TWILIO
segment

The CDP Report 2022

Another step forward for customer data platforms

Welcome to Twilio Segment's third annual Customer Data Platform report, an in-depth look into how customer data is powering customer engagement across the world.

When we published the report last year, we predicted the pandemic would make customer data platforms (CDPs) an integral part of the modern tech stack for businesses of all kinds. We believed that as businesses began to make the vast majority of their customer interactions digital – whether that's online shopping, on-demand fitness, or virtual doctors' appointments – having a CDP would become table stakes.

Fast forward to 2022, and the tailwinds propelling CDPs forward have only gotten stronger.

The death knell has been rung for third-party data, triggered by regulators and technology giants. Across the globe, standards and restrictions on the collection, sharing, and processing of data have become tighter. Apple and Google, which capture billions of customers and businesses within their ecosystems, have made moves to limit third-party tracking.

The message is clear: CDPs have become pivotal in the quest to uphold privacy while simultaneously making customer engagement more personal.

To better understand the aggressive adoption of CDPs in the past 12 months, we turned to our customers to investigate how they're using the Twilio Segment platform.

This aggregated, anonymized data gives us a window into how businesses derive value from data and the ways they're preparing for a world where first-party data takes top priority. At the end of this report, we'll share some predictions about what's on the horizon for 2022.

Methodology

1 - The data is sourced from the anonymized, aggregated usage behavior of Twilio Segment's 25,000+ customers, during the period of November 1st, 2020 - November 1st, 2021.

2 - We have only included tools that have active integrations in the Segment catalog prior to November 1st, 2021.

3 - Categories are based on whether or not they are in the Segment catalog with that category tag.

4 - The data is based on the number of customers using each destination/source, rather than the number of workspaces. In some cases, a customer may have multiple Segment workspaces.

Explosive growth in data volume

The Customer Data Platform
Report 2022

The bottom line: *2021 saw record numbers of API calls on the Segment platform.*

The growing demand on Segment's APIs over the past several years shows us that customer data has become an integral part of how businesses power their digital experiences.

From 2017, API volume had been growing steadily year over year, but the pandemic triggered an inflection point, with late 2020 and 2021 seeing record numbers of API calls on the Segment platform.

Tracking these API calls is a bellwether for many of the secular trends we've witnessed over the past 18 months – streaming, e-commerce, on-demand delivery, and much more – as well as a fascinating way to track the ebb and flow of consumer demand for digital services.

While we don't expect the growth in API volume to be linear forever - it will depend both on businesses' continued investment in digital experiences and the attachment of consumers to them – it's interesting to note that we've yet to see API volume come close to pre-pandemic levels.

As the world gradually reopens, it will be interesting to monitor which of the trends initiated by the pandemic are lasting, and which were temporary.

API Volume
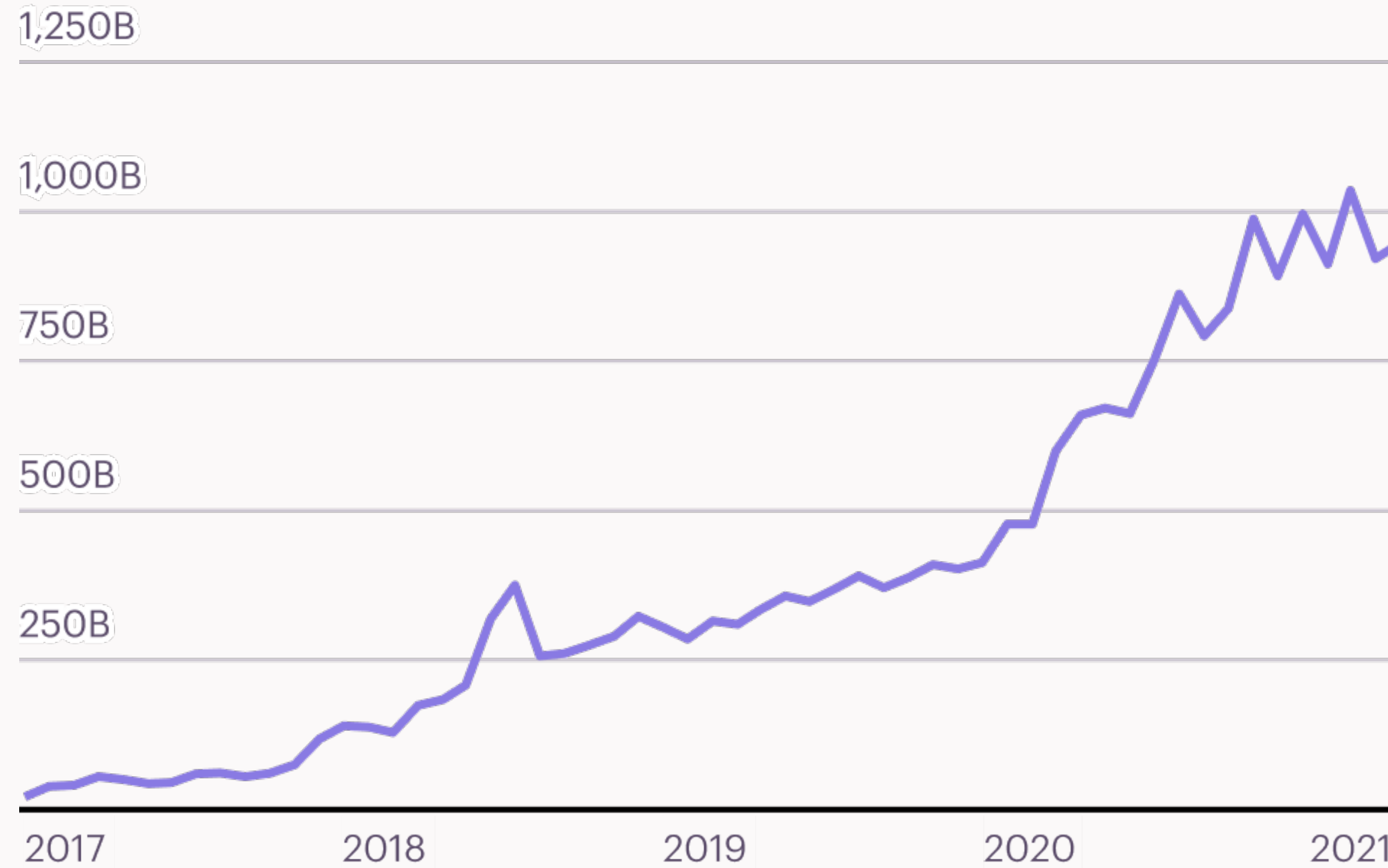
Daryl Bowden
Executive Vice President of Technology at FOX Corporation

"Our Segment and AWS framework was able to handle a peak of nearly 10 million unique concurrently streaming devices per minute. On game day, Segment's best in class infrastructure and Professional Services Team were some of the necessary pieces to the intake of approximately 1 million records per second."

2021's fastest-growing apps

The bottom line: *Explosive growth for digital advertising and data warehouse tools on the Segment platform.*

More than 25,000 Segment customers use our platform to connect their customer data to over 400 different SaaS apps. As such, we have a bird's-eye view of how the SaaS market is evolving for developer, marketing, and growth teams.
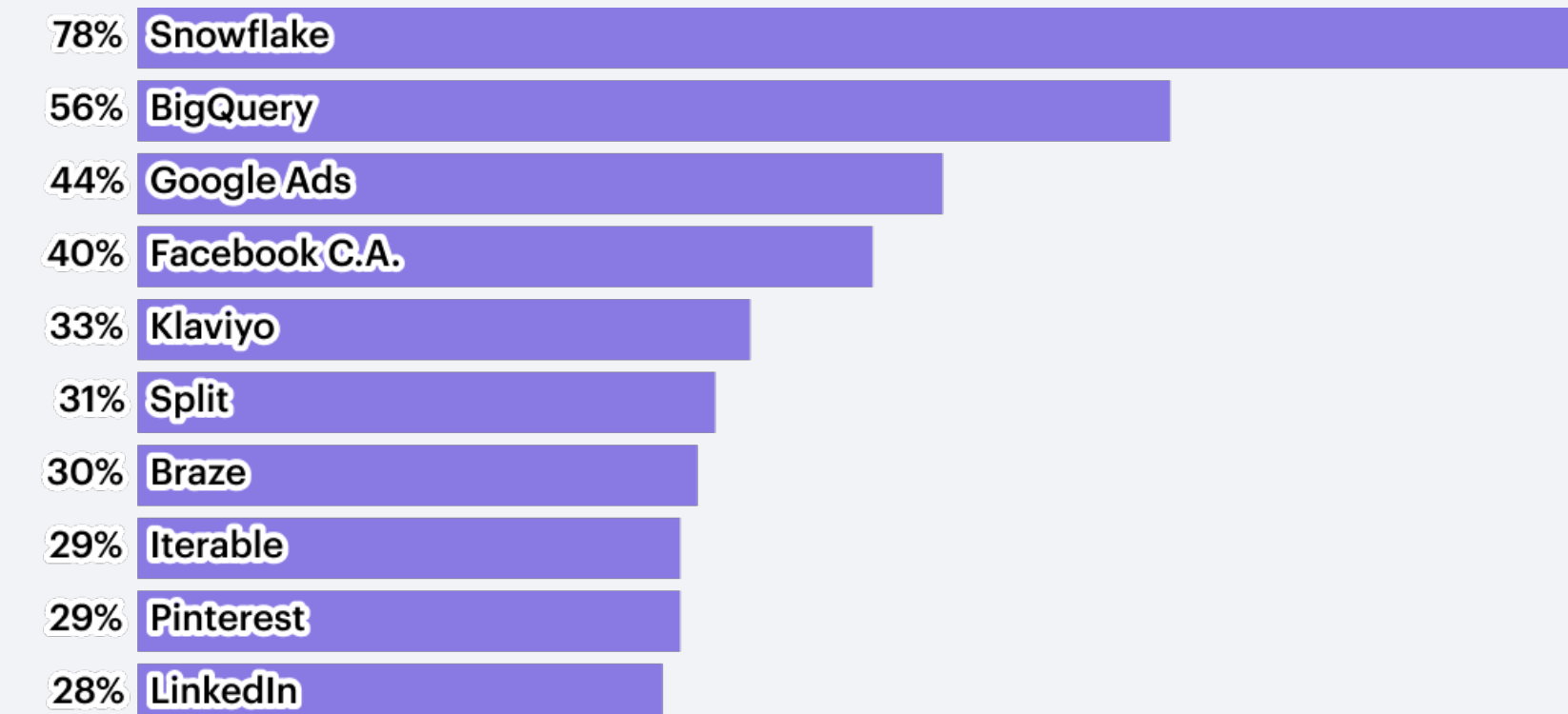
Let's dive in.

The first trend you'll notice is that it was a strong year for data warehousing tools like Snowflake and Google BigQuery. As we reported earlier, 2021 saw a significant rise in data processed on the Segment platform. Alongside this rise in data volume comes the need for more storage and processing bandwidth, as well as enhanced analytics capabilities. As a result, data warehouses and analytics platforms saw the largest YoY growth on the Segment platform from 2020 to 2021.

The second is the continuing growth of digital advertising. In spite of shrinking marketing budgets, global supply chain disruptions, and user privacy clampdowns, digital advertising has proved to be remarkably resilient and is expected to grow 31% this year.

This growth is reflected in Segment customers' top ten apps. Our users sent their customer data and profiles to advertising tools more than any other marketing channel in 2021.

Here's a closer look at the 10 most popular apps on the Segment platform in 2021.

The Fastest Growing Apps of 2021

78%	Snowflake
56%	BigQuery
44%	Google Ads
40%	Facebook C.A.
33%	Klaviyo
31%	Split
30%	Braze
29%	Iterable
29%	Pinterest
28%	LinkedIn

YoY% growth in usage by Segment customers

#1 - Snowflake

Usage of Snowflake, the Data Cloud company, grew by 78% YoY in 2021.

The company has been pretty busy ever since it debuted on the New York Stock Exchange in September 2020 at $120 a share – an event that was dubbed the biggest software IPO in history. 2021 saw Snowflake make a big enterprise play by launching a Hadoop migration. It also added Python support in preview and increased its focus on data programmability and governance. Aside from its expanded capabilities, Snowflake's increased focus on verticals drove quarterly triple-digit YoY revenue growth in its second fiscal quarter ended July 31, 2021.

Unpacking the growth of Snowflake on the Segment platform, much has to do with its ease of implementation and scale. With Segment and Snowflake, you don't have to build your own ETL pipeline to stream data from your mobile apps and websites into a data warehouse. You can also stream data from other sources like your CRM, help desk, payment systems, or email marketing tools. Segment schematizes and loads all of this data for you with no extra configuration required. Snowflake's platform scales automatically and supports fast queries with practically no limits on how many analysts can access it at once.

Automating this process will save your engineering team a significant amount of time. On average, our customers reported it would take 108 engineering hours upfront and 40 hours of maintenance per month to implement a warehouse pipeline on their own. With Segment, that time shrinks to just a few minutes spent authorizing your Snowflake account.

Vishwanath Tanneeru
Lead Data Architect at Allergan

"The machine learning team loads custom audiences and data science scores for consumer profiles into the Snowflake database. From Snowflake, we leverage the Segment's SQL traits to ingest that data into the Segment user profile.

Now, marketing, personalization, and CRM teams can use Segment's audience builder to create target audience groups and reach them through multiple marketing channels supported by Segment. This end-to-end automation has been quick and easy to accomplish with Segment and Snowflake and added instant value to our business."
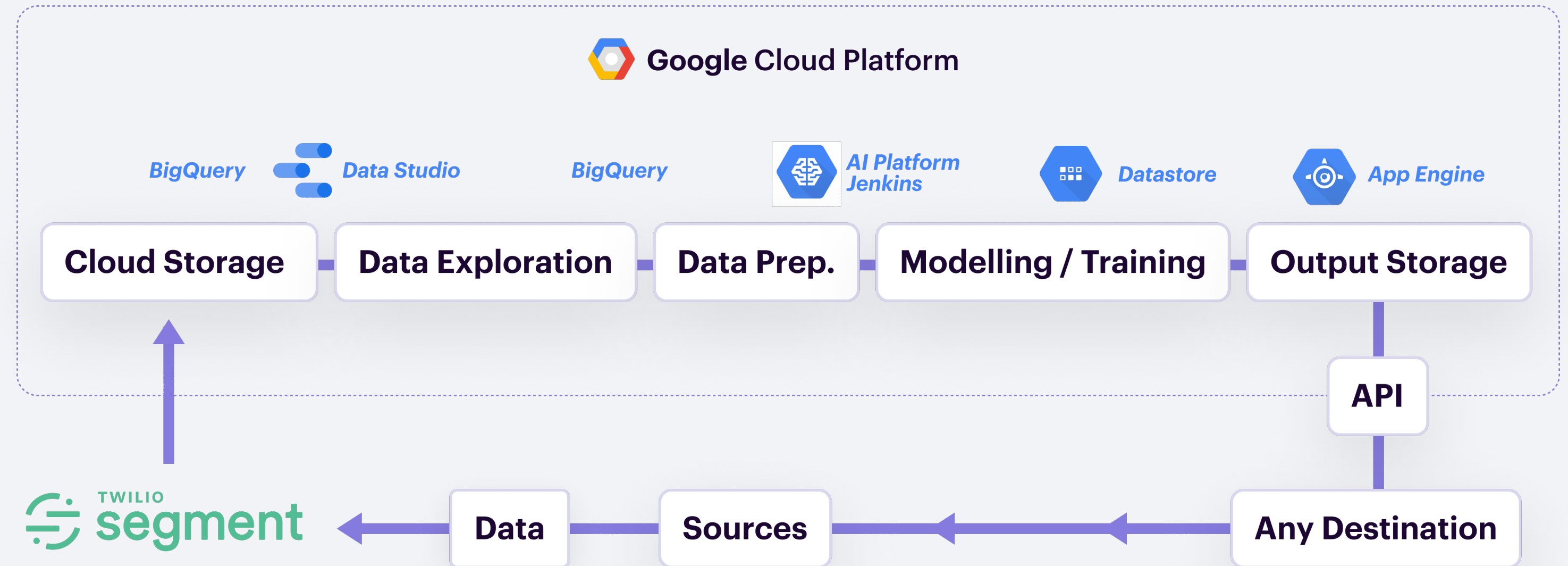
#2 - BigQuery

BigQuery, Google's low-maintenance cloud data warehouse, has been around for a decade and is one of the most popular data warehouses on the Segment platform. Thanks to its serverless architecture, it's quick and easy to set up and doesn't require infrastructure management on your end. It also offers powerful, lightning-fast analysis tools that are useful for big data and enterprise use cases. For example, it takes less than 30 seconds to query a 7 terabyte dataset with 100 billion rows.

While BigQuery was made for Google Cloud, last year it released Omni, a solution to allow users to query data on other clouds, such as AWS and Azure, without leaving the BigQuery interface. This move was a significant step in reducing data silos and reflects the larger trend of multi-cloud analytics (an approach that Snowflake also uses).

These launches saw usage of BigQuery on the Segment platform grow by 56% YoY in 2021, as more and more customers used BigQuery to run experiments on massive datasets. Using BigQuery through Segment means you'll get a fully managed data pipeline loaded into one of the most powerful and cost-effective data warehouses today.

How Norrona, a Danish retailer is using Segment + BigQuery to power their business

#3 - Google Ads

As the market leader in online advertising, Google Ads captured 28.6% of digital ad revenue share in 2021. For every $1 a business spends on Google Ads, it gets back $8 in profit through Ads and Search, according to estimates by Google. It follows that this channel is the fastest-growing advertising app on the Segment platform, up 44% from 2020 to 2021.

Despite being a veteran of the industry, Google Ads has continued to evolve and improve. Last year, it refined its ability to understand customers' search intent, strengthened ad controls, enhanced video ad tracking, and conversion attribution, launched Smart Bidding across different accounts, and introduced automatic implementation of campaign recommendations. These and other upgrades help make it a channel of choice for marketers looking to quantify returns, track performance in real-time, and boost the business value of marketing activities.

#4 - Facebook Custom Audiences

Despite continued public criticism, government scrutiny, and diminishing popularity among young North American users, Facebook (now part of Meta Platforms Inc) remains unrivaled in its ability to target users. Its monthly active users continue to grow in number, and the network took the second-largest slice of digital ad revenue share in 2021, capturing 23.8%.

On the Segment platform, usage of Facebook Custom Audiences grew by 40% YoY, primarily thanks to the ability to create real-time, unified customer profiles out of disparate sets of data. These customer profiles are automatically fed with the latest customer data via Segment, giving businesses the ability to get even more targeted and personalized with their advertising (and subsequently drive more ROI).

A popular Segment and Facebook use case

#5 - Klaviyo

#6 - Split

Klaviyo is a feature-rich tool helping marketers take strides in personalizing and automating communications. Segment users are taking note – usage of Klaviyo on the Segment platform grew by 33% from 2020 to 2021.

Once predominantly known as an email platform, 2021 saw Klaviyo expand its offering with a variety of features and integrations last year, including enhanced capabilities for audience segmentation, SMS A/B testing, and scaling one-on-one event-triggered messages.

The growth of Klaviyo is indicative of a wider trend: **businesses investing more in their owned marketing channels.** The tightening of privacy and data sharing rules across ad networks means that B2C companies need better ways to engage customers. Klaviyo is just one of the companies on our list benefitting from this tailwind.

Last year, Twilio reported that the pandemic sped up digital transformation efforts by six years. This saw businesses rapidly increase their development cadence, as they shipped new products and features to cater to new customer demand.

It was therefore encouraging to see the usage of Split, a feature flag management platform, grow by 31% from 2020 to 2021.

Split says the use of feature flags has grown at a 300% annual rate, as more and more businesses seek to deliver value to their customers quickly but safely.

But to get the most out of feature flags, it's important to combine them with data on performance, user behavior, and the like, as doing so reveals the impact of a new feature or a change, says Split CEO Brian Bell. Segment enables that. By unifying experimentation and insights, the Segment-Split integration lets businesses iterate rapidly to refine app functionality.

#7 - Braze

#8 - Iterable

Brands have come to view customer engagement from a holistic perspective, working across multiple channels and customer touchpoints to engage users effectively. As such, natively cross-channel customer engagement platforms like Braze are gaining traction, as they enable businesses to deliver relevant, personalized experiences across channels and at scale.

Braze has been busy expanding its customer base across all verticals during the past year, and today the company has over 1,200 global customers. This past fall, Braze debuted on the NASDAQ stock exchange, and they just launched a litany of upgrades and new features in their Winter 2022 product release that you can read about here.

Reflecting upon this trend, we saw Braze usage grow by 30% from 2020 to 2021. Braze is available on our platform as both a source and a destination. Messaging activity recorded by Braze can be streamed back to Segment via Braze Currents for transformation, validation, and analysis. Additionally, customer data and profiles collected via Segment can be sent to Braze to inform customer communications plans and user journeys.

Consumers want a more personalized brand experience that meets them where they are. With the acceleration of marketing's digital transformation, platforms like Iterable have expanded their offerings to empower brands as they connect with consumers across email and mobile channels.

Iterable's increased focus on R&D and regional expansion in 2021 resulted in 60% YoY growth in revenue and a 44% increase in its global customer base — and Segment customers took notice, where usage grew 29% YoY.

Iterable is both a source and destination for Segment customers. Through Segment you can populate Iterable with user and event data to power personalized messaging workflows. Iterable then sends messaging event data to Segment, allowing for the consolidation of data in analytics solutions or data warehouses for more actionable insights.

#9 - Pinterest

#10 - LinkedIn

Pinterest was one of the social media darlings of the pandemic as people searched for inspiration to spruce up their homes and get some gardening and DIY tips. With more people staying at home, user-generated content blossomed on the platform which is why Pinterest is investing heavily in short-form video content and building a Creator ecosystem. Expanding into content Creators gives markets additional value.

Pinterest has been strengthening its e-commerce position, and in Q3 2021, the company reported a 60% YoY growth in the use of its in-app shopping features. It made a major social commerce push in April, expanding its Shopify partnership to 27 new countries and growing its support of small businesses.

LinkedIn saw record engagement last year as more people used the platform to create content, make connections, and get hired. In the July to September quarter, it reported a 42% YoY increase in revenue, as well as a 160% YoY increase on hires made through the platform. Today, more than 15,000 enterprises use LinkedIn.

On Segment, usage of LinkedIn grew by 28% from 2020 to 2021. Our customers can easily deploy the LinkedIn Insight Tag to their web properties to track user actions, deepen campaign analysis, and retarget users with ads.

Customer data platforms are riding the e-commerce wave to new heights

The bottom line: *Seasonal e-commerce events saw data volume surge by up to 1,000% for retail customers.*

Even as foot traffic to physical stores picks up again, e-commerce activity continues to explode on the Segment platform.

The Black Friday weekend saw Segment's platform reach an all-time high of API usage calls. However, these spikes weren't an aberration, and API volumes continued to accelerate well into 2021.

Unsurprisingly for a channel with so much volume, retailers are turning to customer data platforms to make sense of it all. Hundreds of retail customers have told us that, in the shifting COVID landscape, they need to take the personal experiences that an in-store associate could provide and find ways to bring those online.

That can mean everything from real-time support online, product recommendations via email, or even strategically providing coupons to customers most likely to convert.

Regardless of the goal, having the ability to access and act on customer data in real-time is crucial.

111 billion API calls passed through the Segment platform over the Black Friday weekend

Privacy changes provide tailwinds for customer data platforms

The Customer Data Platform
Report 2022

The bottom line: *Segment is one of many customer data platforms riding tailwinds from the growing regulation around personal data control and blocking of third-party cookies. Over 50% of Segment customers are now using our CDP for advertising purposes.*

For years now, browsers and government regulators have rung the death knell for third-party cookies (for those in need of a refresher, these are small pieces of code installed on a user's browser, by a domain they've never visited, to track behavior across websites).

In 2017, Apple implemented an update that automatically blocked third-party cookies and limited the lifespan of first-party cookies in Safari. Mozilla followed suit in 2019 with Firefox, which also blocks third-party cookies by default.

This culminated in 2020 when Apple announced users now had to explicitly grant app developers permission to share their phone's unique identifier (IDFA) for tracking and advertising purposes. While users could opt out of sharing their IDFA previously, this release brought the option to the forefront rather than burying it under Settings.

To put it simply, privacy regulations and browsers are moving towards an internet where it won't be possible to retarget anonymous users with personalized ads across website domains.

In theory, this should spell disaster for advertisers. Instead, it's promoted marketers to rethink their existing strategies and adopt new technologies like customer data platforms that allow them to ethically leverage first-party data to connect with their customers.
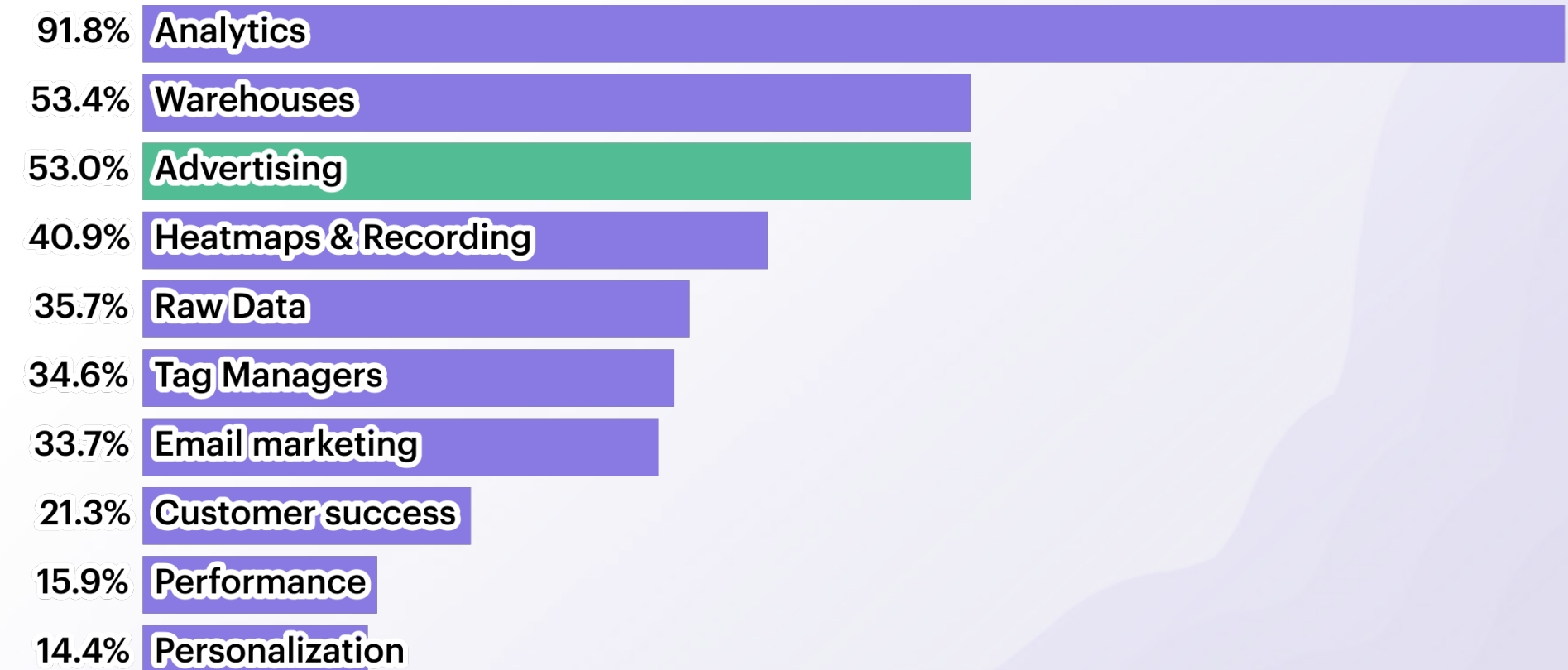
Our data shows that over 50% of Segment customers are now using our CDP for advertising purposes.

We're also seeing behavioral changes in where businesses are collecting customer data. In 2021, we saw node.js become the third most popular way of collecting customer data on the Segment platform, the first server-side source to ever crack the top five.

Segment's Node.js library lets you record analytics data from your node code. The requests hit our servers, and then we route your data to any destinations you have enabled.
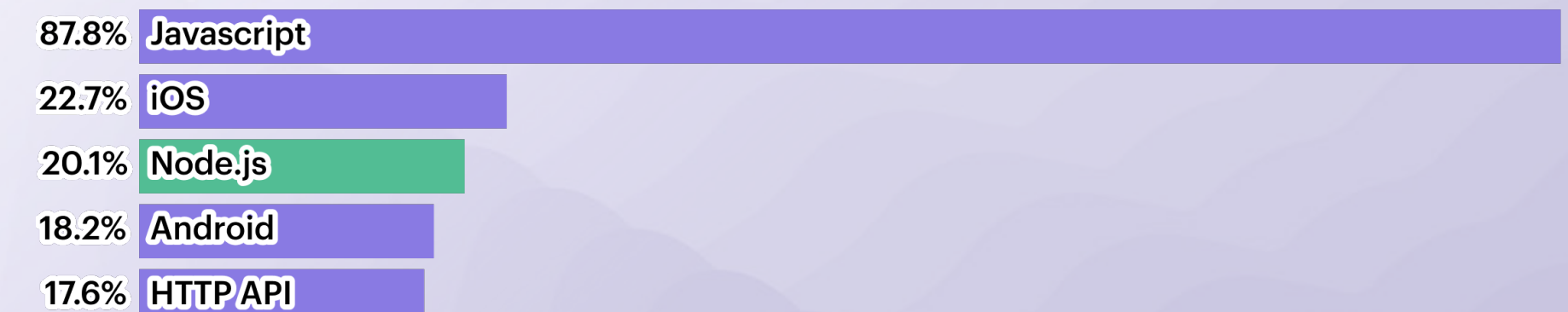
This is important as it shows us that developers, in the face of challenges being posed to browser-based tracking, are increasingly leveraging node.js for server-side tracking (as opposed to client-side tracking, by far the most common form of data collection over the past decade).

The Most Popular App Categories

91.8%	Analytics
53.4%	Warehouses
53.0%	Advertising
40.9%	Heatmaps & Recording
35.7%	Raw Data
34.6%	Tag Managers
33.7%	Email marketing
21.3%	Customer success
15.9%	Performance
14.4%	Personalization

Percentage of customers using a tool from the category

The Most Popular Data Sources

87.8%	Javascript
22.7%	iOS
20.1%	Node.js
18.2%	Android
17.6%	HTTP API

Daniel Alvarez
Chief Product Officer at Quartz

"Working with Twilio Segment has given us the chance to be proactive about data privacy changes. What could have been a mad scramble to get around the changes actually set us up for success by offering a better experience for our readers and advertisers."

But walled gardens continue to flourish

The Customer Data Platform
Report 2022

The bottom line: *As marketers brace for a world without cookies, they are pouring more dollars into Facebook (now Meta), Amazon, Apple, and Google. Facebook and Google dominate the top ten apps on the Segment platform.*

In response to these industry changes, more businesses are turning to Google, Facebook, and Amazon, walled gardens that have robust amounts of users and, therefore, valuable first-party data, to reach their audiences.
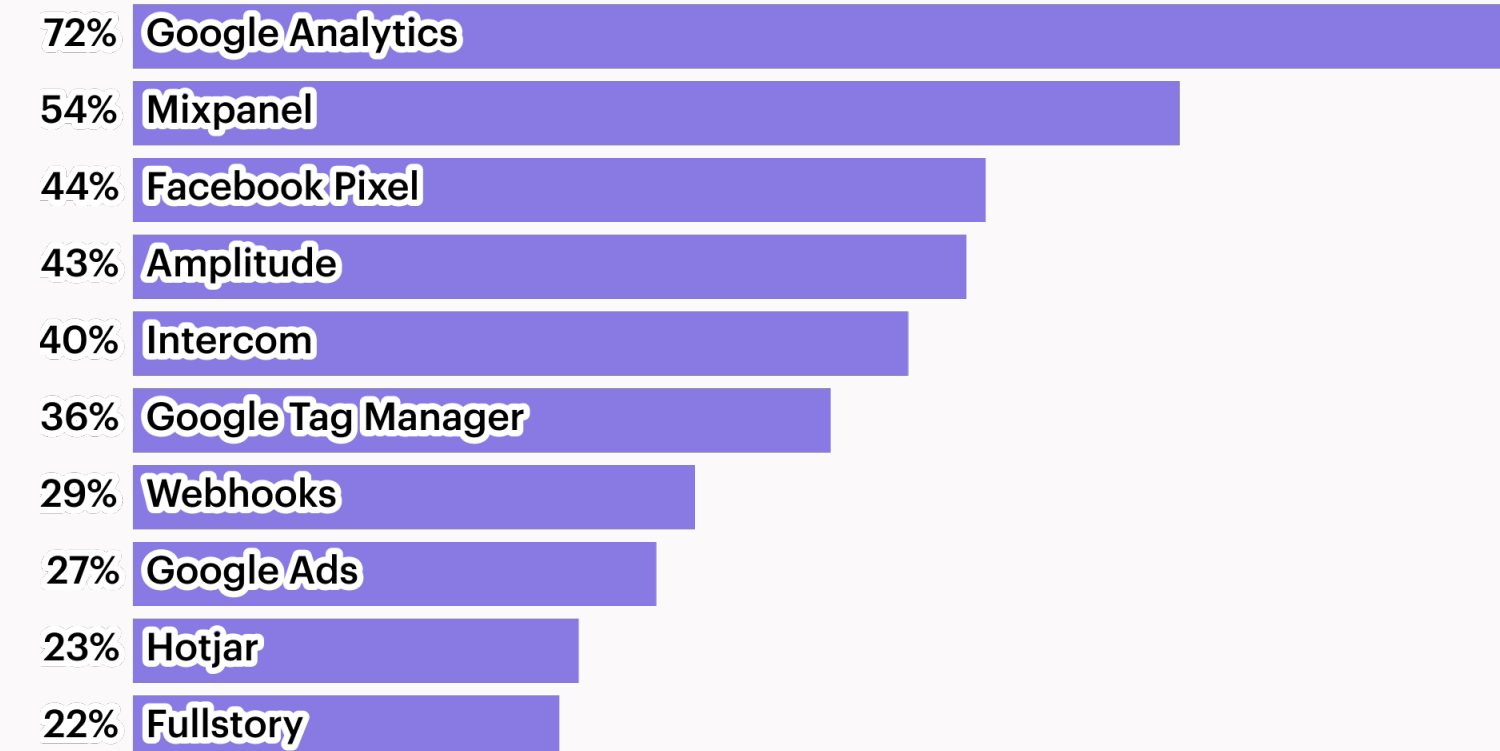
According to Jounce Media's 2021 market outlook, this rising demand from marketers saw walled gardens capture 69% of global non-search digital advertising spend, up from 28% in 2017. Four companies – Google, Facebook, Amazon, and The Trade Desk media-buying platform – controlled 60% of demand for all open internet web, mobile app, and connected TV spend in 2021, up from 33% in 2017.

This data is backed up by activity on the Segment platform, with Facebook and Google having a prominent place in the top ten apps used by Segment customers.

However, exclusive dependency on someone else's walled garden is fraught with challenges. You're subject to their rules and fees, which may change at any time. You're also relying on the data they gather on the audiences you want to reach.

Furthermore, activating, converting, retaining, and growing users is not only done using paid media – it's done with email, SMS, and a litany of other channels. It's incredibly important that amazing businesses can make their first-party data accessible not only to paid media but to other equally important channels. In 2021, our customers showed that using a CDP and leveraging the scale and reach of a walled garden gives you the best of both worlds.

The Most Popular Apps

72%	Google Analytics
54%	Mixpanel
44%	Facebook Pixel
43%	Amplitude
40%	Intercom
36%	Google Tag Manager
29%	Webhooks
27%	Google Ads
23%	Hotjar
22%	Fullstory

Percentage of customers using tool connected to the Segment platform

Christian Rocha Castillo
Deputy Director E-commerce/Digital Media at Domino's Pizza

"Having Segment not only helped us do the personalization work we've always wanted to do, but we can now improve on the effectiveness of our Google and Facebook ad campaigns and create a better feedback loop."

Customer data platforms "go local" to help satisfy data regulations

The bottom line: *The global movement towards data sovereignty is gaining momentum and causing more businesses to turn towards regionally hosted CDPs.*

It has been nearly two years since Schrems II, a ruling that requires European Union-based businesses to assess the adequacy of a country's data protection rules before exporting data there. Companies are still grappling with its implications.

While some countries already have laws in place for sensitive data in certain sectors like health, government and finance, it's likely that other regional governing bodies and specific countries could follow suit with rules covering a broader category of data. Similar regulations for the hosting of customer data are being introduced in India, Canada, Brazil, Asia-Pacific, Middle East and North Africa, and beyond.

It's clear that this trend towards data sovereignty – data being subject to the laws of the countries or regions where it was generated – has gained significant momentum. And it has led businesses to require any software vendor that touches customer data to provide locally hosted offerings that ingest, process, and store customer data in-region.

Elmar Weber
Chief Technology Officer at AMBOSS

"A Customer Data Platform has allowed us to centralize GDPR compliance across multiple channels and markets and increase agility to react to fluctuating regulatory requirements."

Customer data platforms "go local" to help satisfy data regulations

In response, Segment has embarked on a one-year journey towards a regionalized product – Regional Twilio Segment – that was released in Europe in January 2022.

Regional Twilio Segment gives you Connections, Protocols, and Personas with data ingestion, processing, storage, and audience creation done on infrastructure hosted in the EU. It can greatly reduce – and in many cases eliminate – the need for data transfers to the US and other 3rd countries.

With such regulatory developments and the growing governmental and individual focus on personal data privacy globally, we can expect a new way of thinking about customer data to gain more prominence in 2022 and beyond: that of compliance with regional data regulations being the bare minimum and a growing focus on data etiquette and being a good steward of customer data.

It also means that anyone looking to adopt a CDP in 2022 needs to ask their vendors some tough questions: can they support the residency requirements that regulations require and provide the tools and controls to help protect the data privacy of end users in the EU and around the world?

High Level Customer Architecture

Customer Applications

Analytics JS
Client-Side Integration

Python Django
Server-Side Integration

iOS SDK
Mobile Integration

Regional Ingestion
events.eu1.segmenttapis.com/v1
Dedicated Tracking Endpoint

Segment Infrastructure

Dublin, Ireland — AWS

eu1.app.segment.com
Managment console

Regional Processing
Dedup, Filters, Schema, Transform

Regional Personas
S3 bucket

London & Zurich

Regional Personas
Audience Builder

Customer Destinations

Snowflake
Data Warehouse

Braze
SMS & Push Notifications

Amplitude
Analytics

Twilio Segment is the leading platform for customer data

As the volume and complexity of customer data continues to accelerate, businesses worldwide need to adopt the right infrastructure to put privacy first and enable customer-first engagement.

Although the findings of our report highlight recent changes – privacy regulations, e-commerce growth, tech stack consolidation – we believe these trends are here to stay.

See why 25,000+ customers use Twilio Segment's CDP to collect, clean, and control customer data at scale.

Schedule a demo to learn how to get the most out of your customer data with Twilio Segment.

Want to learn more about customer data platforms?

5 Ways to improve Customer Engagement with a CDP

Learn how to leverage a CDP to boost engagement rates across channels like SMS, live chat, customer support, and more.
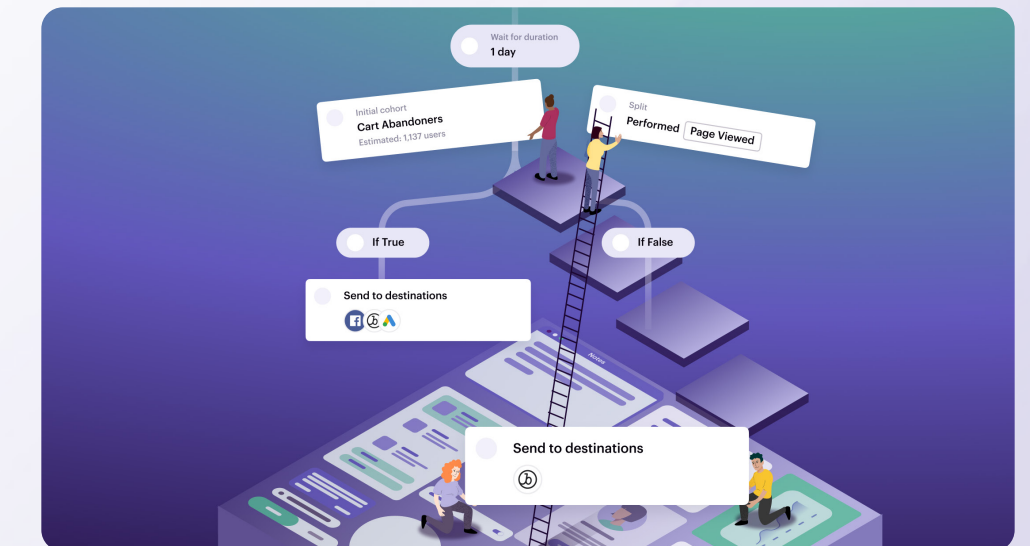
Download Guide

The Growth Report

This report features key insights from growth leaders at Lyft, Zendesk, and Shopify on how they're using CDPs to fuel growth.

Download Report

Customer Data Privacy: Build, Buy...or Both?

We break down the CDP build vs. buy debate, and discuss a third option: harnessing the benefits of both with a hybrid approach.

Download Guide