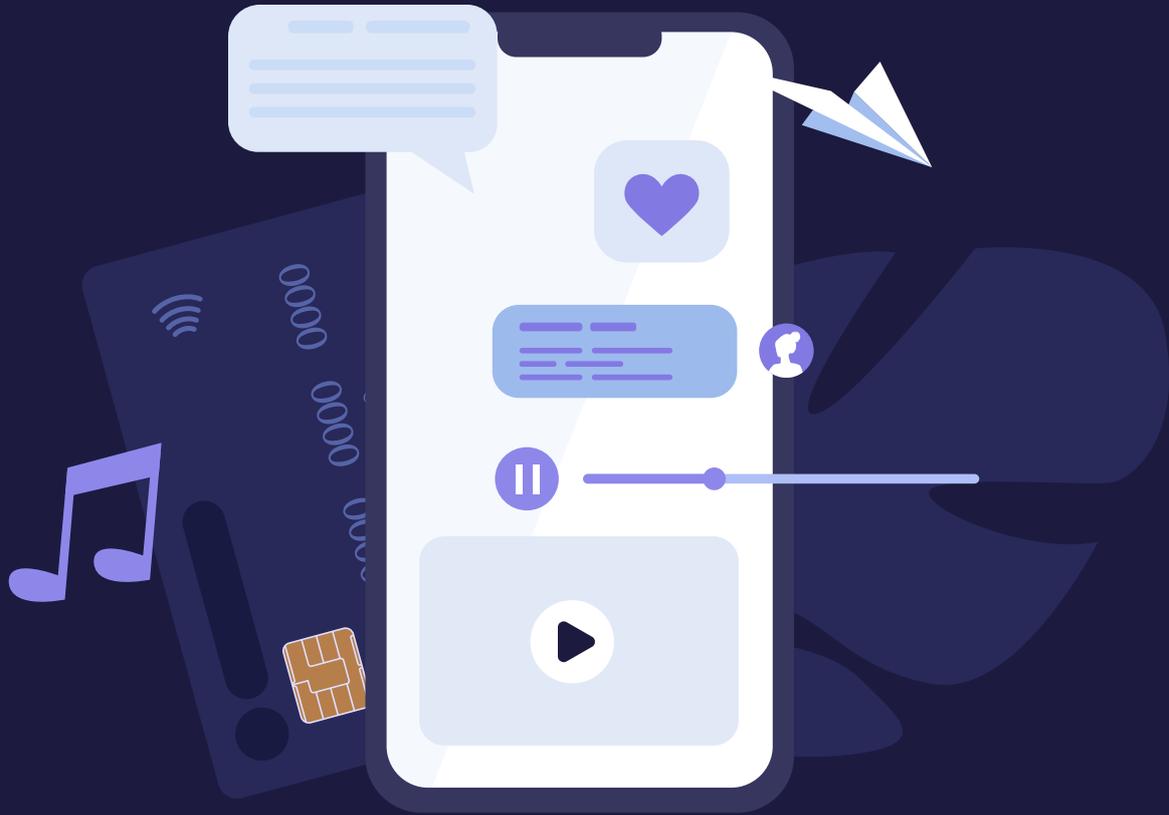


MEASURE



MobileLife

BEHAVIOR REPORT

Released June 2021

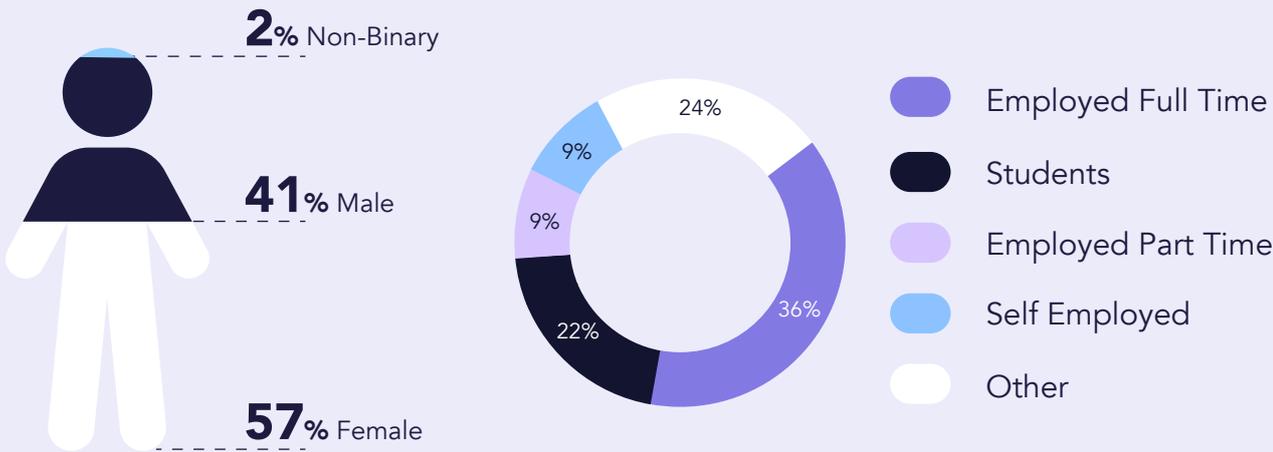
Most industries have three primary questions: what is their target audience doing, what are they consuming, and what are they buying? Mobile devices, with today's accelerated usage, have become the window to answering these questions and understanding consumer behavior. Measure's MobileLife report unveils the latest data about the actions and activities of individuals on their phones.

The more than 3.2 billion smartphone users around the world have access to roughly 1.96 million apps via the Apple App Store or 2.87 million apps via the Google Play Store. User bases and available apps continue to grow. Most brands and companies recognize the need for understanding device and app usage and developing app strategies.

However, accessing the information needed for data-driven decision making in this area is challenging. Most reports still focus on app installs, uninstalls and ratings, while the most critical metrics, surrounding actual consumer activity, are increasingly difficult to measure. This includes the latest iOS 14 updates which will prove to have a major impact on how data is collected and shared. At Measure Protocol, we offer a better way to access this hard-to-get usage data utilizing our proprietary Retro technology. We give you a glimpse of what we found out about actual consumer behavior in this report.

The Data.

The data within this report was compiled over a six-week period starting mid-February, across the Measure MSR app network. Members of the MSR community are rewarded for sharing data and completing tasks in a privacy-first environment where they are compensated fairly. All data is de-identified and aggregated to protect member privacy. We strive to compensate individuals fairly for their data and, on a prorated scale, participating members earned approximately \$15-\$40/hour based on the level of participation.



This report contains a subset of data collected from nearly 5,000 individuals in the United States on iOS devices. Unless otherwise noted, data represents actual on-device app usage. The sample set is 42% aged 18-25, and 58% 26+. Gender breakout is 57% female, 41% male, and approximately 2% non-binary or other. Over one-third (36%) are employed full-time, 9% employed part-time, 9% self-employed, 1% are retired and 22% are students.

Full datasets and metrics are available by contacting Measure at sales@measureprotocol.com

WHAT ARE INDIVIDUALS *DOING?*

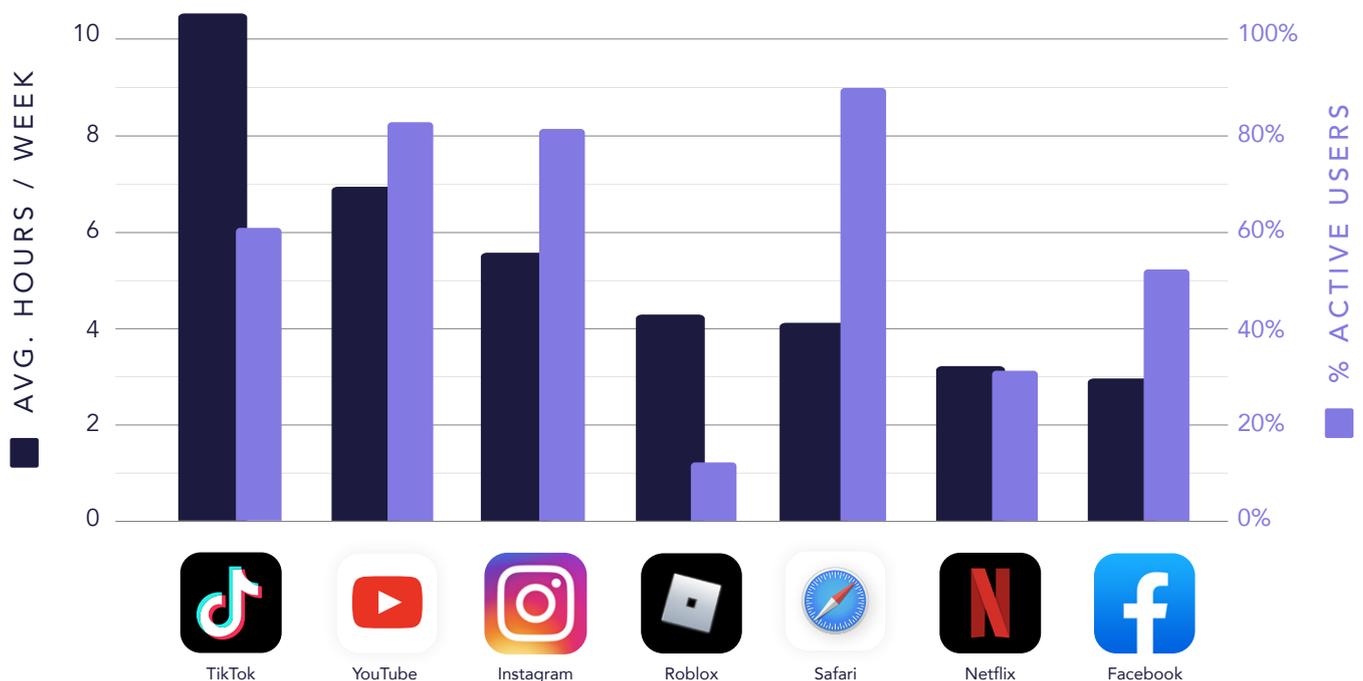


App Usage

On average, individuals 18-25 spent just under 49 hours using their smartphones on a weekly basis. We measured how many individuals are using specific apps, and how long they spend in each app they are accessing.

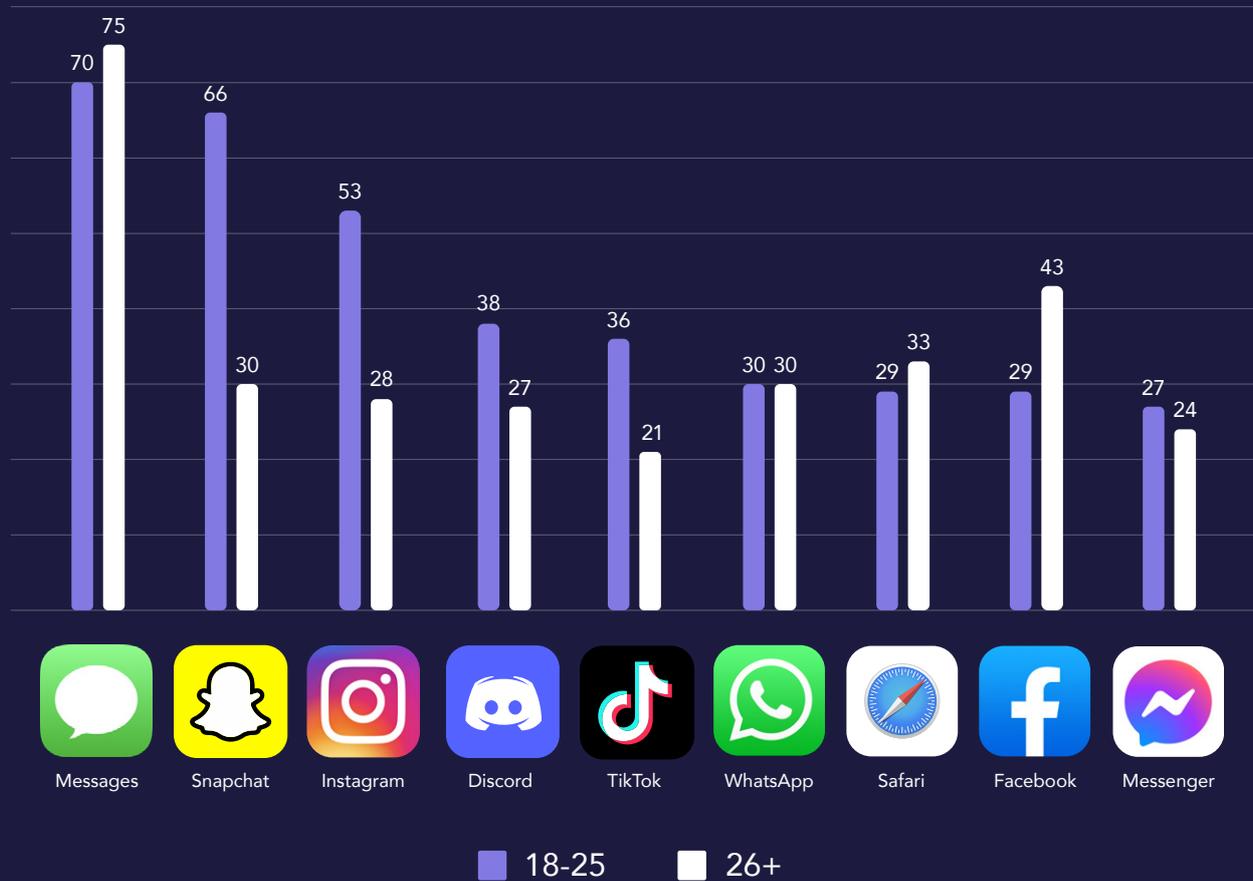
"TikTok is smashing YouTube with +56% more usage by 18-25 year olds."

Of the apps used, TikTok has risen to the top with nearly 10.5 hours per week (used by 61% of participants). While Messages (91%), Safari (90%) and YouTube (84%) had greater reach across the community of individuals using the app on any given week, their actual usage in time was much less at 2.4 hours, 4.1 hours, and 6.9 hours respectively.



Average usage of Facebook for our audience of 18-25 was close to 3 hours per week, with only 54% using the app at all. It is interesting to note that in the 26+ age range, 74% do access the app and they also spend longer using it at 6.2 hours per week.

NUMBER OF TIMES PER WEEK THE APP IS
THE FIRST USED WHEN DEVICE IS PICKED UP

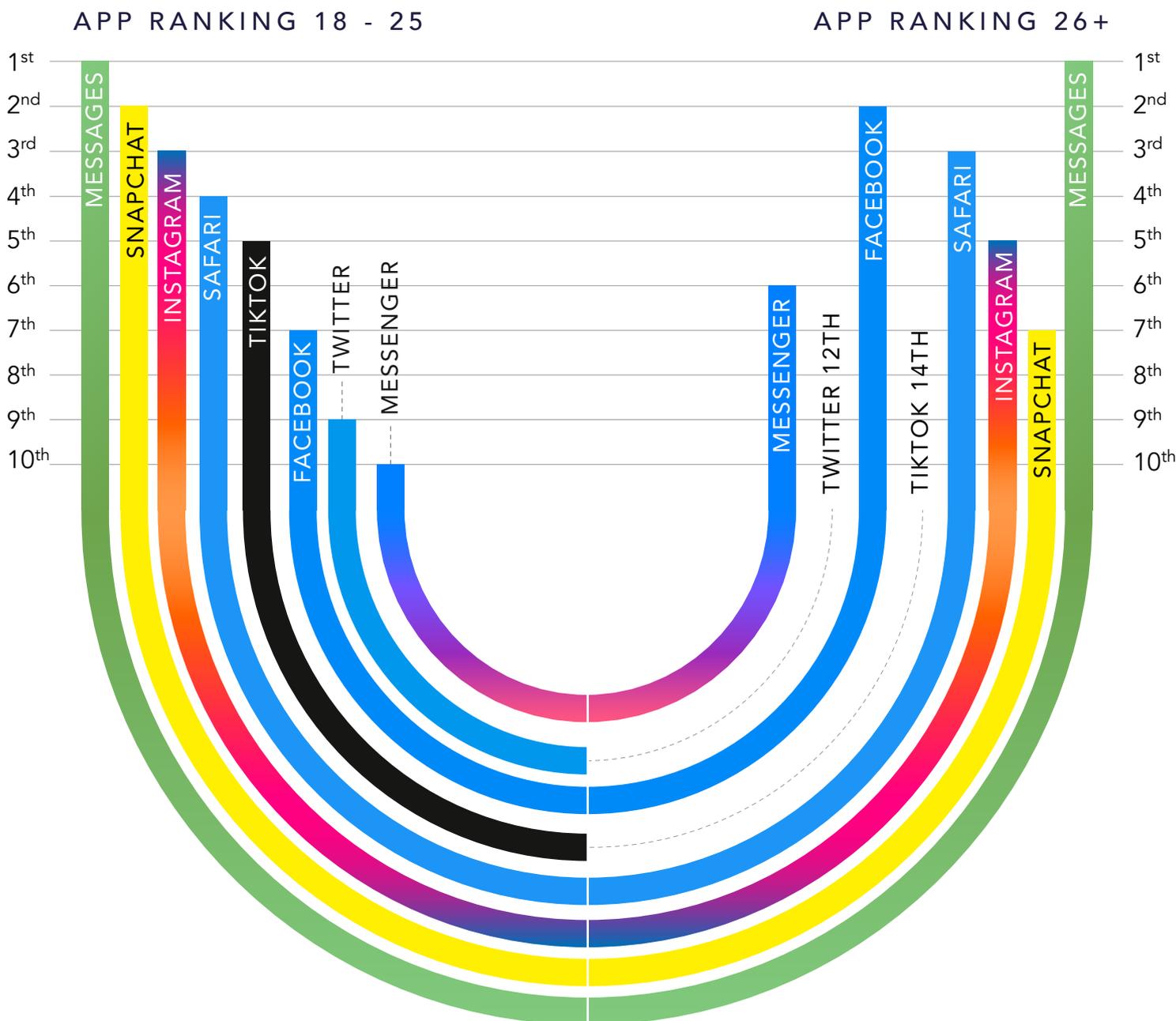


The Go-To Apps for Priority Engagement

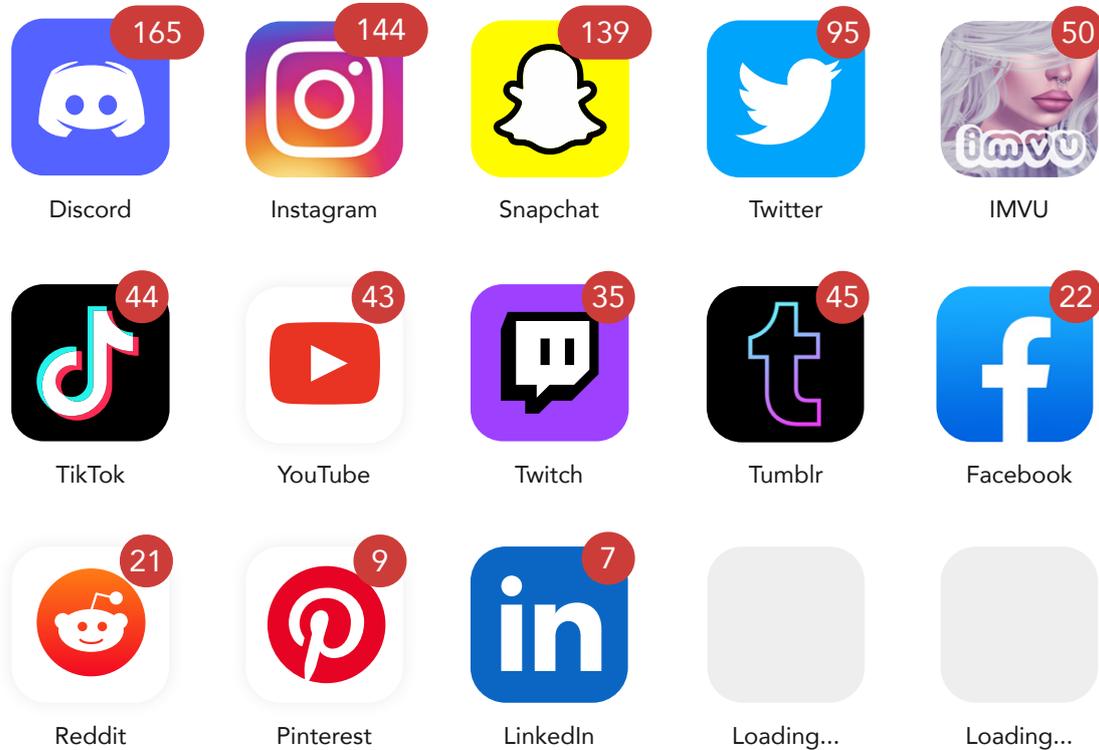
Smartphones may have started as a multi-functional phone device, but they have clearly evolved to be more reflective of a messaging device. Should we be referring to these devices as Social Messaging Devices more accurately? The analysis above illustrates the first apps our study members engage with on their device. We can see here that messaging and social applications are in the top 10. Interestingly, it is apparent that the younger cohort is deliberate in their usage of Snapchat, Instagram and TikTok when they first pick up their device.

This point is further illustrated when looking at the top 20 apps used by the 18-25 cohort. The phone app itself is ranked as 15th most used app/function after picking up a phone, and it is the 10th for those aged 26+. As we started to explore above, we can see here that while Facebook is ranked as the 2nd go-to for those 26+, it is ranked far behind at 7th for 18-25.

Most used apps by rank



AVERAGE WEEKLY NOTIFICATIONS FOR SOCIAL APPS
(USERS 18-25)



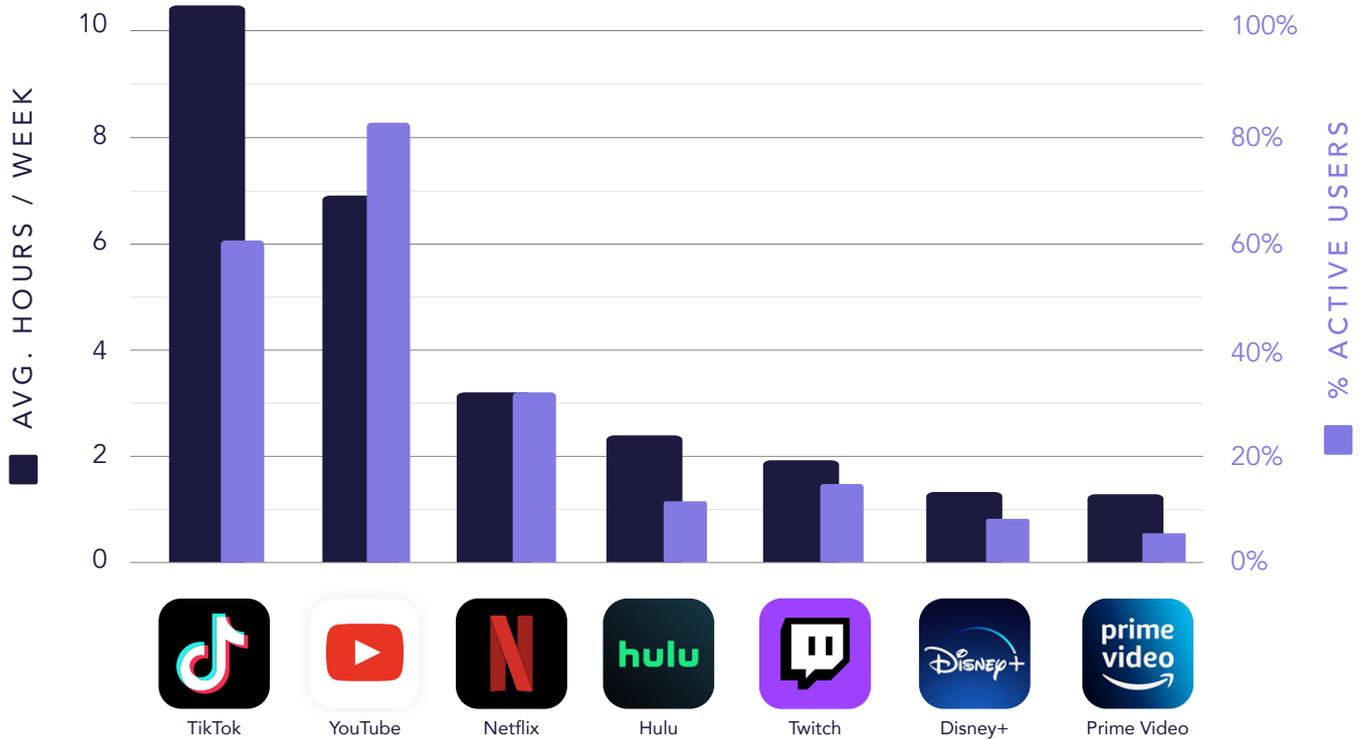
The gaming and community engagements lead the pack

with 165 average weekly notifications

Recent versions of iOS have put more control in the users' hands when it comes to managing distractions and unwanted notifications. Increasingly, it has become more of a challenge for app developers to rely on notifications and they must continue to provide real value to ensure individuals continue to receive their notifications.

WHAT ARE INDIVIDUALS **CONSUMING?**





Top streaming apps

Video has become a primary function for smartphones, especially over the past year with the rise of new video-based apps. This is supported by our data of actual mobile video app viewing, which shows that the top apps being used by participants are TikTok, YouTube and Netflix.

While YouTube is the most widely used app by the percentage of individuals actively using it, in a relatively short amount of time TikTok has risen to the top of our charts when it comes to weekly hourly usage per user. As media consumption moves to mobile devices, the usage of Netflix, Hulu and others will play an important role in trying to capture and sustain the attention of the mobile user.

Twitch is worth examining more closely as it contains more “community” oriented and interactive user features, such as direct chats, than others in the list. It continues to hold an interesting and somewhat unique place in the mix of mobile apps.

What are they watching?

Beyond actual mobile usage of video and streaming services, it is important to also understand what individuals are actually watching. Unlike traditional mobile panels, Retro data collection supports account-level behaviors. For example, a sample of 675 individuals sharing their Netflix account-level viewing history revealed that nearly 1-in-4 (23%) tuned in to Bridgerton. This data represents all viewing across all devices since Jan 1, 2021. A similar number watched Crime Scene: The Vanishing at the Cecil Hotel and a close 1-in-5 (20%) watched Cobra Kai.



23%

Bridgerton



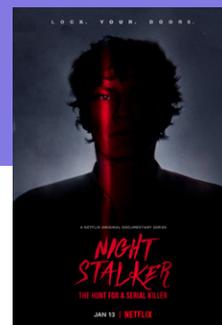
23%

Crime Scene:
The Vanishing at ...



20%

Cobra Kai



19%

Night Stalker



16%

Good Girls

Though when it came down to the most watched episodes by series, over 5% of nearly 45,000 watched episodes were of Grey's Anatomy, indicating that long-running shows are very binge-worthy.

SOCIAL USAGE

■ % Active Users ■ Avg. Hours Used

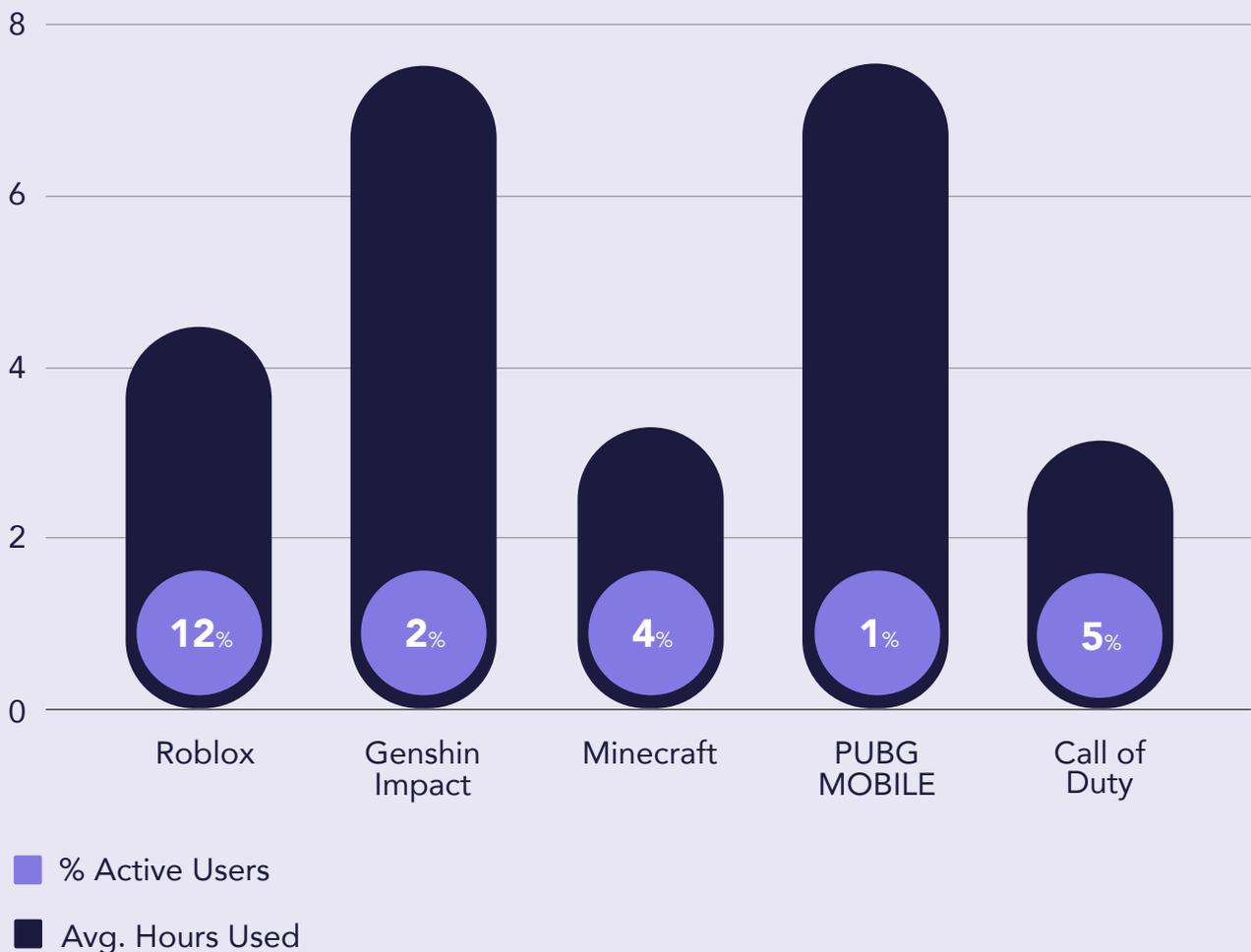


Social Usage

TikTok continues to dominate our findings, as it has also surpassed both Facebook and Twitter in terms of hours used per user and the overall proportion of users. Discord has also quickly established itself in the market cohort of 18-25 year olds, and is getting attention from the likes of Microsoft. It is also important to note that the majority of this age group are still using YouTube (84%), Instagram (82%) and Snapchat (71%), although hours spent per week are lower than TikTok overall.

Gaming

The Roblox IPO reflects the popularity of the platform's approach to user-generated gaming, and although some like PUBG mobile, Genshin Impact and Minecraft have fewer active users across the sample, levels of engagement on a weekly hourly basis remain strong. While the lifecycle of some games may be relatively short, being able to maintain strong engagement can encourage levels of use similar to other mainstream apps such as YouTube, Netflix and Facebook.

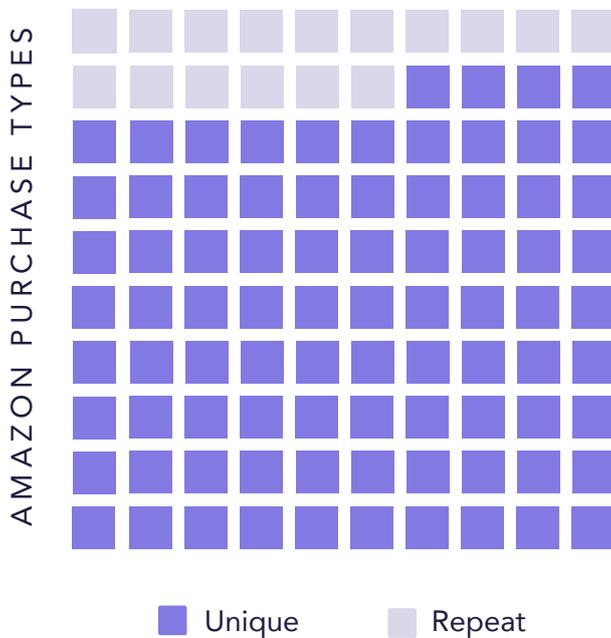


WHAT ARE INDIVIDUALS *BUYING?*



Amazon Purchase Behavior

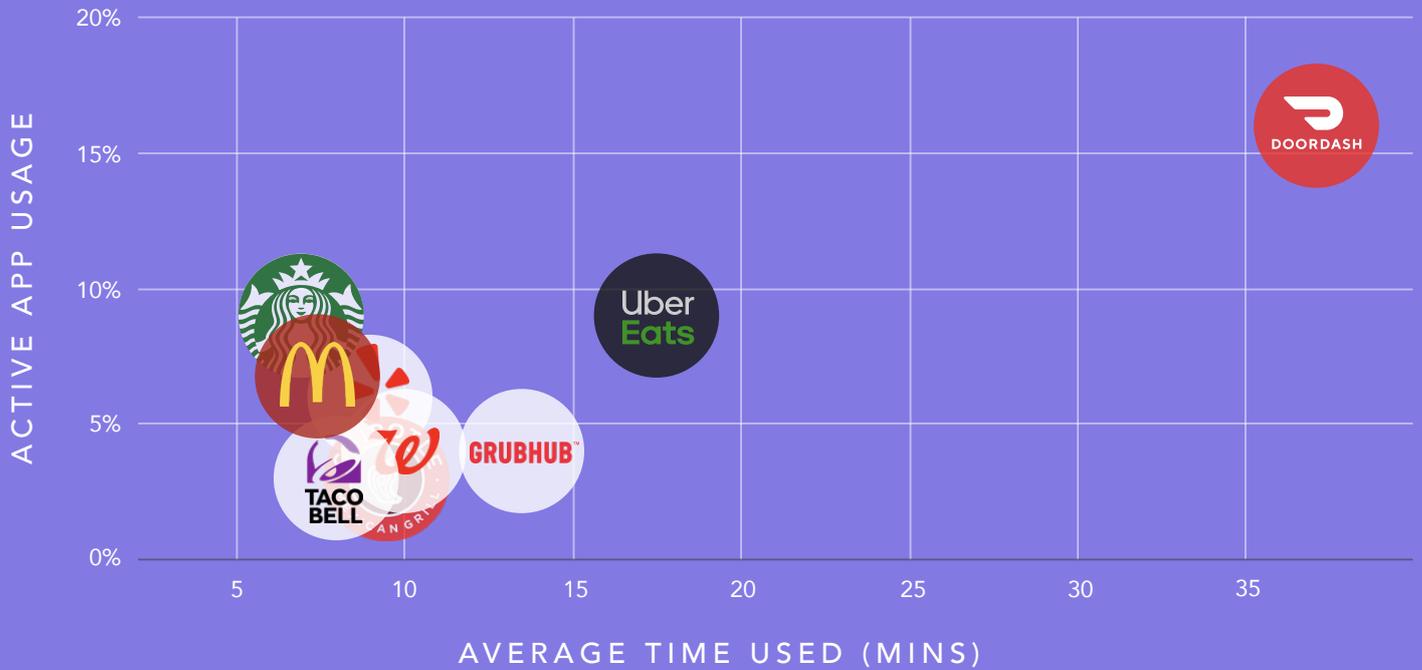
The past year has seen a dramatic move to online purchases across most merchants and services such as Walmart, Amazon and others. Understanding this shift to on-demand shopping has long-term implications for our economic landscape while providing new opportunities for small and large scale retailers.



Just over 650 individuals were asked to share their Amazon purchases between approximately August 30th, 2020 and February 14th, 2021.

During this period, over 26,000 items were purchased by these individuals and interestingly about 22,000 were unique items. This speaks to the long tail and breadth of products sold by Amazon.

In ranked order, the top purchased items included Amazon.com gift cards by 18% of individuals, followed by the Amazon Smart Plug, \$10 PlayStation Store gift card, the Echo Dot (3rd Gen) Smart speaker with clock, and the Mkeke Compatible with iPhone XR Screen Protector. Apple AirPods Pro came in at the 7th most purchased item by individuals.



Food & Drink

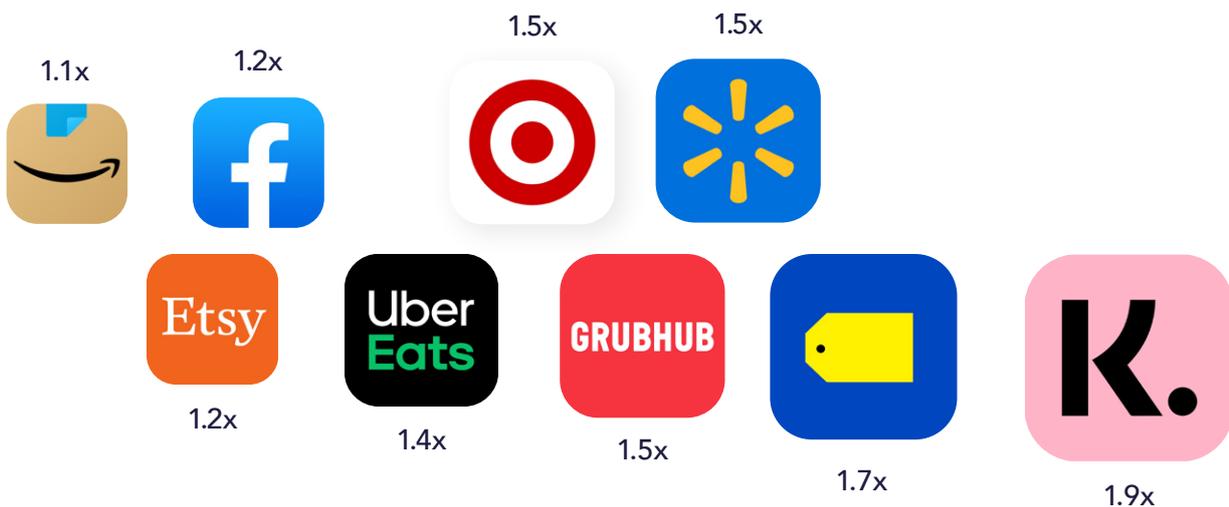
As consumers drastically change the way they grocery shop and dine, we thought it would be interesting to see how our audience is using apps in this space.

DoorDash, which has experienced triple-digit-percent growth rate in recent quarters, is actively used by the highest percentage of 18-25 users (16%) for the most amount of time per week (37 minutes) in this category.

User Profile - Food App Users

Food apps have grown in popularity across the user base. While it may be interesting to see the incidence of the typical user in the study and their usage of these apps, when looking at a cohort of individuals who use one of the listed food-related apps, namely Burger King, McDonald's, Wendy's or Taco Bell, we see a more dramatic picture. Is there a particular opportunity for individuals of this cohort? We think so.

APP USAGE (WEEKLY HOURS) FOR USERS OF FOOD APPS
COMPARED TO AVERAGE USERS



While this cohort is only slightly less likely to be using apps like Discord, we see that they over-index as users of Facebook with just over a 10 percentage point difference (76% vs. 65%). Additionally, they are more likely to be using food services such as Uber Eats, Grubhub and Doordash. Interestingly, they are also almost 2x more likely to be using new fintech payment services like Klarna.

Similarly, we see this cohort to be relatively higher users of shopping apps such as Best Buy, Amazon, Walmart, Etsy, Sam's Club, Target and Walgreens. Fast food app-users present an interesting opportunity for high-transactional services and shopping related services. For these services, understanding individuals by their behaviors such as different app type usage, provides new context and engagement opportunities.

THE MEASURE

TOP 5

TAKEAWAYS



1. In a sea of apps, actual usage trumps downloads.

The sheer number of apps available and the high churn rates experienced by most of these apps makes it increasingly difficult to understand what is really resonating with individuals.

When developing marketing strategies, engagement metrics help get a truer assessment. Looking beyond superficial data such as downloads and ratings and truly digging into app usage data can start to paint a clearer picture of where people are spending their time on mobile devices. This can, in turn, help to advise marketing strategy, spend and other key business initiatives.



2. Apps must offer true value to be noticed.

Once an app or service is installed, a primary challenge is to ensure continued engagement. While notifications are a primary way of communication and triggering attention and engagement, user

controls and system-assisted blocking and management is making this increasingly difficult. This is why we believe that the number of notifications getting through and "priority engagement" metrics can help us better understand engagement. How do you stack up when compared to your competition?



3. TikTok defines a new standard for engagement and is challenging many established apps - in more categories than one.

The relatively new player in social engagement, TikTok, is redefining the rules of engagement. Overall usage among users continues to grow, and usage per user is beginning to eclipse the nearest competitor. Not only are individuals using it three times more than Facebook when it comes to social media, but they are also using it significantly more for video content than former front-runner, YouTube. This app's wild popularity and front-runner status should cause brands to take another look at what young people are seeking in their mobile, digital experiences.



4. Video is still king...

...and its crown has been pressed firmly into place with the events of the last year, as more and more people tapped into video content as a way to wait out the pandemic. Video-based apps consistently dominate in all aspects of usage and engagement, and unsurprisingly this coincides with high levels of connectivity and messaging apps. It's become apparent that the way to engage with individuals has been established and that a mobile-first approach is here to stay. Smart marketers will prioritize video marketing plays in order to capture audience attention.



5. It's about messaging.

The term "smartphone" has become a misnomer, as our audience indicates that they rarely use any "phone" options on their devices at all, instead turning to a variety of messaging apps. The top three apps for 18-25 year olds are Messages, Snapchat, and Discord and these are the same apps that this group accesses immediately upon picking up their phones. With email-based apps not even making it into the top 10 for 18-25, we see a clear signal on the utility and prominence of messaging as a primary method or engaging with these individuals. Brands and companies should strategize how they can reach their important audiences on these types of high-impact, heavily used messaging platforms.

Conclusion

As brands, marketers and researchers continue to try and understand their customers and audiences, their digital behaviors become increasingly important as a baseline. Whether it is to understand what they are doing on their devices, what media and services they are consuming, or what they are buying, actual user-supplied data provides unprecedented insights. From how apps are being used and how frequently, to how people are consuming goods and services, all the way to how people prefer to communicate - these are all metrics that can help us build a deeper, truer understanding of key audiences. And, more importantly, how to engage with them in more meaningful ways.

Why you need Retro

While brands rely heavily on consumer behavior and data, their ability to access this data has become increasingly difficult, restricted, and often inaccessible with the rise of mobile phones, apps, privacy protocols, and consumers' reluctance or lack of trust when it comes to sharing information. Retro changes all of this.

Better access to data: Retro is an on-demand behavioral data collection technology that provides access to previously inaccessible in-app data directly from consumers in a privacy-first, trusted environment via Measure's MSR app. The proprietary solution collects and processes raw data from individuals and turns it into valuable behavioral insights. Data is easily accessible through a "Storefront" interface so brands can understand how consumers are spending time on their digital devices, while consumers retain full custody of their own data.

Enhance your data pipeline: With each person's full permission and direct engagement, Retro technology can collect on-device data such as device usage, in-app purchases, account-level media consumption, and app-specific behaviors from a growing list of supported apps on both iOS and Android devices. Retro can efficiently transform device-based data in video, image and raw formats into structured insights using proprietary and patent-pending technology. Retro can be integrated into existing surveys and data pipelines, or organizations can leverage the trust-based Measure community to bring meaningful behavioral data to the market.

Engaged individuals = heightened sharing: By prioritizing consumers, the Measure ecosystem delivers greater engagement and higher quality outcomes. Retro provides individuals with an opportunity to earn fair rewards while completing data-sharing tasks on their mobile phones. In fact, individuals are compensated on average between \$15 and \$50 per hour on a prorated scale for sharing. And all of this happens in a fully permissioned and transparent

environment. Greater control over their data asset, positive experiences, great trust and unparalleled compensation leads to greater levels of data sharing and insights.

The days of clumsy metering methodologies are over as permissioned, transparent and user-friendly experiences prevail. Today brands and agencies alike are using Retro to power their shopper insights, media consumption insights, consumer journey strategy, and tap into alternative data sources.

About Measure

Created to help consumers take ownership of their data and provide brands and marketers access to new forms of consumer data, Measure was founded in 2018 by a group of media, ad tech, and market research technology veterans. Measure is a consumer-centric data technology company that facilitates a marketplace for permissioned, person-based data where individuals take control of their data and monetize it directly with brands, advertisers and researchers. Consumers contribute data by completing engaging data-generating tasks within the company's MSR App and proprietary Retro data collection technology.

Founded on principles of data sovereignty, privacy, transparency and fair compensation, Measure provides an ecosystem that addresses challenges faced by the market research, advertising and AI industries. Measure Protocol won the 2019 ASC / MRS Award for Best Technology Innovation, the 2020 Marketing Research and Insight Excellence Award for Technology Impact, powered by Quirks, and are alumni of the Creative Destruction Lab's Blockchain program.