to 50%



Bally's leveraged SportCaller's expertise as a leading global free-to-play games provider to create games that introduce customers to real-money offerings

Partnership Acquisition/Investment

NEW TECHNOLOGY STARTUPS



B2B provider of sports betting and casino gaming products, now developing consumer-facing sports betting brand



Interactive content and games company centered around betting education, sports fans, and the athlete perspective



Real-time live odds aggregator allowing bettors to access odds and place bets by taking a picture of live game on phone



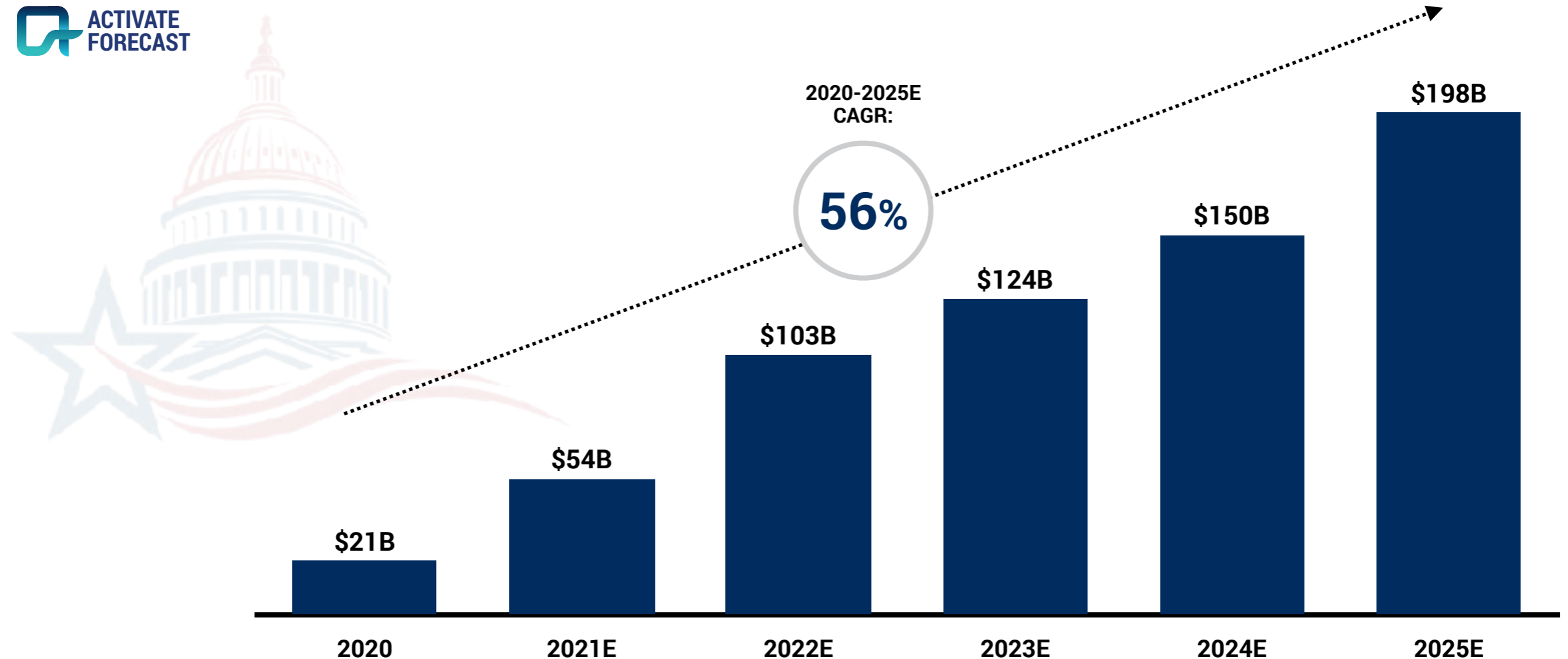
Nation's first and only 24-hour sports betting and fantasy sports network featuring statistics and expert analysis



Dynamic sports betting and trading exchange modeled after financial markets

We forecast that the total sports betting amount wagered will reach nearly \$200B by 2025 as sports betting becomes legal in a growing number of states

TOTAL SPORTS BETTING AMOUNT WAGERED, U.S., 2020-2025E, BILLIONS USD



NUMBER OF STATES WITH LEGAL SPORTS BETTING¹:

20

29

35

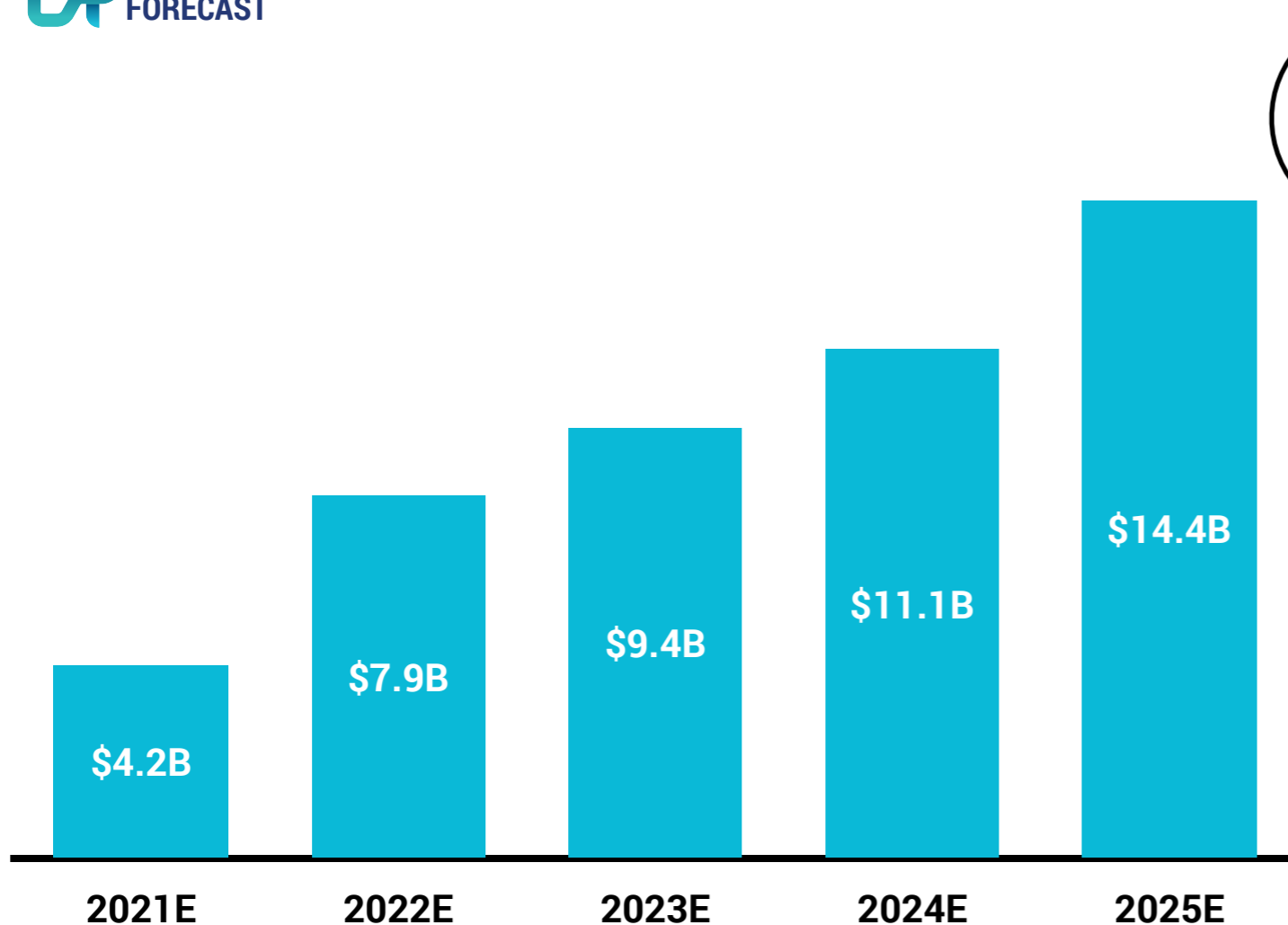
37

41

43

We expect that U.S. sports betting revenues will reach \$14B by 2025

DIRECT SPORTS BETTING REVENUE¹, U.S., 2021E-2025E, BILLIONS USD



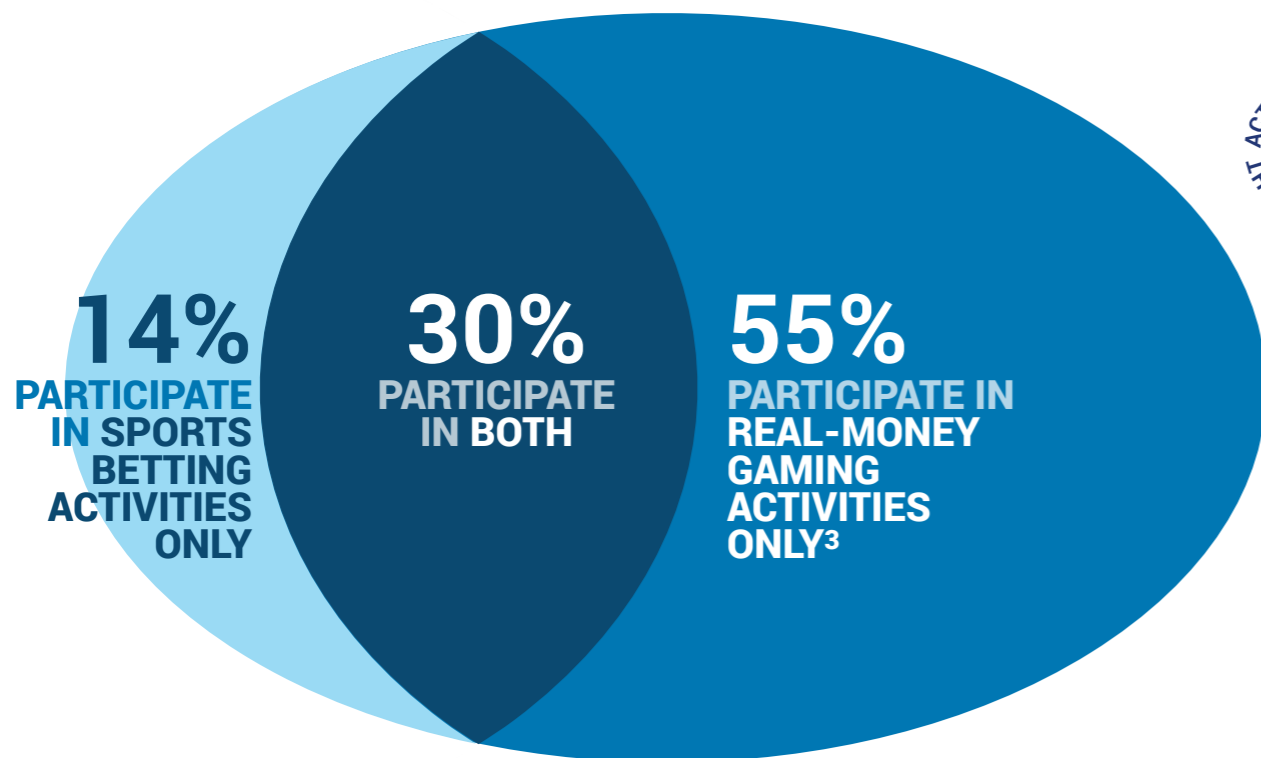
DIRECT SPORTS BETTING REVENUE GOES TO:	
ONLINE SPORTSBOOKS	
CASINOS/RACETRACKS	
STATES ²	

1. Direct sports betting revenue is determined as a share of the total amount wagered and depends on odds, type of wager, and individual sportsbooks. The betting provider's take rate ranges as a % of total amount wagered. 2. State tax income is generated as a share of the total amount wagered, a share of gross gaming revenue (ranges depending on the state and type of betting), and by gaming licensing fees.

Sources: Activate analysis, Eilers & Krejcik Gaming, Legal Sports Report, The Lines, Nevada Gaming Control Board, U.S. Bureau of Economic Analysis

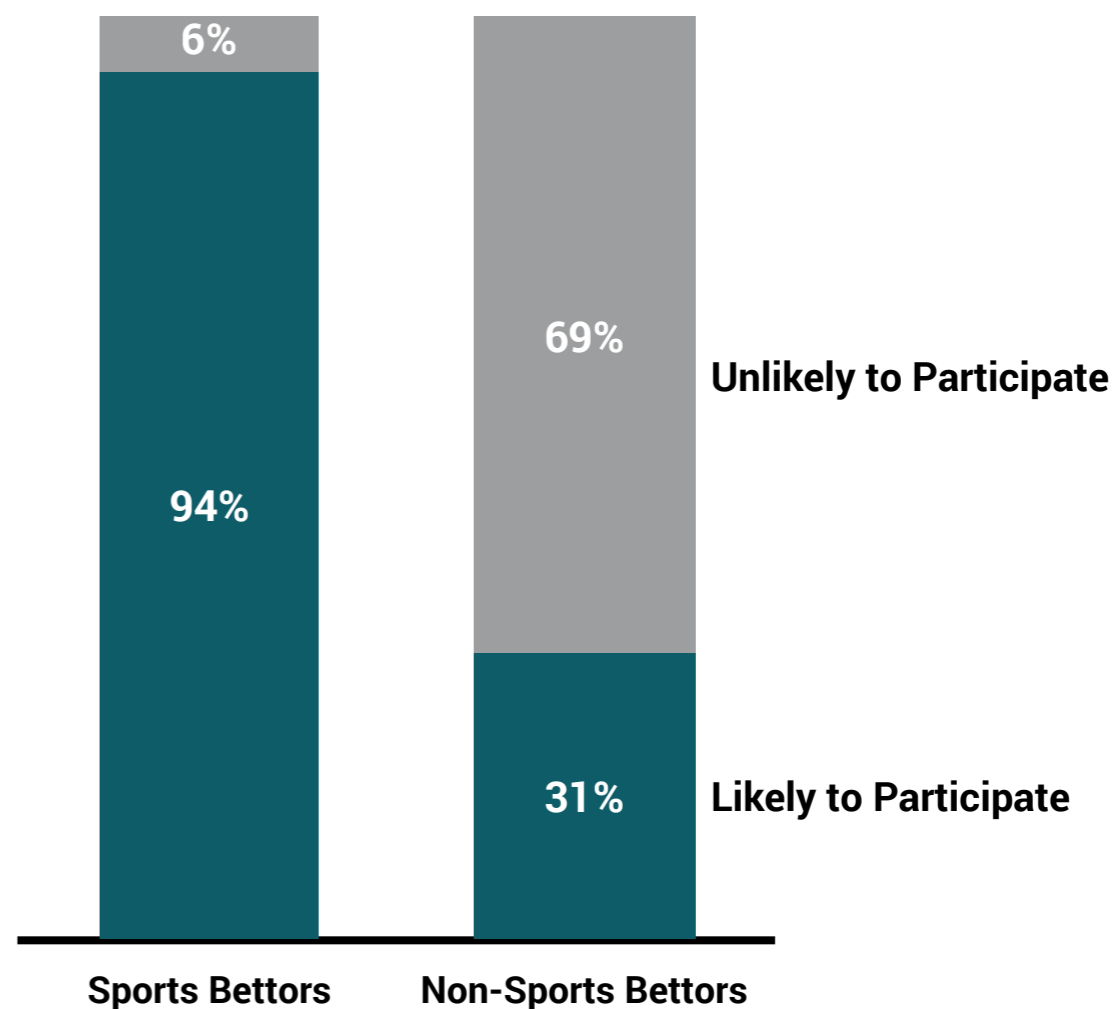
The same people who are betting on sports are also participating in other types of online gaming activities

OVERLAP BETWEEN SPORTS BETTORS AND REAL-MONEY GAMERS¹, U.S., 2021, % SPORTS BETTORS / REAL-MONEY GAMERS²



100% = 76.7 MILLION SPORTS BETTORS / REAL-MONEY GAMERS²

LIKELIHOOD OF PARTICIPATING IN IGAMING⁴, U.S., 2021, % ADULTS AGED 18+ WHO DO NOT CURRENTLY PARTICIPATE IN REAL-MONEY GAMING ACTIVITIES³ BY SPORTS BETTING STATUS



1. Figures do not sum to 100% due to rounding. 2. "Sports bettors and/or real-money gamers" are adults aged 18+ who have participated in at least one betting or real-money gaming activity (betting on sports, esports, or virtual sports or playing casino table games, bingo, poker, or slots with real money) in-person or online in the last 12 months. 3. Includes both in-person and online real-money gaming activities (casino table games, bingo, poker, or slots). 4. Online real-money gaming activities only (online casino table games, bingo, poker, or slots).

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), U.S. Census Bureau

Despite legalization in only 6 states as of July 2021 (vs. 17 for online sports betting), iGaming has already attracted 4x the amount wagered on sports betting

ONLINE SPORTS BETTING VS. IGAMING¹ TOTAL GROSS REVENUE AND WAGERS, U.S., YTD JULY 2021, BILLIONS USD

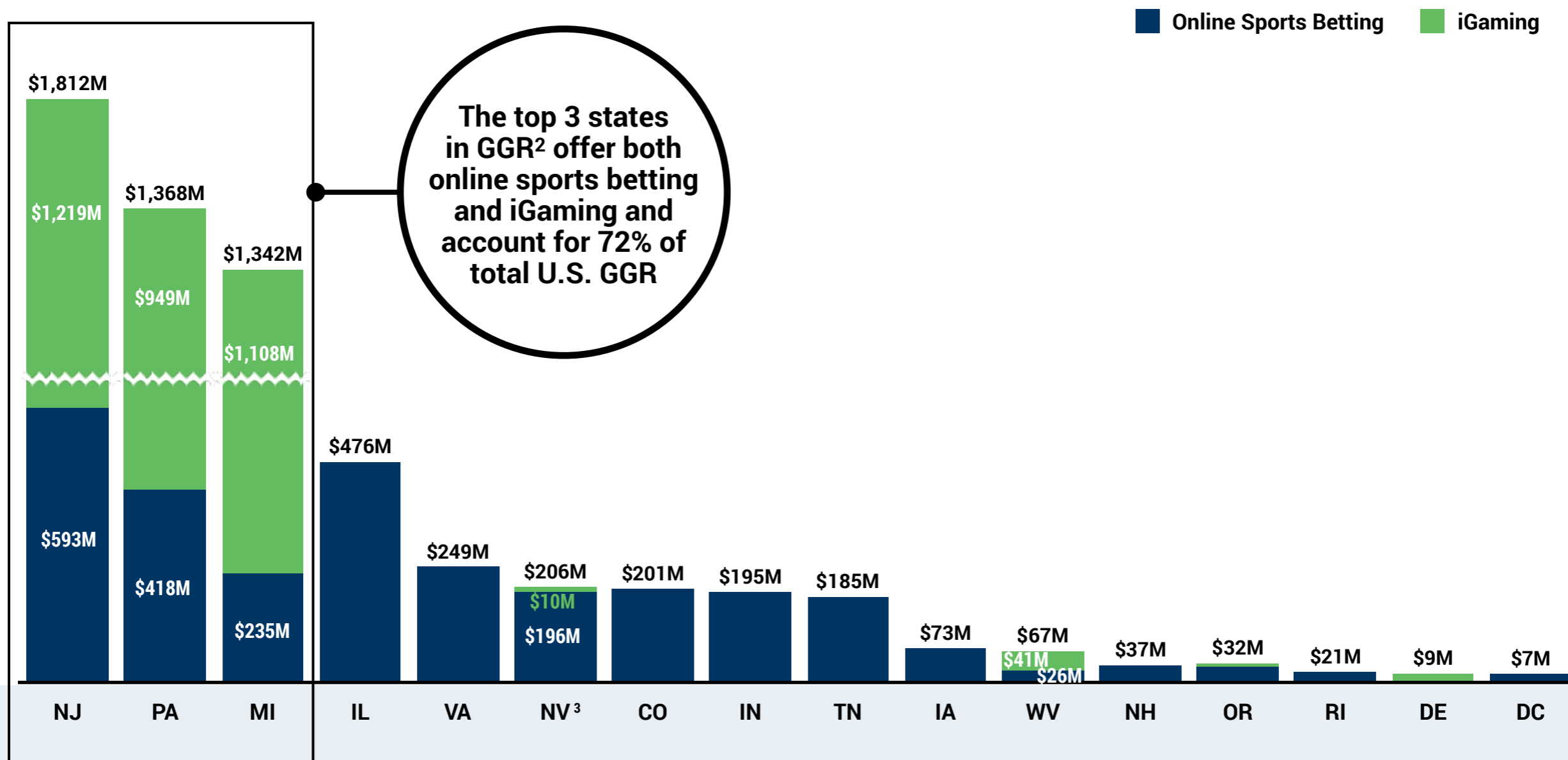


1. "iGaming" is defined as playing casino table games, bingo, poker, or slots online with real money. 2. Includes two states (MS, MT) where online sports betting is legal and live, but only within retail-licensed premises. Four states (AZ, WA, WY, SD) have launched online sports betting since July 2021. WA and SD are legal and live only within retail-licensed premises. 3. Total dollars wagered less customer winnings.

Sources: Activate analysis, Legal Sports Report, State regulator sites

States that have legalized both sports betting and iGaming are leading in gross gaming revenue

ONLINE SPORTS BETTING AND IGAMING GROSS REVENUE¹ BY STATE², U.S., AUG. 2020-JULY 2021, MILLIONS USD



1. Total dollars wagered less customer winnings. Median of monthly non-zero revenues between August 2020 and July 2021 annualized. "iGaming" is defined as playing casino table games, bingo, poker, or slots online with real money. 2. Includes states where online sports betting and/or iGaming was legal and live for at least one month during the period of August 2020 to July 2021. Figures do not sum due to rounding. 3. Poker is the only iGaming sub-product legal and live in Nevada. Sources: Activate analysis, State regulator sites

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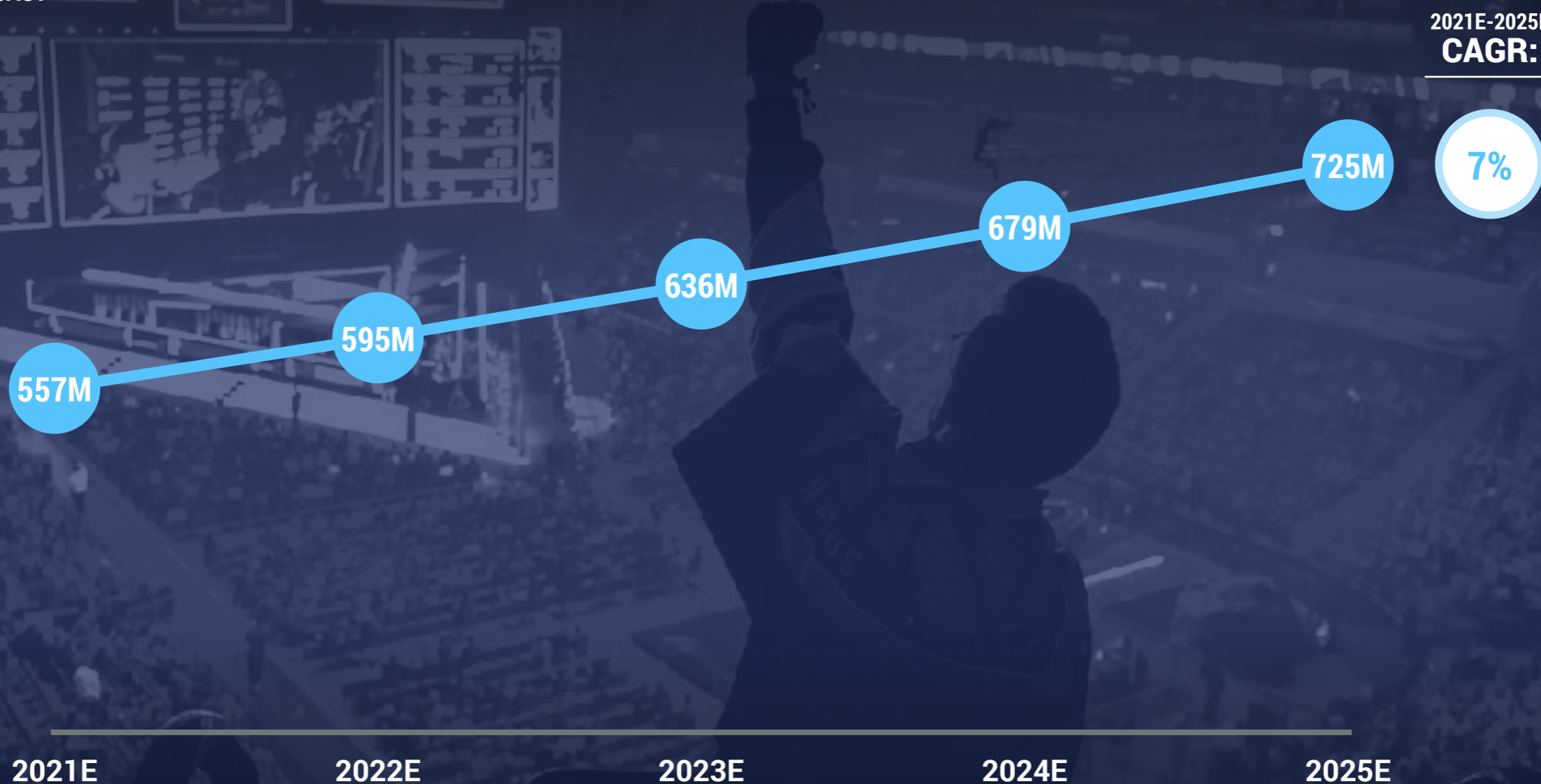
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The global esports audience will grow to surpass 700 million viewers by 2025

ESPORTS VIEWERSHIP, GLOBAL, 2021E-2025E, MILLIONS ESPORTS VIEWERS

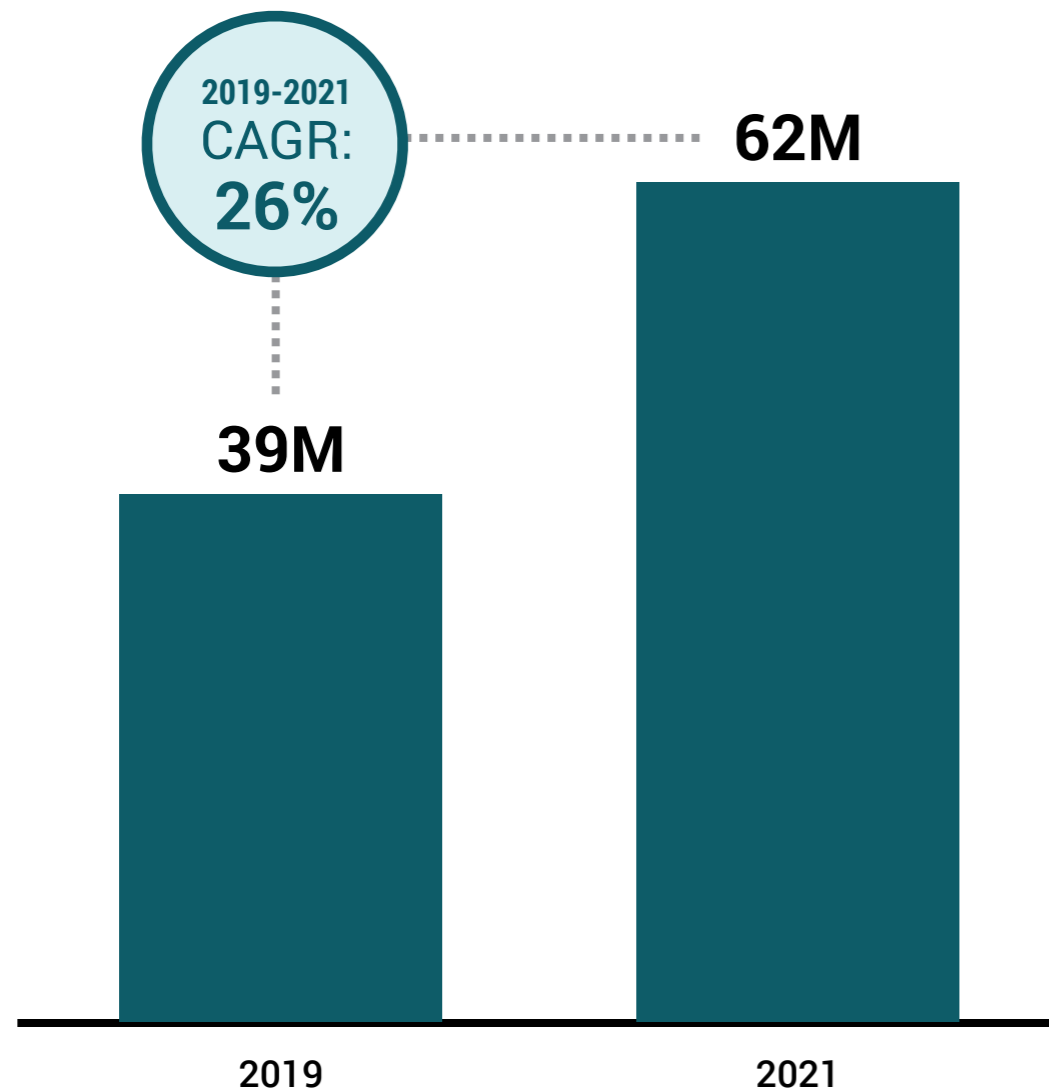


GLOBAL
ESPORTS
AUDIENCE

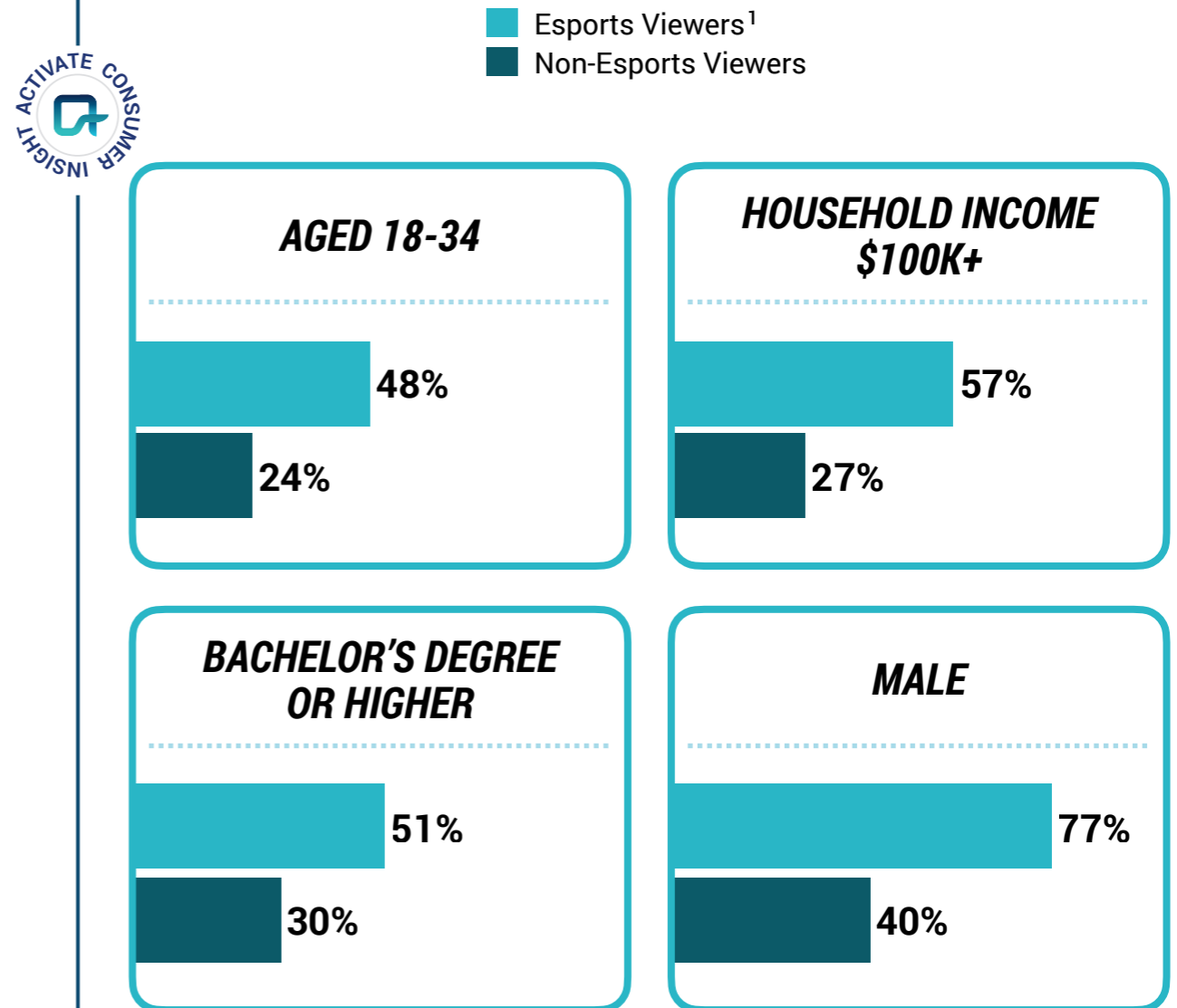


In the U.S., esports viewership has grown to over 60M; the core demographic of U.S. esports viewers is young, affluent, educated, and male

ESPORTS VIEWERSHIP, U.S., 2019-2021, MILLIONS ESPORTS VIEWERS¹



DEMOGRAPHICS BY ESPORTS VIEWERSHIP, U.S., 2021, % ESPORTS VIEWERS VS. NON-ESPORTS VIEWERS¹

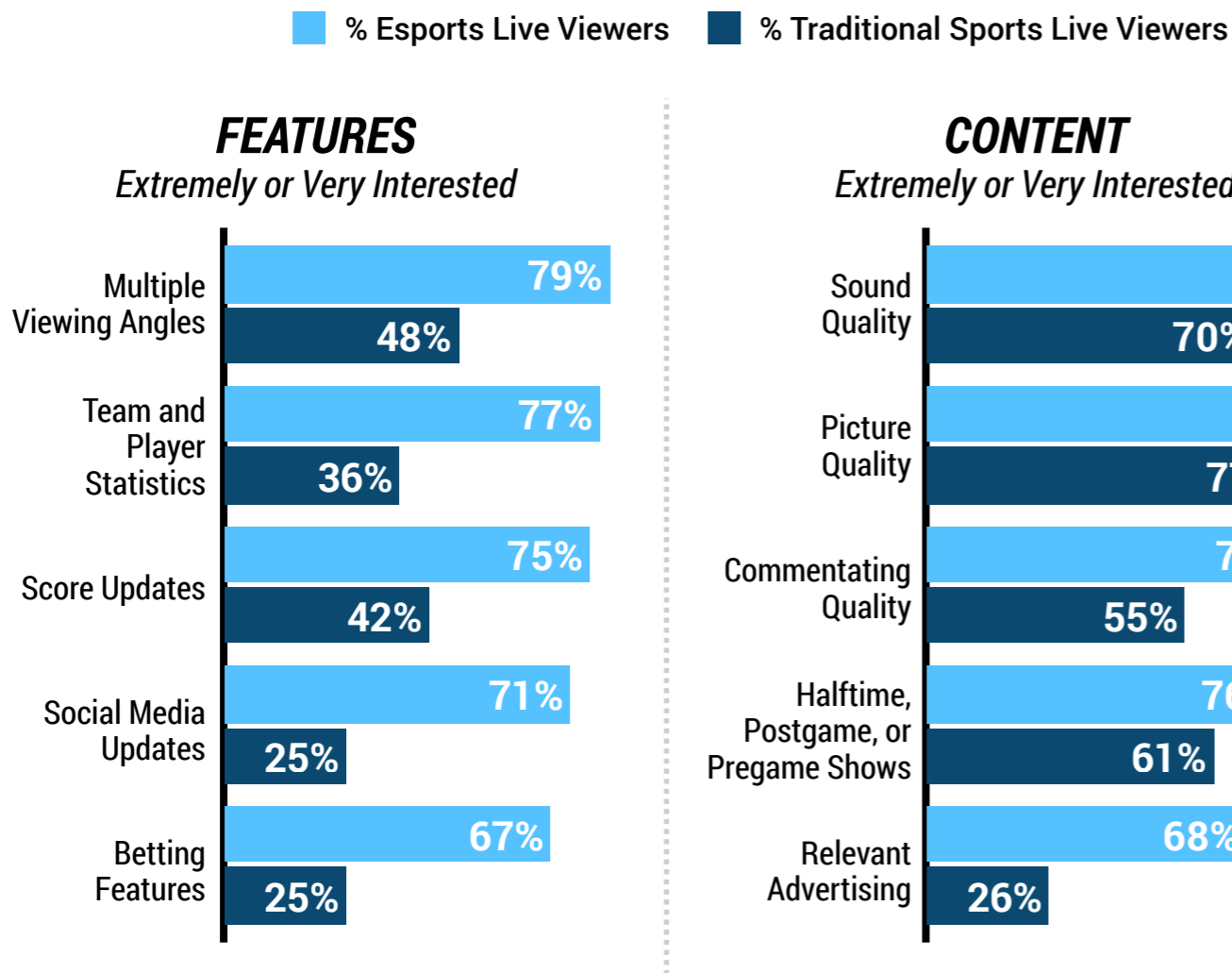


1. "Esports viewers" (2021) are defined as adults aged 18+ who have watched an esports competition in the last 12 months. "Esports viewers" (2019-2020) are defined as adults aged 18+ who have watched an esports competition at any point in time.
 Sources: Activate analysis, Activate 2019 Consumer Technology & Media Research Study (n = 4,006), Activate 2020 Consumer Technology & Media Research Study (n = 4,003), Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

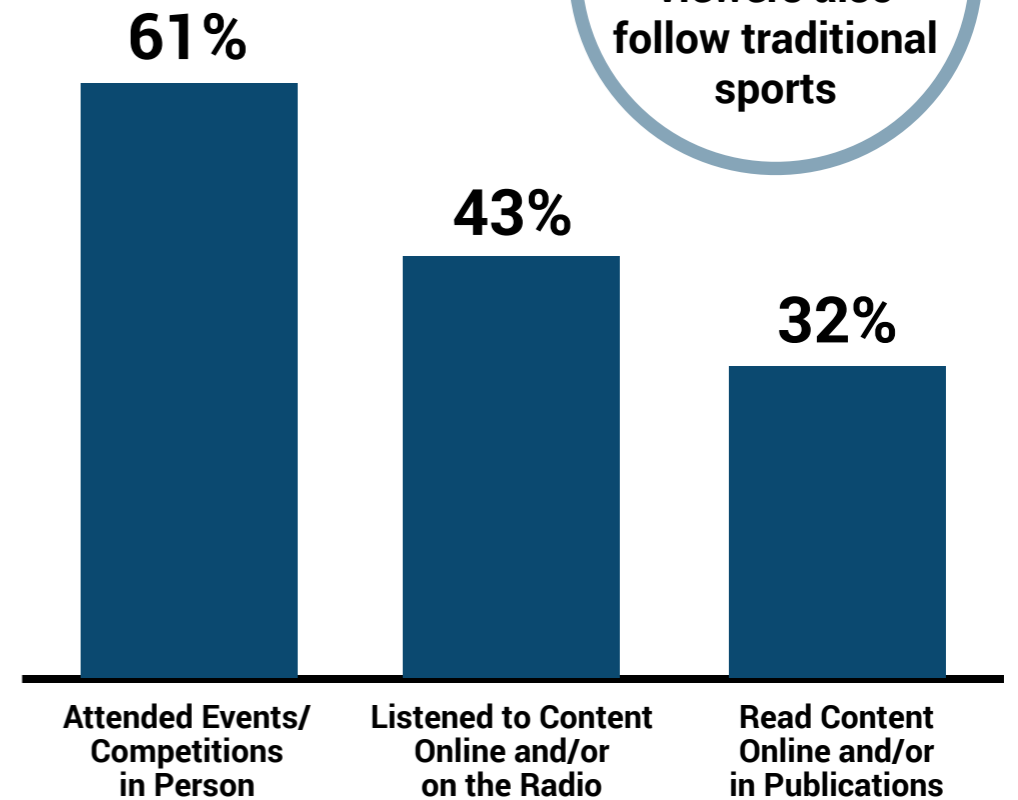
Esports viewers pursue feature- and content-rich viewing experiences; they also attend events and follow the sport through audio and online publications

INTEREST IN LIVE VIEWING FEATURES AND CONTENT WHILE WATCHING LIVE ESPORTS / TRADITIONAL SPORTS, U.S., 2021, % ESPORTS / TRADITIONAL SPORTS LIVE VIEWERS¹

ENGAGEMENT WITH TYPES OF ESPORTS CONTENT IN THE LAST 12 MONTHS, U.S., 2021, % ESPORTS VIEWERS²



94%
of Esports viewers also follow traditional sports



1. "Live viewers" are defined as adults aged 18+ who have watched a live esports or traditional sports competition in the last 12 months (excluding attending an event live). 2. "Esports viewers" are defined as adults aged 18+ who have watched an esports competition in the last 12 months.

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

The most-watched esports titles include both established franchises and relatively recent entrants; esports presents an opportunity for new titles with fresh and compelling content to capture audiences



TOP ESPORTS¹ TITLES BY TOTAL HOURS WATCHED ON TWITCH, GLOBAL, 2020, BILLIONS HOURS

LEAGUE OF LEGENDS 1.55B FRANCHISE FIRST PUBLISHED 2009

FORTNITE 1.07B FRANCHISE FIRST PUBLISHED 2017

VALORANT 0.81B FRANCHISE FIRST PUBLISHED 2020

CALL OF DUTY: WARZONE 0.81B FRANCHISE FIRST PUBLISHED 2003

COUNTERSTRIKE GLOBAL OFFENSIVE 0.71B FRANCHISE FIRST PUBLISHED 2000

DOTA 2 0.50B FRANCHISE FIRST PUBLISHED 2003

APEX LEGENDS 0.32B FRANCHISE FIRST PUBLISHED 2019

HEARTHSTONE 0.28B FRANCHISE FIRST PUBLISHED 2014

FIFA 20 0.18B FRANCHISE FIRST PUBLISHED 1993

OVERWATCH 0.17B FRANCHISE FIRST PUBLISHED 2016

PUBG: BATTLEGROUNDS 0.16B FRANCHISE FIRST PUBLISHED 2017

TOM CLANCY'S RAINBOW SIX SIEGE 0.15B FRANCHISE FIRST PUBLISHED 1998

There will be considerable investment in the esports space by traditional sports leagues and teams, as well as other companies

TRADITIONAL SPORTS

— LEAGUES & TOURNAMENTS —

NBA-OWNED LEAGUE¹



FORMULA 1-OWNED LEAGUE



FIFA-OPERATED TOURNAMENT



TEAMS

GOLDEN STATE WARRIORS-OWNED TEAM



GALATASARAY OWNED TEAM



PSG²-OWNED ESPORTS ORGANIZATION³

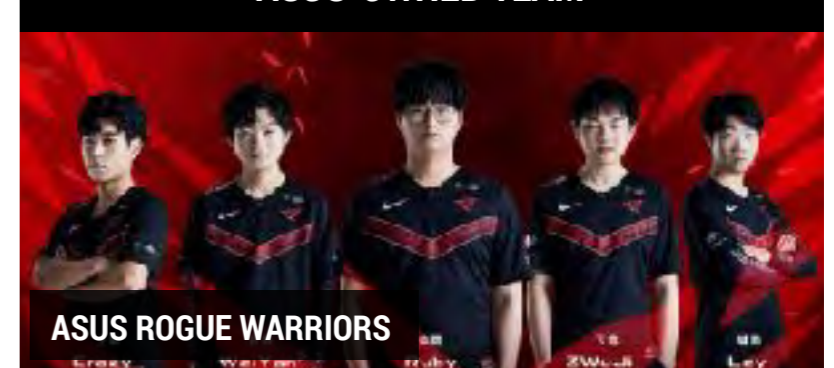


OTHER COMPANIES

SK TELECOM AND COMCAST SPECTATOR-OWNED ESPORTS ORGANIZATION⁴



ASUS-OWNED TEAM



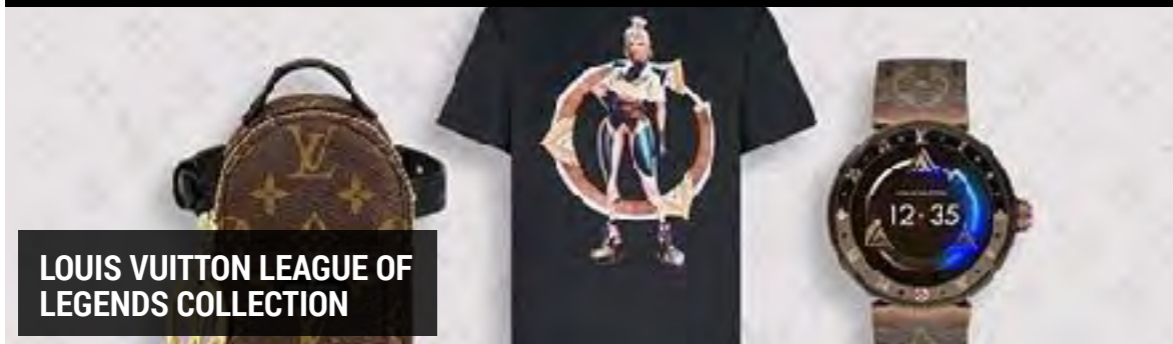
NETEASE-OWNED TEAM



A broad set of consumer brands will partner with esports companies for collaborations, sponsorships, and new products

BEAUTY & FASHION

LOUIS VUITTON-BRANDED PRODUCT



GUCCI-BRANDED PRODUCT



NYX-SPONSORED ESPORTS ORGANIZATION¹



CONSUMER GOODS

BUD LIGHT-OPERATED TOURNAMENT



DORITOS-SPONSORED TOURNAMENT



MOUNTAIN DEW ESPORTS-THEMED PRODUCT



Platforms offering wagers and competitions for popular esports titles, along with integrations within casual gaming titles, have further engaged and monetized the captive esports audience, garnering the interest of major gambling operators

TRENDS AND DEVELOPMENTS IN ESPORTS BETTING

ESPORTS BETTING PLATFORMS ALLOW AMATEURS TO PLACE WAGERS ON ESPORTS COMPETITIONS

Anyone can place wagers on dedicated esports betting platforms:

- Amateurs can **bet while watching or playing popular esports titles** like Counter-Strike: Global Offensive and Fortnite
- Platforms include **all-in-one esports entertainment offerings** (e.g. providing esportsbooks, publishing betting odds and statistics, integrating with Twitch streams and social feeds)



INTEGRATED BACK-END PROVIDERS CREATE MONETIZATION OPPORTUNITIES WITHIN CASUAL GAMING TITLES

Players can bet on their performance:

- Providers offer back-end infrastructure **directly into casual games** to allow players to buy into gamified wagers
- Players can wager **based on their own achievements or in competition against peers via matchmaking systems**

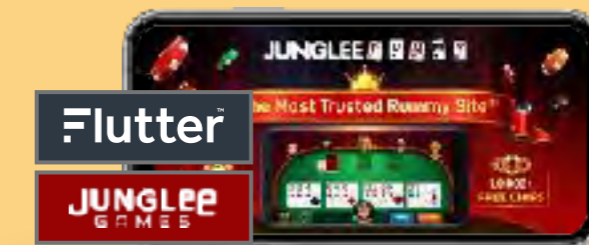


MAJOR GAMBLING COMPANIES WANT TO BE INVOLVED IN THE ESPORTS SPACE

Entain acquired all-inclusive esports betting and skills-based wagering platform Unikrn



Flutter Entertainment acquired a majority stake in Indian rummy operator Junglee Games

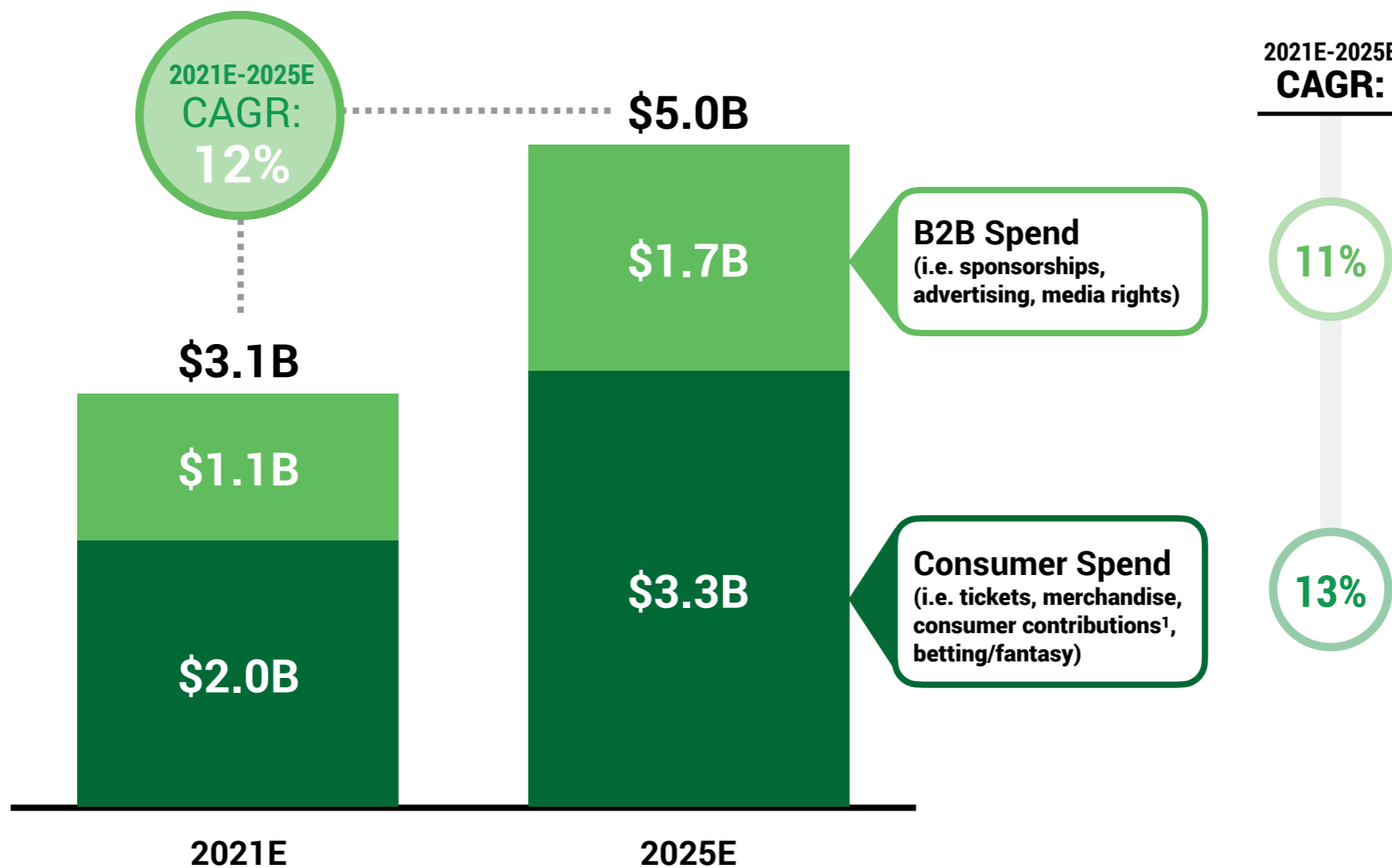


Kambi acquired esports data and technology platform Abios



Esports revenue will grow to \$5B by 2025, with consumer spend as the largest driver of growth

ESPORTS REVENUE BY TYPE, GLOBAL, 2021E VS. 2025E, BILLIONS USD



1. "Consumer contributions" is defined as consumer spend on purchasable items that grant access to tournament and event features and only includes spend towards organized esports events.

Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Newzoo, PricewaterhouseCoopers

The importance of esports goes well beyond its direct financial potential, impacting a broad set of other technology and media experiences

ESPORTS FOLLOWERS¹ VS. NON-ESPORTS FOLLOWERS LIKELIHOOD TO HAVE ENGAGED IN MEDIA BEHAVIORS, U.S., 2021

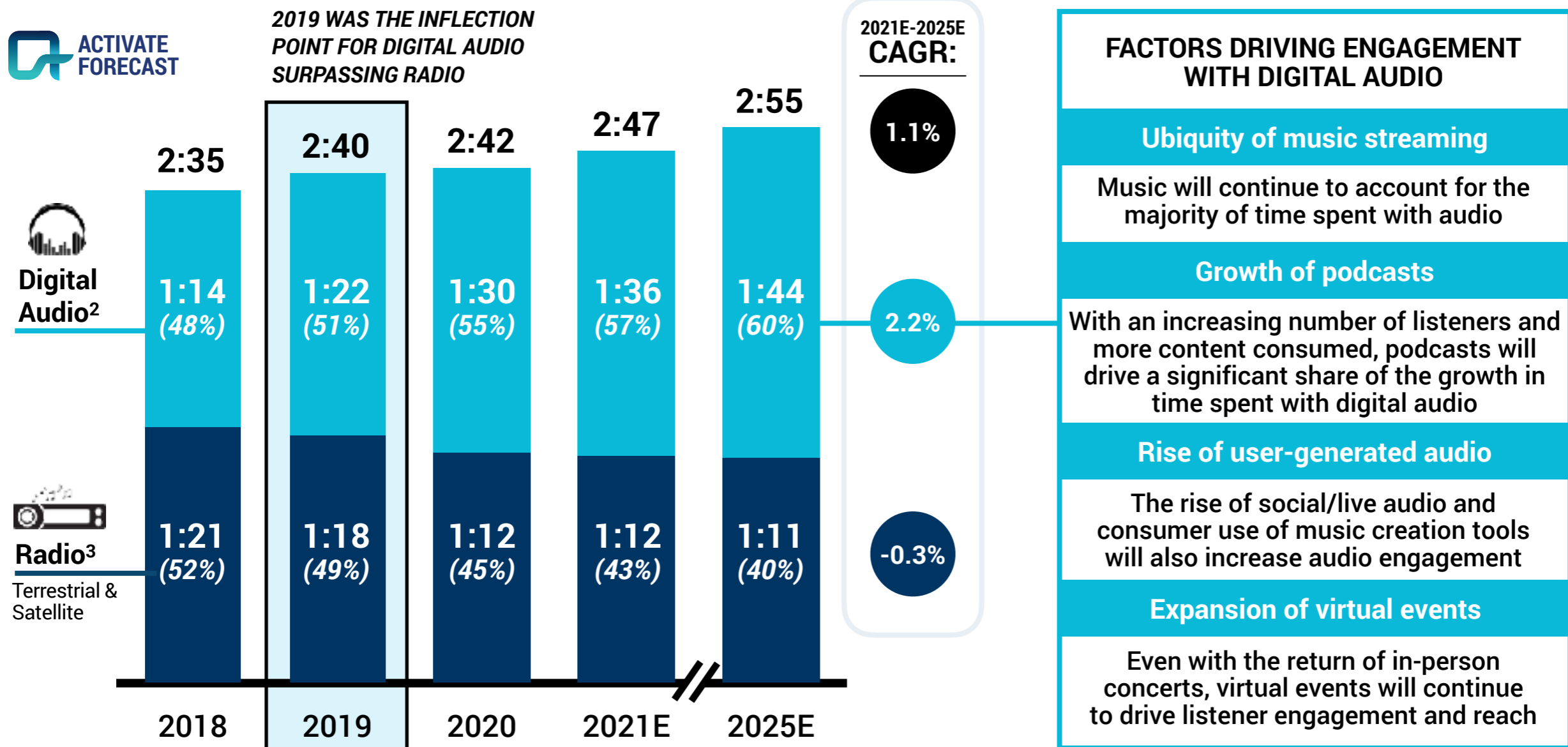


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Audio is one of the fastest growing media behaviors, driven by increased consumer time spent with digital audio

AVERAGE DAILY AUDIO TIME PER ADULT AGED 18+ BY TYPE¹, U.S., 2018-2021E VS. 2025E, HOURS:MINUTES / % TOTAL AUDIO TIME



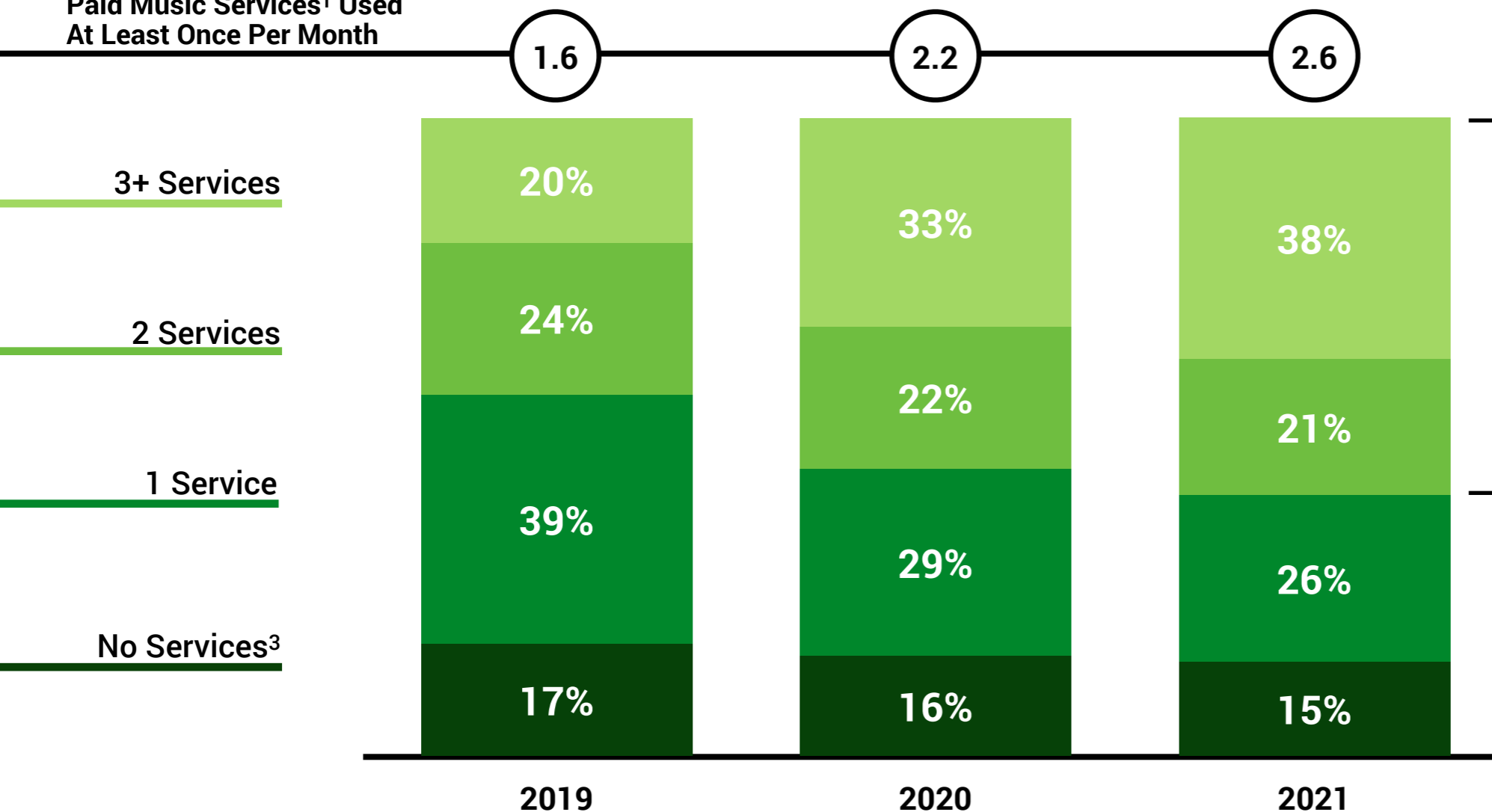
1. Figures do not sum due to rounding. 2. "Digital Audio" includes audio streamed via mobile and desktop/laptop. 3. "Radio" excludes digital radio. Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), AudienceNet, eMarketer, GWI, Nielsen

Music listeners are increasingly using more services to listen to music, with an average of 2.6 services used today



NUMBER OF FREE OR PAID MUSIC SERVICES¹ USED AT LEAST ONCE PER MONTH, U.S., 2019-2021, % MUSIC LISTENERS²

Average Number of Free or Paid Music Services¹ Used At Least Once Per Month



Over half of all music listeners use multiple services to listen to music

1. "Music services" include free and paid services used for listening to music through any format excluding terrestrial radio.
 2. "Music listeners" are defined as adults aged 18+ who spend any time listening to music. 3. "No Services" includes those who do not use music services (e.g. only listen through terrestrial radio, CDs, vinyl).
 Sources: Activate analysis, Activate 2019 Consumer Technology & Media Research Study (n = 4,006), Activate 2020 Consumer Technology & Media Research Study (n = 4,003), Activate 2021 Consumer Technology & Media Research Study (n = 4,018)

Top audio streaming services achieve adoption and usage by offering both free and paid tiers

FREE OR PAID MUSIC SERVICES USED AT LEAST ONCE PER MONTH, U.S., 2021, % MUSIC LISTENERS¹



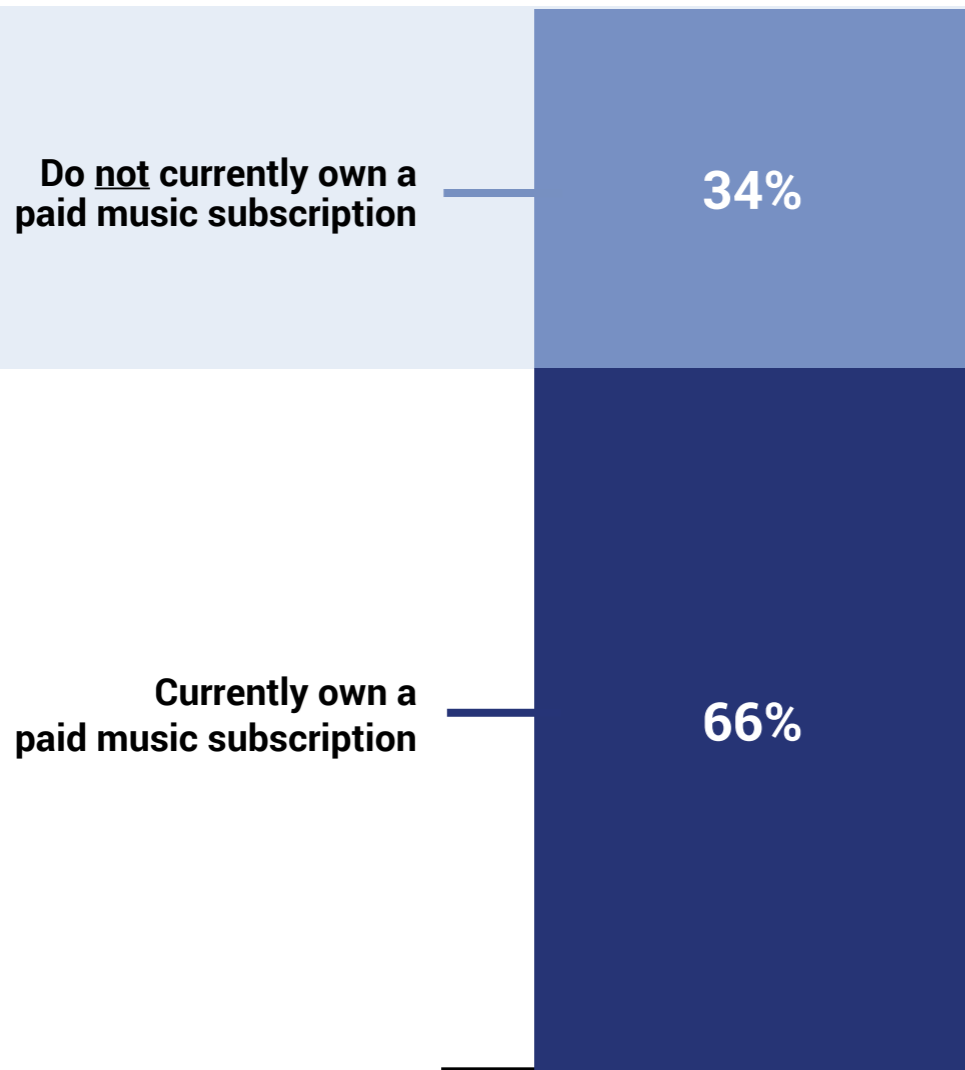
		TIERS AVAILABLE	
		FREE/AD-SUPPORTED	PAID SUBSCRIPTION
YouTube / Music	53%	✓	✓
amazon music ²	38%	✓	✓
Spotify	30%	✓	✓
pandora	25%	✓	✓
MUSIC	19%		✓
SiriusXM	18%		✓
iHeartRADIO	16%	✓	✓
SOUNDCLOUD	12%	✓	✓
Audacy	9%	✓	
TIDAL	7%		✓
TUNE IN	6%	✓	✓
deezer	6%	✓	✓
napster	5%		✓

Apple recently announced its new Apple Music Voice plan, a less expensive subscription tier at \$5 a month for voice control-only access to the service's entire music catalog

Beyond the paid subscriber, a growing battleground in the digital music landscape will be the “Never Payers”: consumers who are interested in music services but not willing to pay

CURRENT PAID MUSIC SUBSCRIPTION OWNERSHIP, U.S., 2021, % MUSIC LISTENERS¹

INTENT TO PAY FOR MUSIC SUBSCRIPTIONS IN THE NEXT 12 MONTHS, U.S., 2021, % MUSIC LISTENERS¹ WHO DO NOT CURRENTLY OWN A PAID MUSIC SUBSCRIPTION

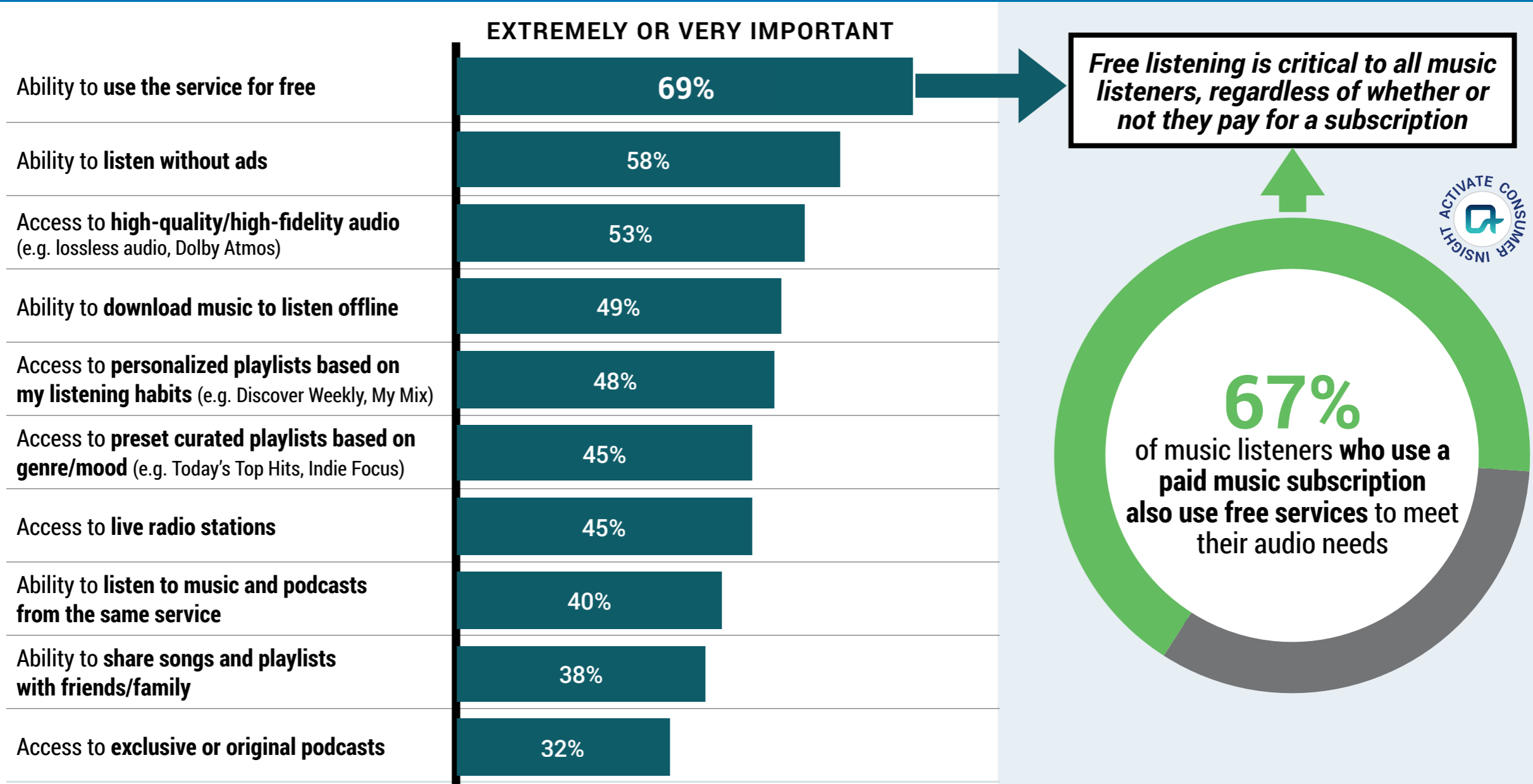


57M music listeners will be **Never Payers²** who are only addressable by free services

1. “Music listeners” are defined as adults aged 18+ who spend any time listening to music. 2. “Never Payers” are defined as music listeners who do not currently own a paid music subscription and who do not intend to pay for a music subscription in the next 12 months.
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), U.S. Census Bureau

Free models hold significant growth potential across all music listeners; even those who pay for a music subscription also use free services

FACTORS THAT ARE IMPORTANT TO CONSUMERS WHEN CHOOSING WHICH MUSIC SERVICE TO USE, U.S., 2021, % MUSIC LISTENERS¹



Companies in the audio space are striving to become comprehensive audio platforms (directly or through partnerships) in order to address the growing set of consumer needs and interests – this trend will shape the rest of the audio ecosystem

OVERVIEW OF THE NEW AUDIO LANDSCAPE

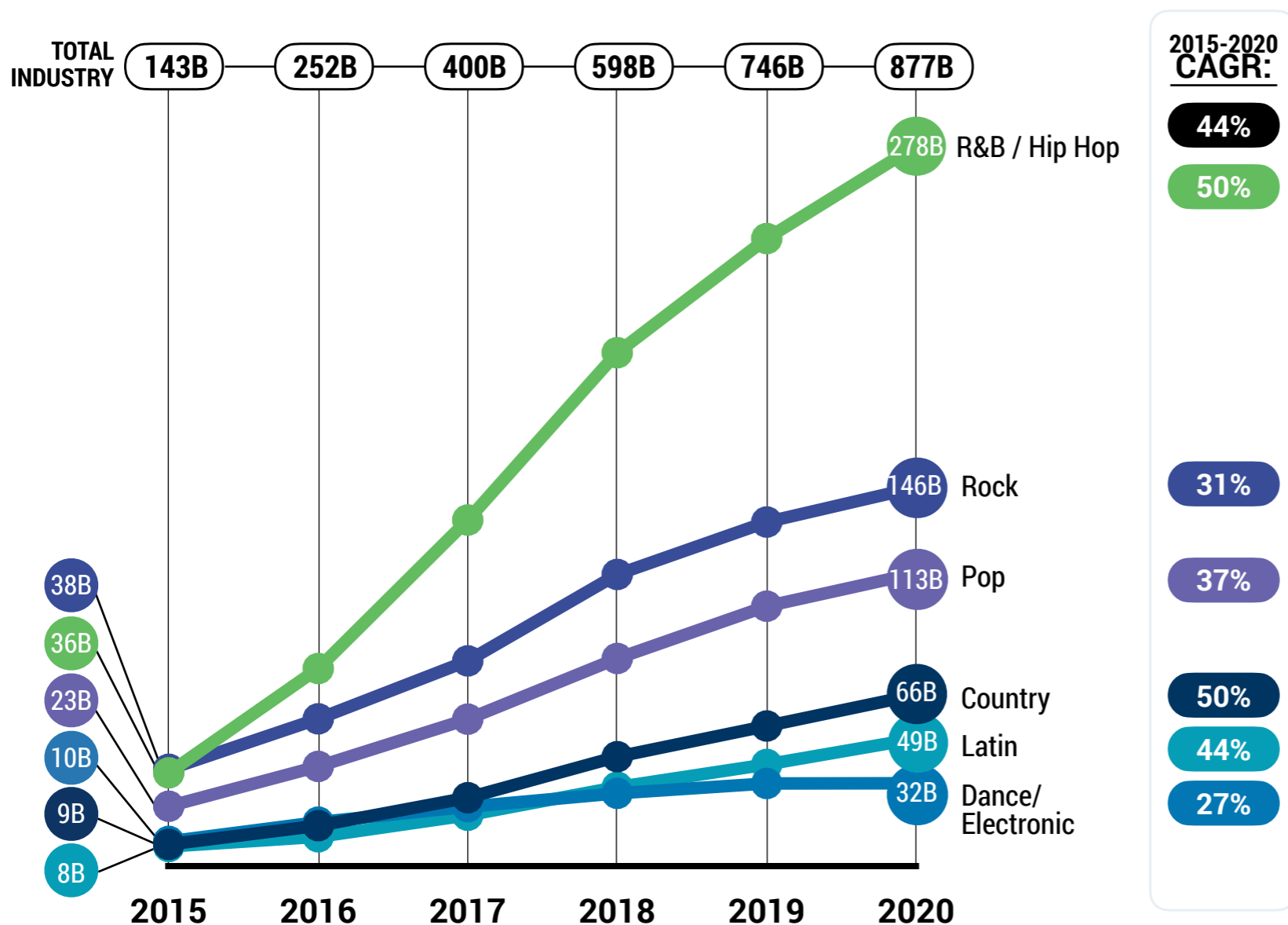


Note: Not exhaustive. Services may not be depicted in every category that is applicable. 1. Includes companies with assets across at least 5 of the 6 listed audio landscape elements. Companies include all subsidiaries (e.g. SiriusXM includes SiriusXM, Pandora, and Stitcher). Sources: Activate analysis, Company sites



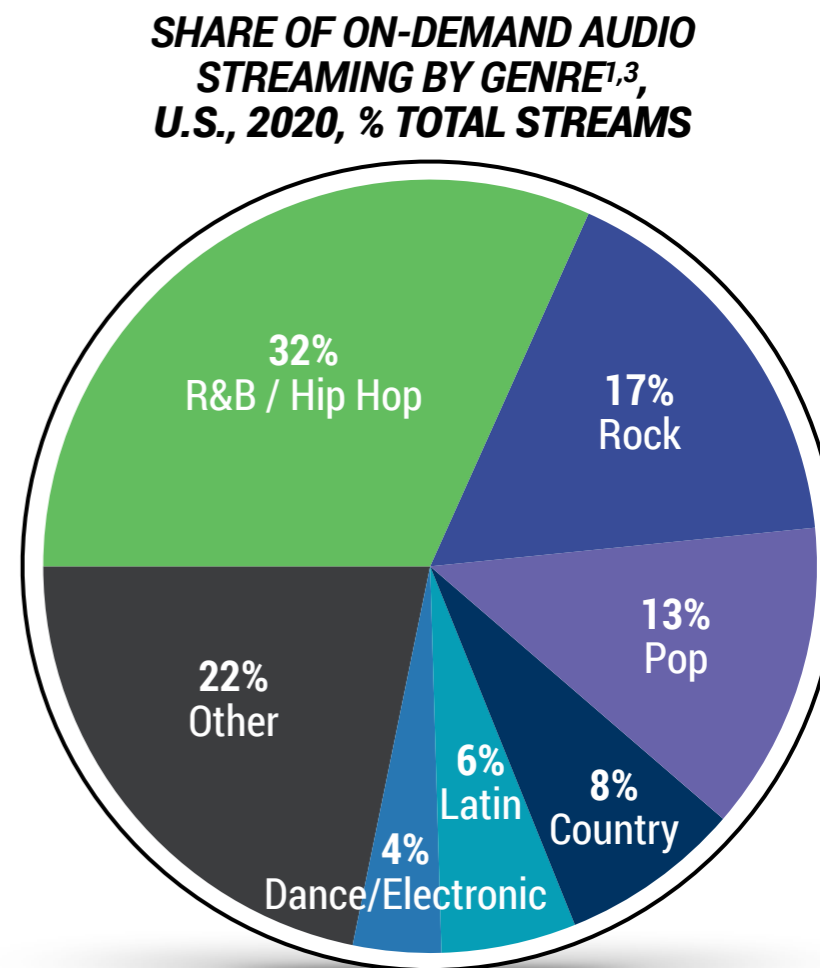
R&B / Hip Hop is the largest and one of the fastest growing genres for on-demand music streaming

ON-DEMAND AUDIO STREAMING BY GENRE^{1,2}, U.S., 2015-2020, BILLIONS STREAMS



2015-2020 CAGR:

- R&B / Hip Hop: 44%
- Rock: 31%
- Pop: 37%
- Country: 50%
- Latin: 44%
- Dance/Electronic: 27%

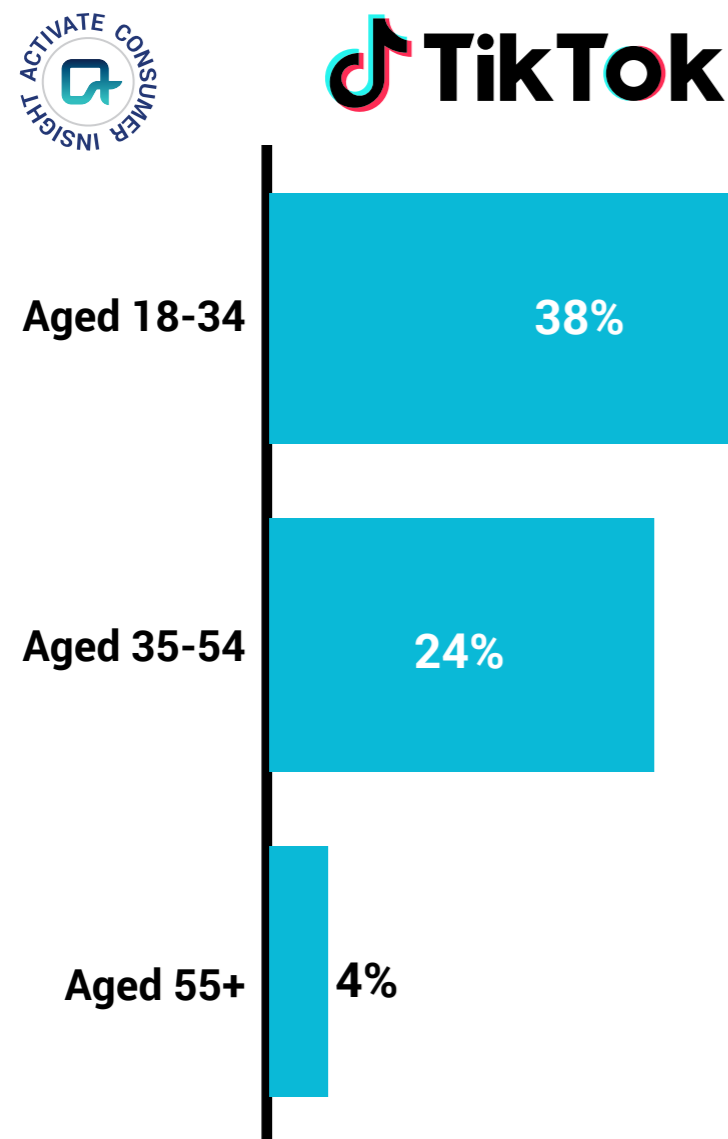


1. On-demand audio streaming activity aggregated across the following platforms: Amazon, Apple, Spotify, YouTube, and many other commercial providers. Song must be played for at least 30 seconds to count as a stream. 2. Streams by genre do not sum to total industry streams due to the exclusion of streams categorized as "Other" genres. 3. Figures do not sum to 100% due to rounding. Sources: Activate analysis, MRC Data



TikTok's impact on the music landscape is profound, driving discovery and virality, particularly among younger users

USAGE OF TIKTOK TO DISCOVER NEW ARTISTS/SONGS IN THE LAST 12 MONTHS BY AGE GROUP, U.S., 2021, % MUSIC LISTENERS¹



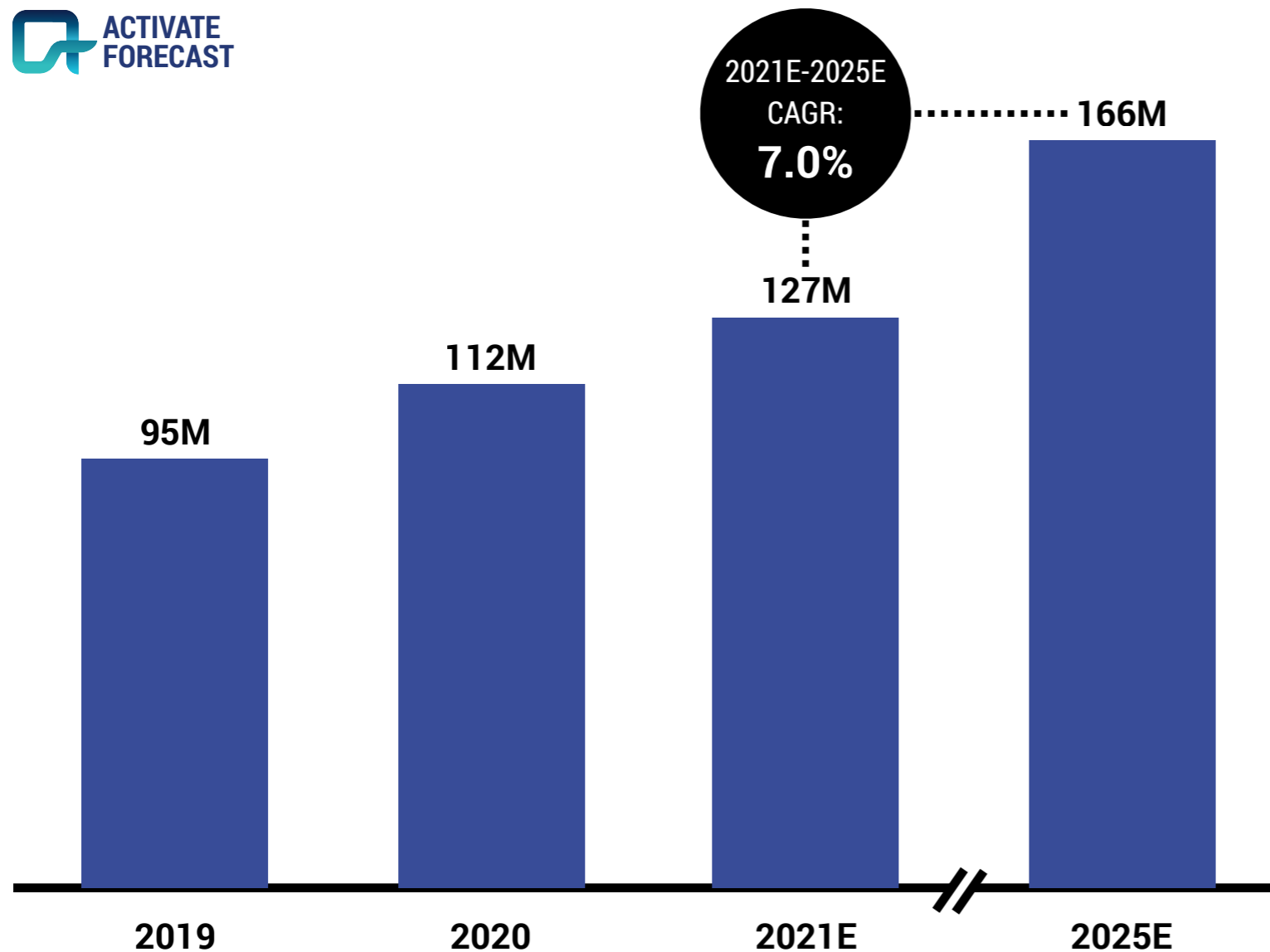
TikTok is well-positioned for music promotion and discovery, often launching new artists/songs to the top of the charts

<p>Astronaut in the Ocean / Masked Wolf</p>	<p>After his song Astronaut in the Ocean went viral on TikTok, Masked Wolf signed a deal with Elektra Records in January 2021 – his re-released single charted at #6 on the Billboard Hot 100</p>
<p>Drivers License / Olivia Rodrigo</p>	<p>Disney star Olivia Rodrigo promoted her song Drivers License via a TikTok that has 62M views – the song charted at #1 and has been streamed more than 1B times</p>
<p>Sunday Best / Surfaces</p>	<p>Surfaces' marketing firm designed viral challenges, hired influencers, and added sound effects to make Sunday Best more "TikTokkable" – the song now appears in more than 20M TikToks and has over 700M streams on Spotify</p>



Podcasts are a core listening behavior for audio platforms to address, with significant user and engagement growth potential

MONTHLY PODCAST LISTENERS, U.S., 2019-2021E VS. 2025E, MILLIONS LISTENERS AGED 12+



DRIVERS OF PODCAST GROWTH

Widespread inclusion of podcasts in music services

Consumers will increasingly use their music services to access podcasts as audio platforms integrate spoken-word content and exclusive podcasts

Growth of podcast-native content and lower barriers to entry for creators

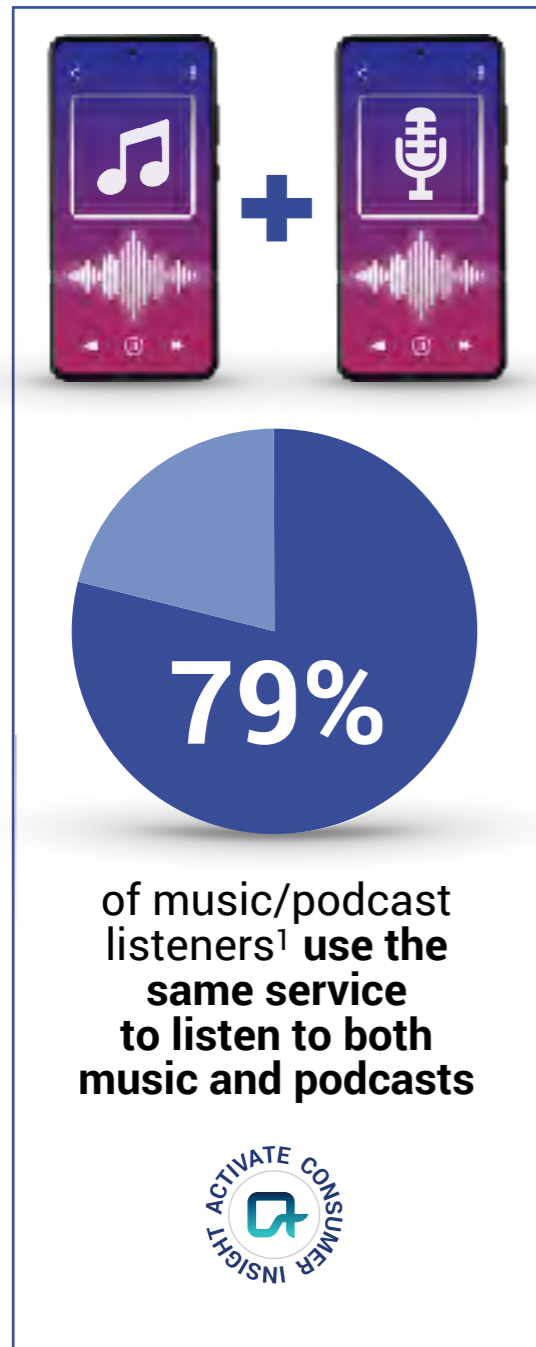
The proliferation of podcast content from all types of creators will draw additional viewers to the audio medium

Connections/integrations with other media formats

Podcasts that tie to other media formats (e.g. as shoulder content) will continue to attract new audiences



As consumers look to have their music and podcast needs served by the same service, major audio platforms are investing in podcast programming to acquire, engage, and retain users



SELECT PODCASTING ACQUISITIONS BY MAJOR AUDIO PLATFORMS	
Audio Platform	Acquisitions
Spotify	Anchor (2019) Gimlet (2019) Parcast (2019) The Ringer (2020) Megaphone (2020) Go92 (2021)
Amazon	Wondery (2020) Art19 (2021)
iHeartMedia INC	Stuff (2018) Voxnest (2020) Triton (2021)
SiriusXM SATELLITE RADIO	Simplecast (2020) Stitcher (2020)
Apple	Scout FM (2020)
Google	dB (2017)

PODCAST STRATEGIES

Spotify EXCLUSIVE CONTENT: Spotify has pursued a notably aggressive content acquisition strategy, signing exclusive deals with well-known creators	BARACK AND MICHELLE OBAMA Multiple podcasts June 2019
Spotify JOE ROGAN "The Joe Rogan Experience" May 2020	KIM KARDASHIAN WEST Podcast on criminal justice June 2020
CALL HER DADDY PODCAST ALEXANDRA COOPER "Call Her Daddy" June 2020	BRENE BROWN Multiple podcasts September 2020
PRINCE HARRY & MEGHAN MARKLE Multiple podcasts December 2020	ARMCHAIR EXPERT DAX SHEPHARD "Armchair Expert" May 2021

SUBSCRIPTION OFFERINGS: Spotify Apple
 Spotify and Apple have recently expanded their offerings to support podcast subscriptions

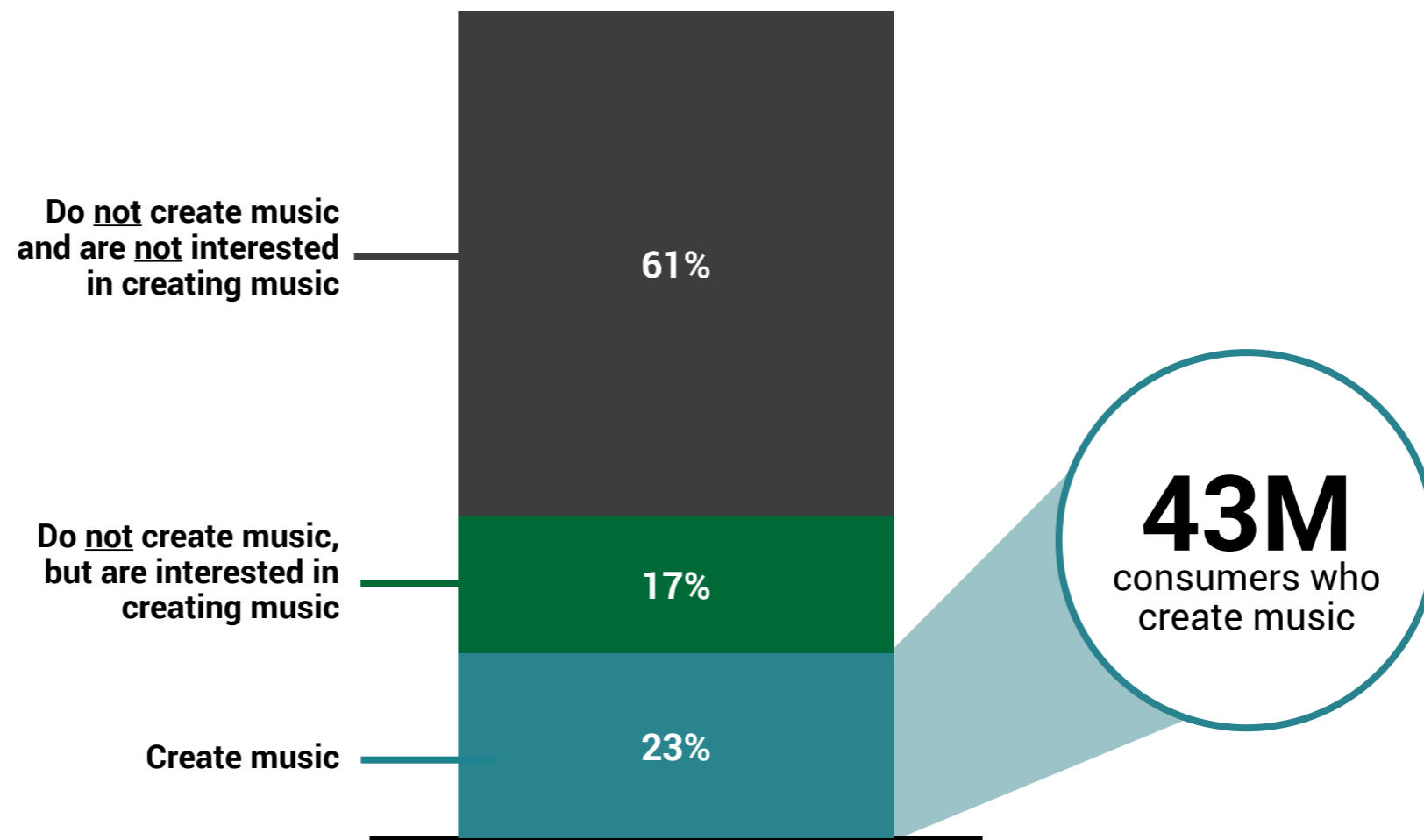
OTHER CONTENT DEALS: Amazon SiriusXM
 Amazon and SiriusXM have acquired non-exclusive content – Amazon made a multi-million dollar deal for the SmartLess podcast in June 2021, and SiriusXM acquired Roman Mars's 99% Invisible podcast in April 2021

1. "Music/podcast listeners" are defined as adults aged 18+ who spend any time listening to both music and podcasts.
 Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Company press releases, Crunchbase, Forbes, TechCrunch, Variety, The Verge, The Wall Street Journal



40% of music listeners create or are interested in creating music

MUSIC CREATION AND INTEREST IN MUSIC CREATION¹,
U.S., 2021, % MUSIC LISTENERS²

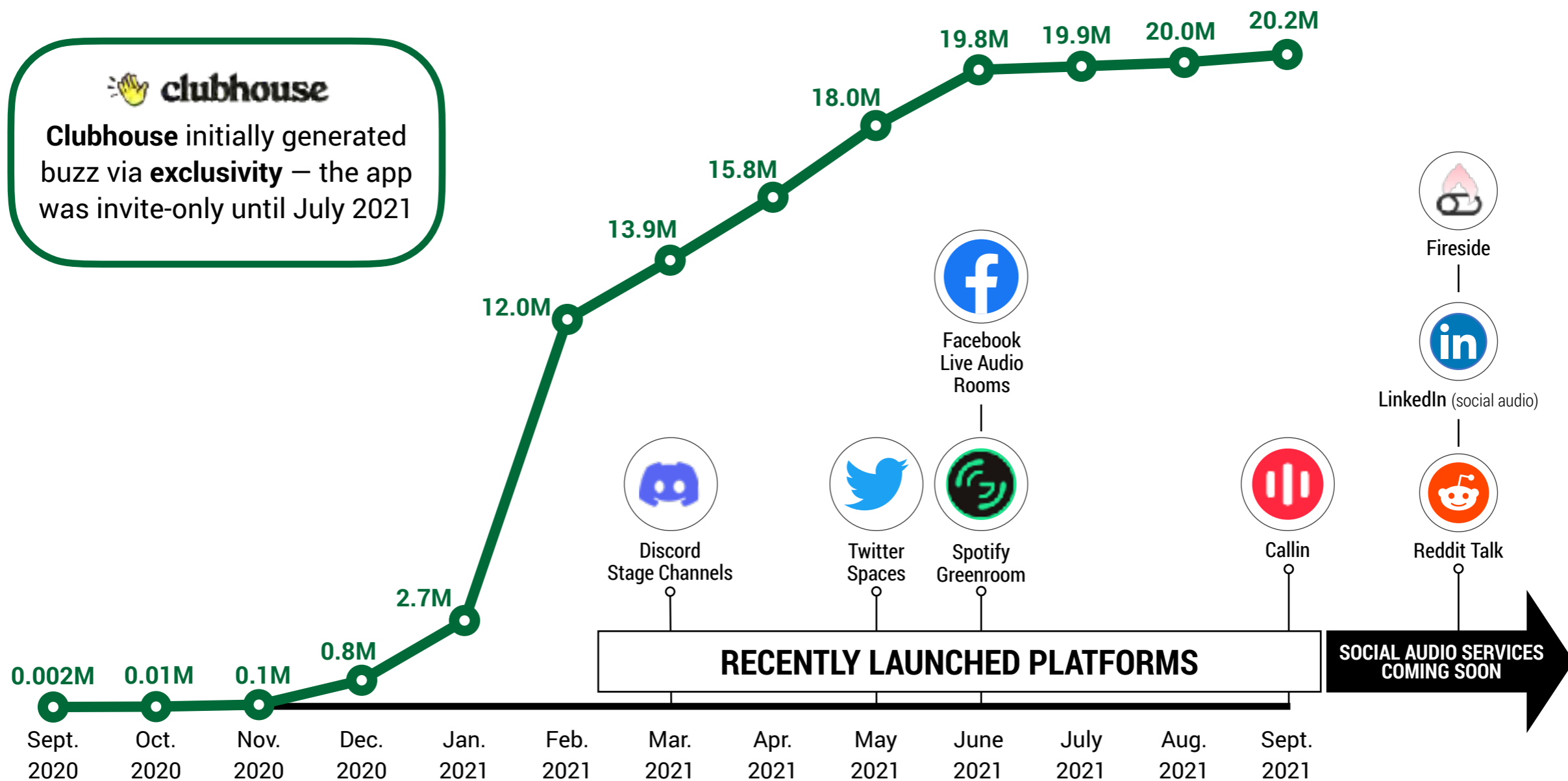


1. Figures do not sum to 100% due to rounding. 2. "Music listeners" are defined as adults aged 18+ who spend any time listening to music.
Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), U.S. Census Bureau



Clubhouse's rapid growth will be the catalyst for the social/live audio phenomenon











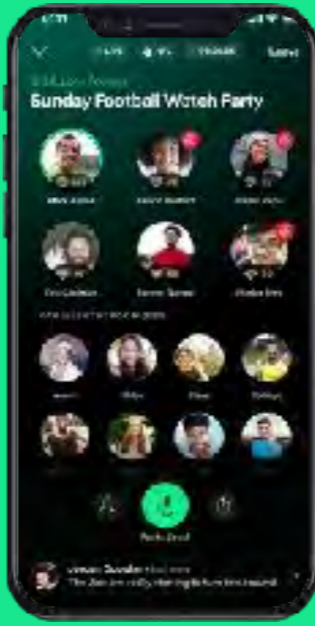

CLUBHOUSE MONTHLY ACTIVE USERS, GLOBAL, SEPT. 2020-SEPT. 2021, MILLIONS MONTHLY ACTIVE USERS





Social/live audio will become a mainstream consumer behavior as social platforms and streaming services follow Clubhouse's lead

SELECT SOCIAL/LIVE AUDIO PLATFORMS

 <p>CLUBHOUSE LAUNCHED APRIL 2020</p>	 <p>DISCORD STAGE CHANNELS LAUNCHED MARCH 2021</p>	 <p>TWITTER SPACES LAUNCHED MAY 2021</p>	 <p>FACEBOOK LIVE AUDIO ROOMS LAUNCHED JUNE 2021</p>	 <p>SPOTIFY GREENROOM LAUNCHED JUNE 2021</p>	 <p>CALLIN LAUNCHED SEPTEMBER 2021</p>
					
<p>As the first major player in the social/live audio landscape, Clubhouse allows users to join live audio rooms based on their interests – the service recently introduced a new feature, “Wave,” to facilitate smaller, closed chats</p>	<p>Discord released their Stage Channels live audio event offering, along with the Stage Discovery event portal, as an additional way to highlight the platform’s interest-based communities</p>	<p>Twitter Spaces offers live audio rooms with features to promote audience engagement (e.g. emoji reactions) as well as to help creators monetize their content (e.g. paid events through Ticketed Spaces)</p>	<p>Facebook launched its Live Audio Rooms to allow select public figures and Groups to host audio events – users can give reactions and send Stars (monetary tips) to creators to engage with the content</p>	<p>Spotify Greenroom leverages the acquisition of Betty Labs (and their live audio service Locker Room) to create a social/live audio offering that also allows users to record their events to distribute as podcasts</p>	<p>Callin’s platform combines social audio and podcasting – in addition to live audio rooms, users are able to record and edit their conversations for release as podcasts</p>



We expect to see new audio integrations and partnerships with video, gaming, connected devices, and more

SELECT AUDIO INTEGRATIONS AND PARTNERSHIPS

STREAMING

Twitch / MUSIC LABELS & DISTRIBUTION SERVICES

Twitch has partnered with various music labels and distribution partners to create **Soundtrack by Twitch**, enabling creators to integrate a library of rights-cleared music into their streams



Twitch / WARNER MUSIC GROUP

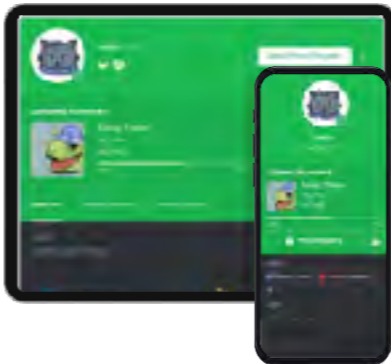
Twitch's recent partnership with Warner Music Group (WMG) will **launch new artist channels and a music-centric WMG space** with professionally-produced content, bringing users new ways to interact with music-related content and **providing artists with a more direct connection to fans**



VIDEO GAMING

Discord / Spotify

Spotify's integration on Discord **promotes music discovery and distribution** by allowing Discord users to connect their Spotify account to **share songs with friends, display what they are listening to, and listen to music together**



VIDEO GAME PUBLISHERS /



Monstercat, an electronic music record label, has leveraged gaming partnerships to drive streams and discovery, with integrations into games such as **Fortnite, Rocket League, Roblox, and Beat Saber**



CONNECTED DEVICES

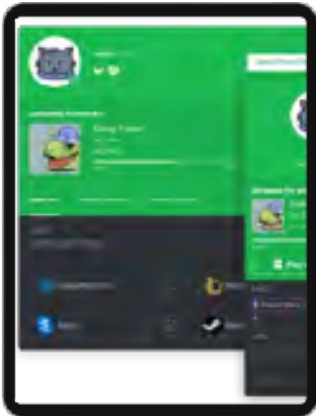
PELOTON / Spotify

Peloton's ongoing partnership with **Spotify** allows users to **take classes set to music from select Spotify playlists** (e.g. "Disney Hits," "Hot Country," "We Everywhere")

PHILIPS / Spotify

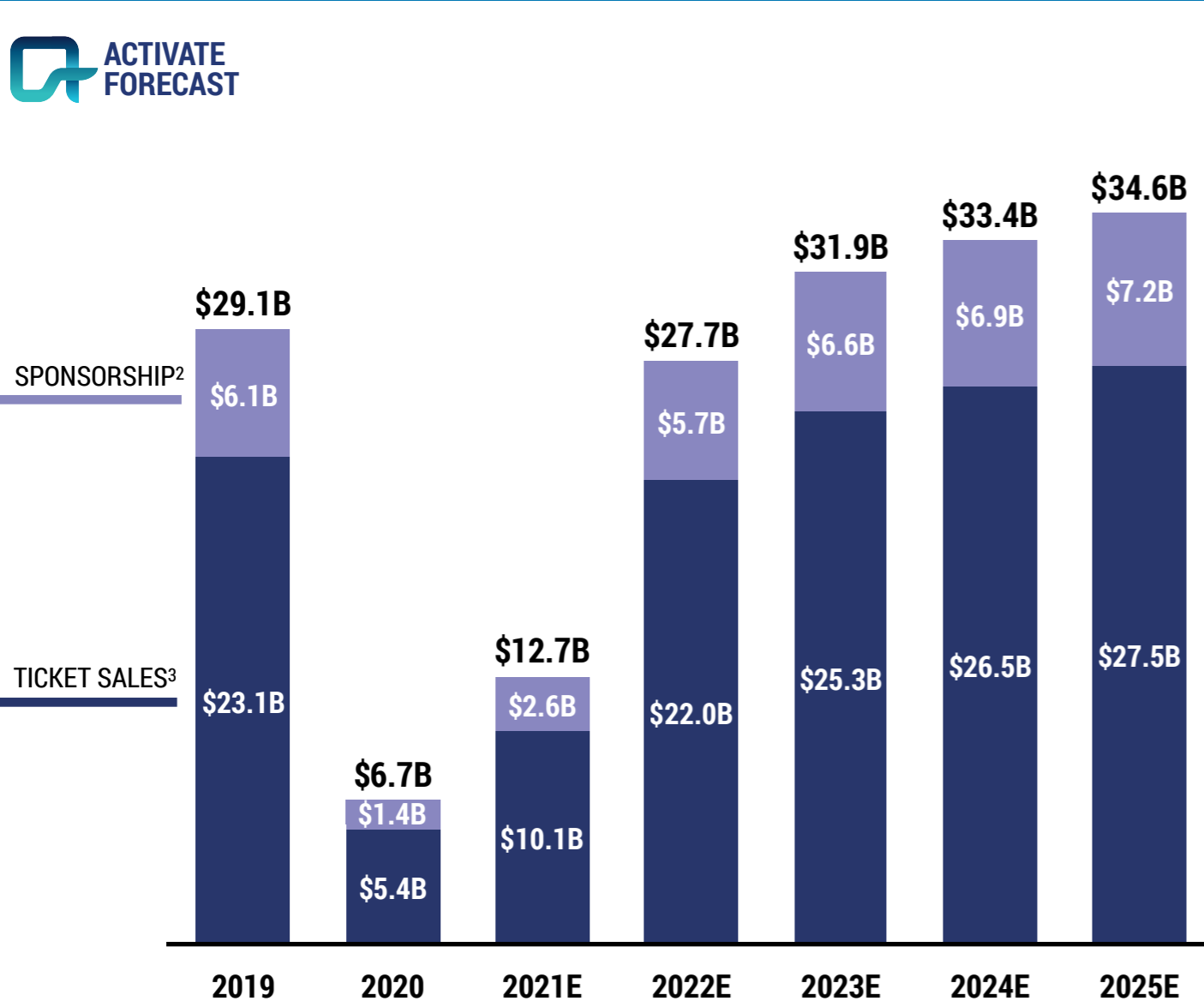
The **Philips Hue lighting system** offers a new **Spotify integration**, adjusting its effects according to users' music and **creating a unique experience accounting for tempo, mood, volume, and genre**





With pent-up consumer demand for in-person events, we forecast that the live music industry will return to pre-COVID-19 levels by 2023

IN-PERSON LIVE MUSIC REVENUE BY TYPE¹, GLOBAL, 2019-2025E, BILLIONS USD



2019-2025E CAGR:

- 2.9%
- 3.0%
- 2.9%



1. Figures do not sum due to rounding. 2. "Sponsorship" includes revenue from sponsorship of live music events (advertising spending). 3. "Ticket sales" include revenue from consumer spend on tickets to live music events. Does not include revenue from merchandise or concessions. 4. "Music listeners" are defined as adults aged 18+ who spend any time listening to music. Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), PricewaterhouseCoopers, Statista



Livestreamed events will continue to be important to fans, even after they return to attending in-person concerts

LIVESTREAMED VIRTUAL EVENTS LANDSCAPE AND NOTABLE CONCERTS



31% OF MUSIC LISTENERS¹ EXPECT TO ATTEND A CONCERT OR MUSIC FESTIVAL ONLINE IN THE NEXT 12 MONTHS

LIVESTREAMED VIRTUAL EVENTS PLATFORMS

SOCIAL MEDIA



AUDIO SERVICES



VIDEO SERVICES



PURPOSE-BUILT



NOTABLE CONCERT LIVESTREAMS



iHeart Country Festival
(October 2021)



Dua Lipa Studio 2054
(November 2020)

Dua Lipa's Studio 2054 performance reported a **global audience of 5M+**



Tomorrowland – Around the World
(July 2021)



BTS Muster Sowoozoo
(June 2021)

BTS's two-day livestreamed event drew **1.3M viewers** and earned **over \$71M**

1. "Music listeners" are defined as adults aged 18+ who spend any time listening to music. Sources: Activate analysis, Activate 2021 Consumer Technology & Media Research Study (n = 4,018), Company press releases, Company sites

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A new set of innovative companies is creating capabilities that help enterprises offer technology-enabled consumer experiences and data-based productivity improvements



A wave of innovation and data science capabilities enable **enterprises to leverage data, information, and technology in the same way major technology companies do** – in particular, systematically using data in decision making across the entire organization



The ability to combine these capabilities is accelerating the development of the **next generation of improvements to end-user experiences** (e.g. autonomous vehicles, predictive transactions, evidence-based medicine, automation, space travel)



Innovations in storage, compute, and connectivity from a new set of companies are the foundational building blocks being leveraged to accelerate these capabilities



These companies, many of which were launched in the last 5-10 years, are scaling at breakneck speeds, fueled by an **accelerating investment cycle in venture capital and private equity**



Their offerings impact all facets of enterprises (e.g. IT, HR, finance, sales & marketing) to **enable increased productivity and elevated end-user experiences**

We expect that the continued growth of these companies, and the emergence of other companies in the space, will be a major driving force for the technology sector in the coming years. Every week, new players announce rounds of funding in the hundreds of millions.

This wave of innovation is helping enterprises unlock significant operational and financial performance improvements, while developing the B2B and B2C experiences of the future

EXAMPLES OF ENTERPRISE PERFORMANCE IMPROVEMENTS ENABLED BY INNOVATION

ACCELERATE DEVELOPMENT OF NEW CUSTOMER EXPERIENCES



Allow all enterprises to create new B2B & B2C customer experiences faster and innovate at the speed of technology companies



Simulate and pilot new ideas and products at a lower cost to remove barriers to customer experience breakthroughs

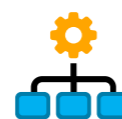


Leverage customer data and insights to integrate a better understanding of customers into the innovation process

CREATE BETTER EMPLOYEE EXPERIENCES (FASTER, LESS BUREAUCRATIC PROCESSES)



Enable simpler unification of data, IT infrastructure, and security protocols across the enterprise



Empower greater collaboration throughout enterprises by centralizing learnings and providing more reliable connectivity



Expedite employee onboarding processes with intuitive identity and security management and improved training processes

IMPROVE BUSINESS INTELLIGENCE AND DECISION MAKING



Enhance business planning and forecasting through capture of greater volume of data, improved processing speeds, ease of database organization, and user-friendly visualization



Harmonize data across different functions through centralized databases to drive planning throughout the entire organization



Leverage improvements in connectivity and computing power to improve robustness and accuracy of scenario planning and optimization

IMPROVE OPERATIONAL AND FINANCIAL EFFICIENCY (e.g. SG&A, SALES & MARKETING)



Automate legal, HR, and administrative tasks to enable greater efficiency, increase security, and reduce time spent on easily repeatable processes



Improve accounting and finance processes through data capture and structure refinements to provide real-time insights and more informed business decisions



Achieve greater sales efficiency and lower cost of customer acquisition through improved customer targeting and pipeline management

The growing ecosystem that is driving this innovation across new infrastructure, tools, and applications is led by a new generation of companies (beyond the major technology companies)



INDIVIDUAL ENTERPRISE APPLICATIONS

MARTECH / ADTECH / AD-OPS



CUSTOMER EXPERIENCE



FINANCE



HR & ADMINISTRATION



ECOMMERCE



SUPPLY CHAIN

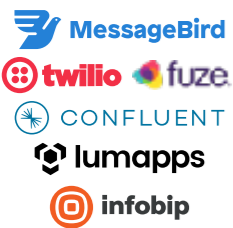


LEGAL / COMPLIANCE



CROSS-ENTERPRISE TOOLS

COMMUNICATION



PLANNING / BUSINESS INTELLIGENCE



COLLABORATION



DEVELOPER TOOLS



RPA¹



IDENTITY & ACCESS



AR/VR



DATA & INFRASTRUCTURE

STORAGE



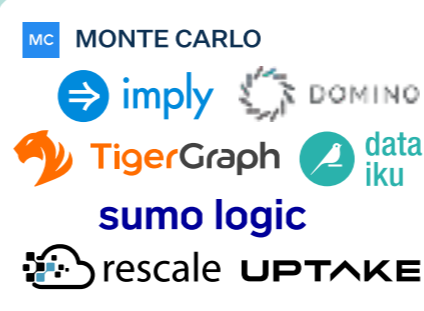
SECURITY



DATABASES



DATA ANALYTICS



CLOUD SERVICES / PLATFORMS



HARDWARE²



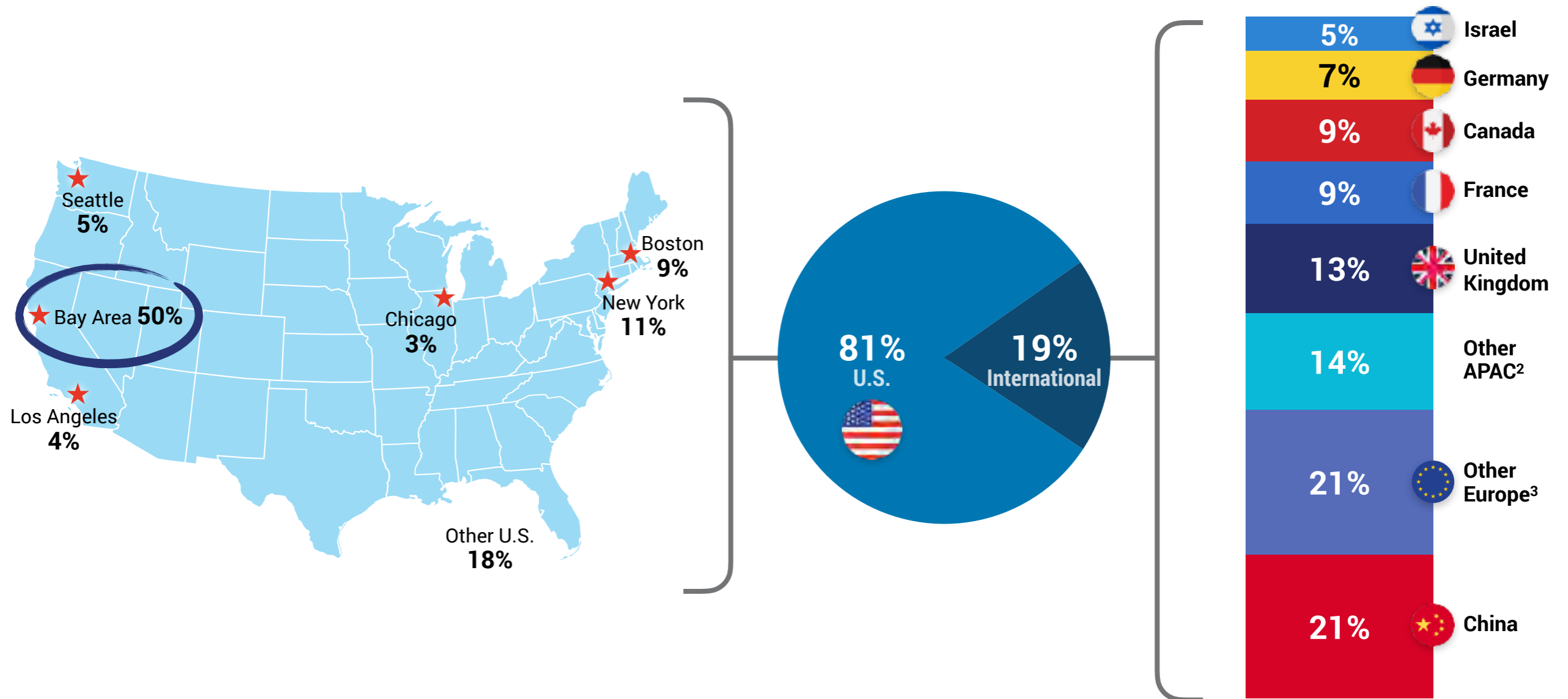
QUANTUM COMPUTING

CONTAINERS³

1. Robotic Process Automation. 2. Includes innovators driving improvements to semiconductors, data center technology, and IoT hardware. 3. Includes innovators in virtualization and containerization of software (i.e. bundling and running software in an isolated user environment, leading to improved portability, security, and development speed).
Sources: Activate analysis, Company sites, Crunchbase

Over 80% of these new companies are U.S.-based, half of which are headquartered in the Bay Area

ENTERPRISE SOFTWARE COMPANIES FOUNDED SINCE 2005 BY HEADQUARTERS LOCATION¹, GLOBAL, 2021, % COMPANIES



1. Includes set of 299 enterprise software companies founded since 2005 with at least \$100M in total disclosed capital raised. Figures do not sum to 100% due to rounding. 2. Includes companies with headquarters in Australia, India, Japan, and Singapore. 3. Includes companies with headquarters in Belgium, Denmark, Finland, Ireland, Spain, Switzerland, and the Netherlands. Sources: Activate analysis, Company sites, Crunchbase

Many of the companies in the new ecosystem have scaled at an unprecedented pace, creating tens of billions of shareholder value, new enterprise capabilities, and end-user value

EXAMPLE COMPANIES IN THE ENTERPRISE SOFTWARE ECOSYSTEM

	EMPLOYEE & CUSTOMER EXPERIENCE	ROBOTIC PROCESS AUTOMATION	SECURITY ²	COMMUNICATION	IDENTITY & ACCESS MANAGEMENT ²	DATA STORAGE
LAUNCH:	2003	2005	2007	2008	2009	2012
IPO:	2012	2021	2018	2016	2017	2020
MARKET CAP ¹ :	\$136B	\$26B	\$44B	\$52B	\$38B	\$106B
	<ul style="list-style-type: none"> Enables enterprises to implement digital workflows to streamline and automate major processes across IT, HR, customer service, finance, and more Delivers improved employee and customer experiences while reducing costs 	<ul style="list-style-type: none"> Provides automation planning and execution of repeatable enterprise tasks Orchestrates and monitors automated processes through its centralized platform for efficient and error-free outcomes 	<ul style="list-style-type: none"> Provides fast and secure access to enterprise cloud resources through direct-to-cloud access and cloud-to-cloud connectivity Enables end users (employees, partners, customers) to securely access applications from anywhere 	<ul style="list-style-type: none"> Provides a central database for omnichannel customer communication (e.g. voice, text, chat, video, email) Enables secure, cross-platform communication with customers and employees 	<ul style="list-style-type: none"> Allows companies to manage user authentication for applications and build identity controls Offers single sign-on services, letting users log into systems with a centralized access point 	<ul style="list-style-type: none"> Unifies, structures, and provides governance and security for enterprise data at a low storage cost Connects and stores enterprise data for secure inter-company information sharing

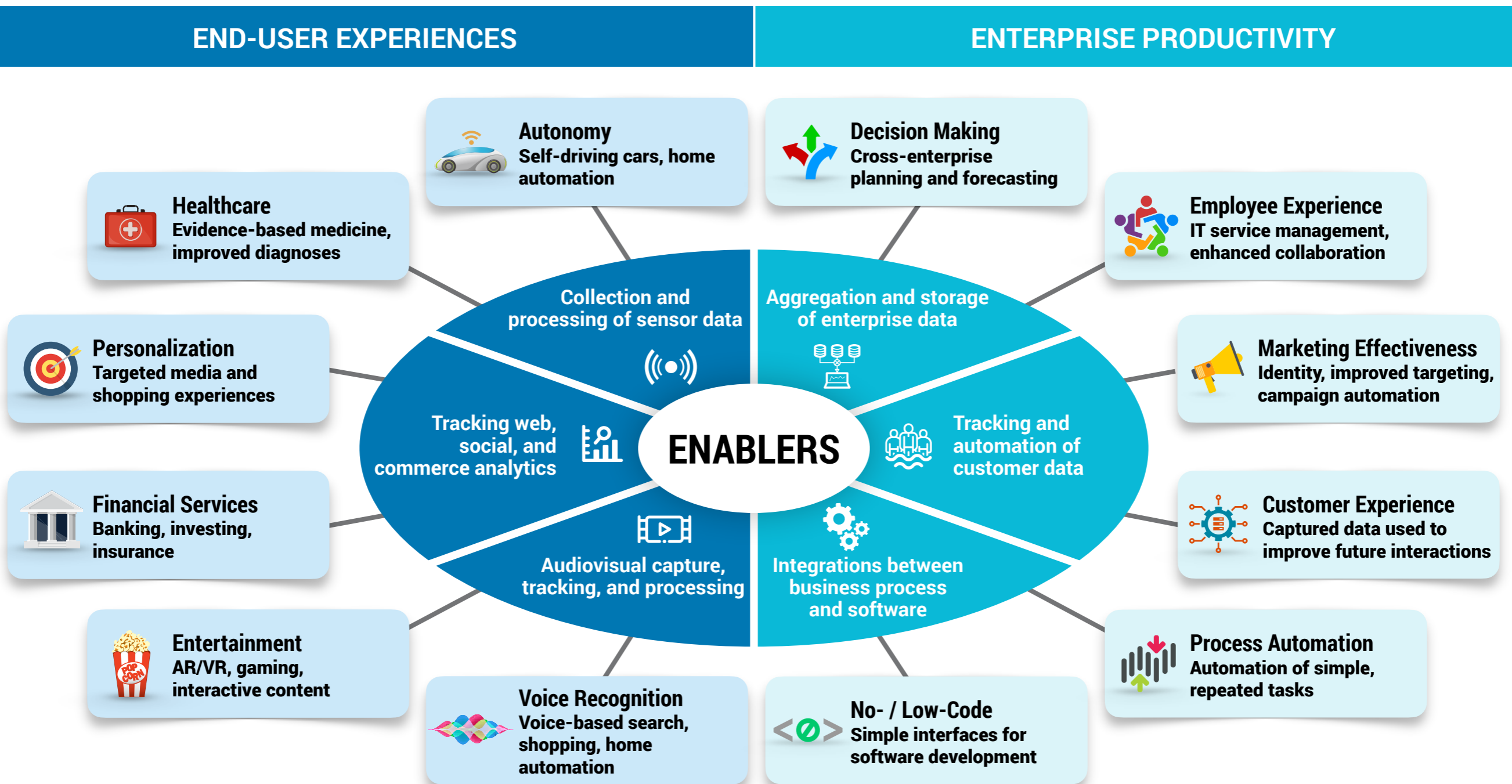
1. Market capitalizations as of 10:30 am on Oct. 28, 2021. 2. "Security" is the broad term describing the technology and processes used to protect information and digital assets against unauthorized access and risks, while "identity & access management" ensures that employees of an enterprise are able to access the software and devices that they need. Sources: Activate analysis, Company sites, Yahoo Finance

Companies are capitalizing on major technological advances to create breakthrough capabilities

TECHNOLOGICAL BREAKTHROUGHS

PUBLIC CLOUD SERVICES	DATA STORAGE ADVANCEMENT	OPEN HARDWARE	OPEN-SOURCE SOFTWARE	HYPERSCALING	EDGE COMPUTING	5G	QUANTUM COMPUTING
<ul style="list-style-type: none"> • Plug-and-play access to scalable and unlimited compute and storage capacity without the need to deploy capital • Pay-per-use pricing model in alignment with upstart company cost requirements • Access to higher levels of functionality and security through utilization of cloud service offerings 	<ul style="list-style-type: none"> • Continuous improvement to cost of compute and storage, driven by growth in the cloud service provider landscape • Improvements in solid-state drives, with increasing speed, lower costs, and greater reliability • Global footprints of cloud providers fulfilling data localization requirements 	<ul style="list-style-type: none"> • Open-source hardware design (e.g. white-box servers) with lower cost of infrastructure and deployment versus branded gear • Enablement of highly scalable and efficient hardware • Highly customizable hardware that can be tailored to specific enterprise needs, use cases, and verticals 	<ul style="list-style-type: none"> • Containers and Kubernetes allowing for faster innovation through access to functional software modules operating on shared/cloud-based resources • Support of open-source ecosystems by large technology players allowing enterprises to more quickly build scalable and reliable products 	<ul style="list-style-type: none"> • Enablement of enterprises to access compute and storage resources of hyperscalers and emulate their compute, network, memory, and storage benefits (e.g. more easily searchable and queryable data, greater resiliency to scaling data demand needs) without capital costs 	<ul style="list-style-type: none"> • Increased computing power on edges (i.e. chip set innovation) and deployment of AI/ML capabilities enable enterprises' real-time localized data processing for faster decision making at lower cost 	<ul style="list-style-type: none"> • Faster decision making and higher productivity for enterprises due to scalable data flow at a much higher speed between the 5G core¹ and large numbers of connected devices in parallel 	<ul style="list-style-type: none"> • Ability to rapidly solve problems that cannot be simulated by classical computing processes (e.g. biological process modeling, financial options pricing) enabling faster innovation and more precise decision-making capabilities
KEY INNOVATORS 							

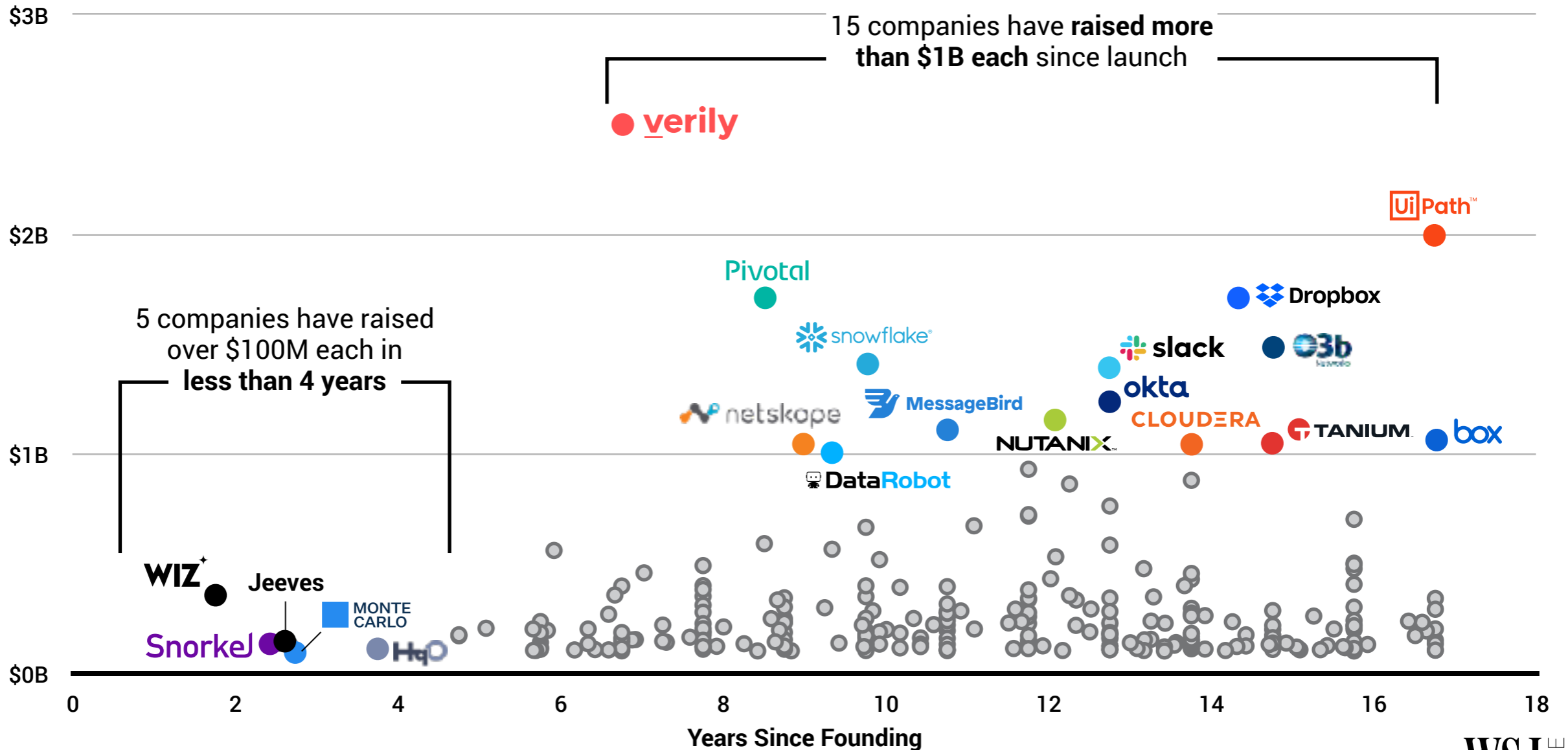
These innovations in data capture, processing, and analysis will be the core enablers of the next wave of user experiences and enterprise productivity improvements



Companies in the new ecosystem access very large amounts of funding extremely fast to fuel explosive growth and technological advances

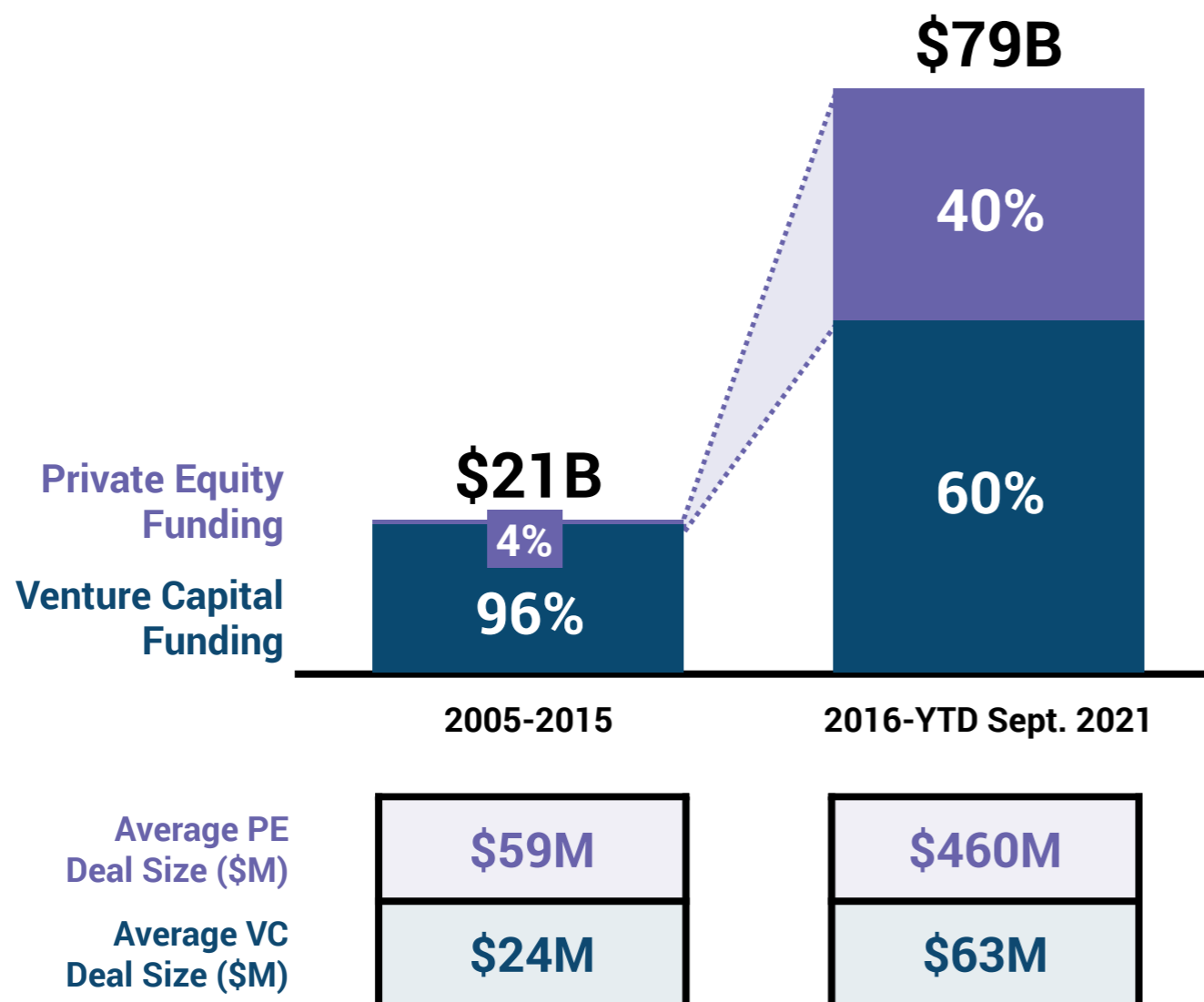
TOTAL DISCLOSED FUNDS RAISED BY ENTERPRISE SOFTWARE COMPANIES FOUNDED SINCE 2005¹, GLOBAL, AS OF 2021, BILLIONS USD / YEARS SINCE FOUNDED

Total Disclosed Funds Raised (\$B)



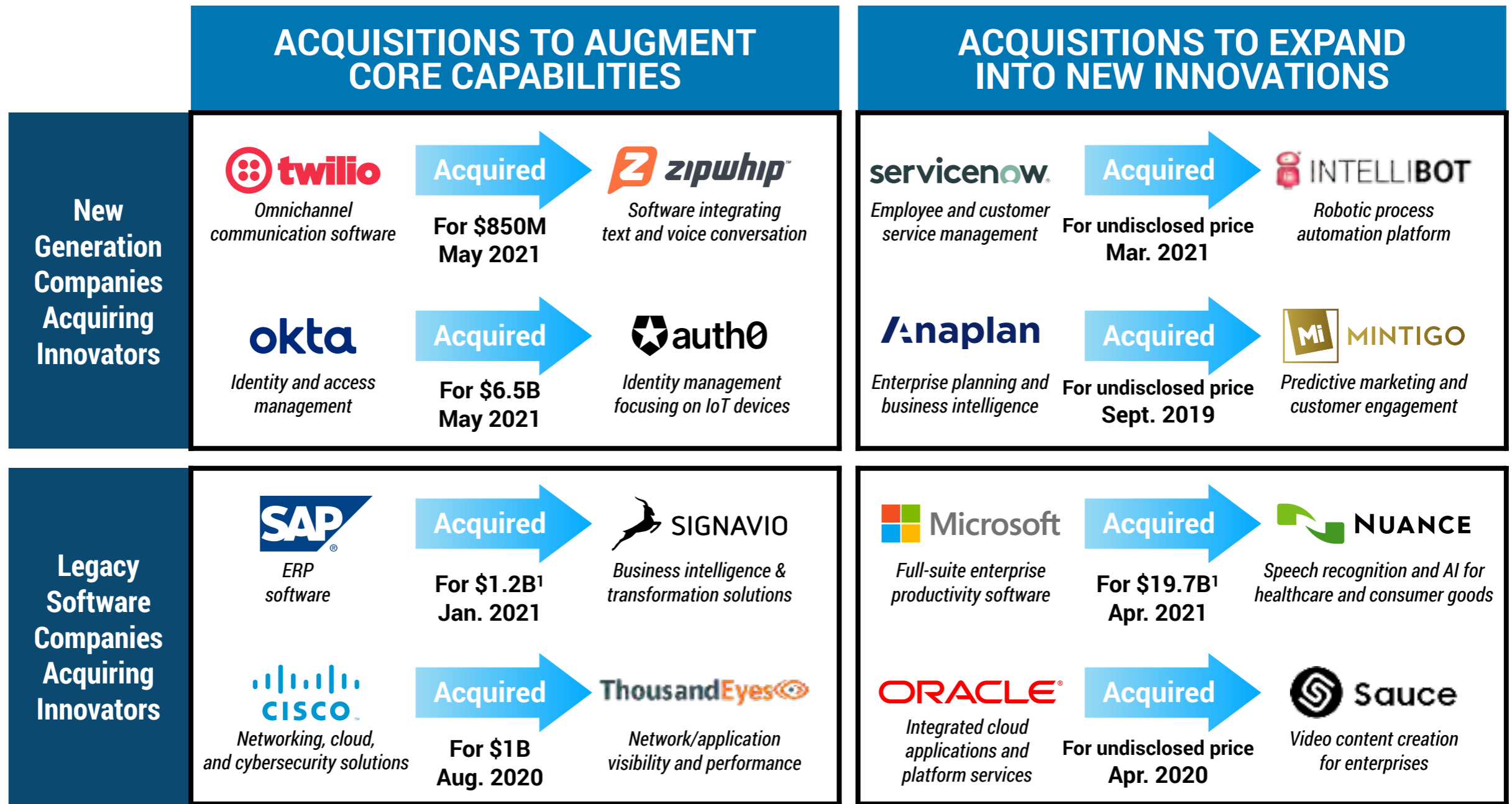
The investment cycle is accelerating as private equity investors join venture capitalists, driving growing funding rounds

TOTAL DISCLOSED FUNDING AMOUNTS FOR ENTERPRISE SOFTWARE COMPANIES FOUNDED SINCE 2005 BY SOURCE¹, GLOBAL, 2005-2015 VS. 2016-YTD SEPT. 2021, BILLIONS USD / % TOTAL DISCLOSED FUNDING



Top Private Equity Investors in Enterprise Software		
Investor	Number of Deals ²	Average Deal Size ³
VISTA EQUITY PARTNERS	9	\$1,048M
INSIGHT PARTNERS	3	\$1,734M
SILVERLAKE	3	\$625M
TPG	3	\$289M
KKR	2	\$300M
K1	2	\$200M
JMI EQUITY	2	\$118M

We expect increased M&A activity given the competitive dynamics of the space, carried out by the major technology companies and scaled innovators



Key functional areas will need to be addressed for this set of next-generation companies to reach their full potential

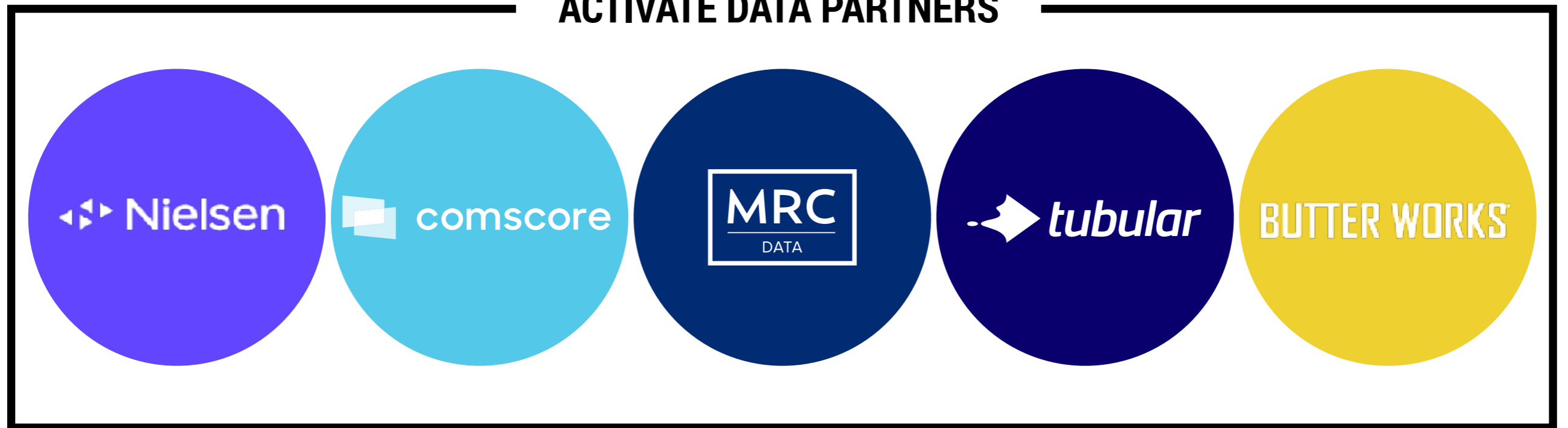
AREAS OF FOCUS

MAJOR IMPERATIVES FOR GROWTH

 <p>STRATEGY & TRANSFORMATION</p>	<ul style="list-style-type: none"> • Define the long-term strategies to convert early commercial success into defensible growth, including: <ul style="list-style-type: none"> - Determine requirements to serve major current and potential customer segments - Align product roadmaps with customer needs - Assess operating and revenue models to improve growth defensibility - Evaluate diversification opportunities to future-proof growth • Create execution roadmaps to enhance long-term visibility and credibility for clients, employees, and investors <ul style="list-style-type: none"> - Formulate the initiatives (organic, M&A, partnerships), timeline, and milestones - Evolve product-first start-ups into resilient and nimble organizations
 <p>GO-TO-MARKET & PRICING</p>	<ul style="list-style-type: none"> • Develop pricing models – including packaging and bundling approaches – that align with customer value drivers to support customer acquisition and retention • Effectively engage channels, partners, and resellers to maximize market coverage and address customer needs
 <p>SALES & MARKETING APPROACH</p>	<ul style="list-style-type: none"> • Define effective marketing strategies (e.g. narrative aligned with customer value drivers, effective marketing channel mix, events, customer engagement playbooks) • Structure effective sales force (e.g. goal-setting, incentives) and equip with winning sales playbooks (e.g. relevant lead funnels, critical prospect information, customer-centric sales approaches vs. product-centric)

Our 2022 data partners

ACTIVATE DATA PARTNERS



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- Strategic due diligence
- Consumer insights
- Customer segmentation
- Go-to-market
- Marketing optimization
- Salesforce activation
- Pricing
- Product strategy

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