

# The CDP Report 2024: 5th Anniversary Edition





# Introduction

This year marks the 5th anniversary of our inaugural Customer Data Platform Report, an annual tradition synthesizing data, insight, and foresight into a narrative that speaks to the heart of the CDP market.

Our journey through billions of interactions and transactions across our platform has afforded us a unique vantage point to observe and analyze the patterns that define successful customer data strategies.

This year, a pivotal development emerges – the integration of AI as a fundamental component in shaping these strategies, transforming raw data into actionable intelligence and highly personalized customer experiences.

Continuing with our comprehensive and forward-looking approach, this edition delves into how businesses are leveraging data to create personalized, seamless, and scalable customer experiences. By mining the depths of our platform usage data, we've uncovered compelling trends and transformative insights.

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From processing a record-high API calls this year to exploring the burgeoning adoption of AI, this report is a testament to the relentless efforts by businesses to engage their customers and the indomitable spirit that drives them.

As we lay out the insights from the past year, we also cast our gaze forward, anticipating the trends that will shape the future. This report is more than just a collection of data points—it is a narrative of progress, a blueprint for innovation, and a guide for the journey ahead in the ever-evolving landscape of customer engagement.

Welcome to the nexus of data and possibility—welcome to the CDP Report by Twilio Segment.





# Methodology

- The data is sourced from the anonymized, aggregated usage behavior of Twilio Segment's customers, during the period of 11/01/2022 to 11/01/2023.
- We have only included tools that have active integrations in the Twilio Segment catalog, as of 11/01/2023.
- Categories are based on whether or not they are in the Twilio Segment catalog with that category tag.
- 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 Twilio Segment workspaces.



# Key Findings

## 1. Data Tsunami: A Record-Breaking 12.1 Trillion API Calls Processed in 2023

- **Finding:** In 2023, Twilio Segment processed an unprecedented volume of API calls, highlighting continued growth in data volume.

## 2. Effortless integration: Destination Usage Climbs by 12.5%

- **Finding:** There's been a significant 12.5% increase in destination usage on the Twilio Segment platform, indicating a shift towards more integrated and versatile data ecosystems in businesses.

## 3. The Data Warehouse Era: The Ascent of a Key Destination

- **Finding:** Data warehouses have seen a steady rise in popularity as a destination category, underscoring their critical role in managing data for deeper analytics and AI-driven insights.

## 4. Diving Deep into Customer Journeys: 12,969 Unique Events Tracked on the Twilio Segment Platform

- **Finding:** The Twilio Segment Platform tracked 12,969 unique e-commerce events in 2023, demonstrating the platform's capability to capture a wide array of customer interactions for deeper behavioral insights.

## 5. Predictive AI: The New Frontier in Customer Insight

- **Finding:** The growing adoption of predictive AI on the Twilio Segment platform, with 426 Predictive Traits available, is paving the way for more sophisticated customer engagement strategies.





Chapter 03

# **From ripple to wave:** Tracing API volume growth over the past five years





In the aftermath of the pandemic, many predicted a plateau in data volume. Yet, as we chart the course of API calls on the Twilio Segment platform, reality tells a different story – one of relentless growth and unexpected acceleration.

From this journey, it's evident that the landscape of digital interactions has not just expanded – it has transformed. Each API call is a thread in the intricate web of digital engagement, binding applications and platforms in a dynamic exchange of data.

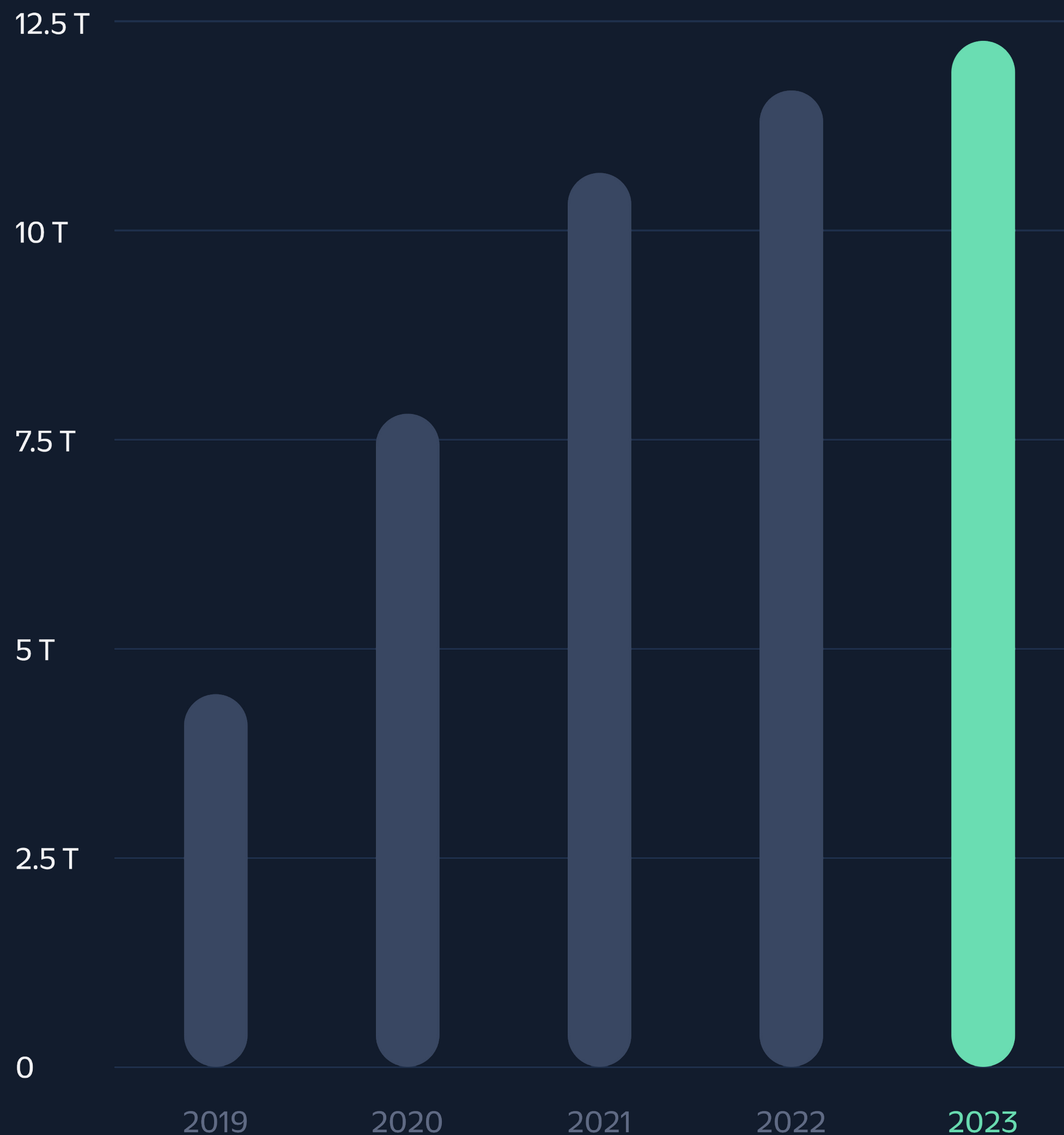
The driver behind this steep trajectory? A confluence of digital adoption, the proliferation of interconnected applications, and, more recently, the burgeoning field of AI. As artificial intelligence takes a more central role in business operations, its **appetite for data is becoming insatiable.**

In response, organizations are funneling more data through platforms like Twilio Segment, seeking to feed AI systems the rich, diverse datasets they require to generate insights and drive decisions.

**350 Billion**

More API calls passed through the Twilio Segment Platform than last year

API Calls on the Twilio Segment Platform by Year

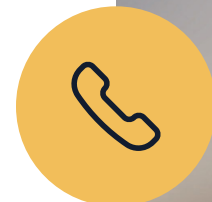




This uptick in API calls is a reflection of a broader industry trend towards more complex, data-driven operations. It underscores the growing reliance on real-time data processing and technology integration as businesses strive to remain agile and responsive in an increasingly connected world.

As we mark this five-year journey, it's clear that the trajectory of API call volume on Segment is an indicator of the digital age's momentum. It's not just about the growth in numbers but about how these interactions enable businesses to harness data more effectively, turning it into a strategic asset that drives revenue and efficiency.

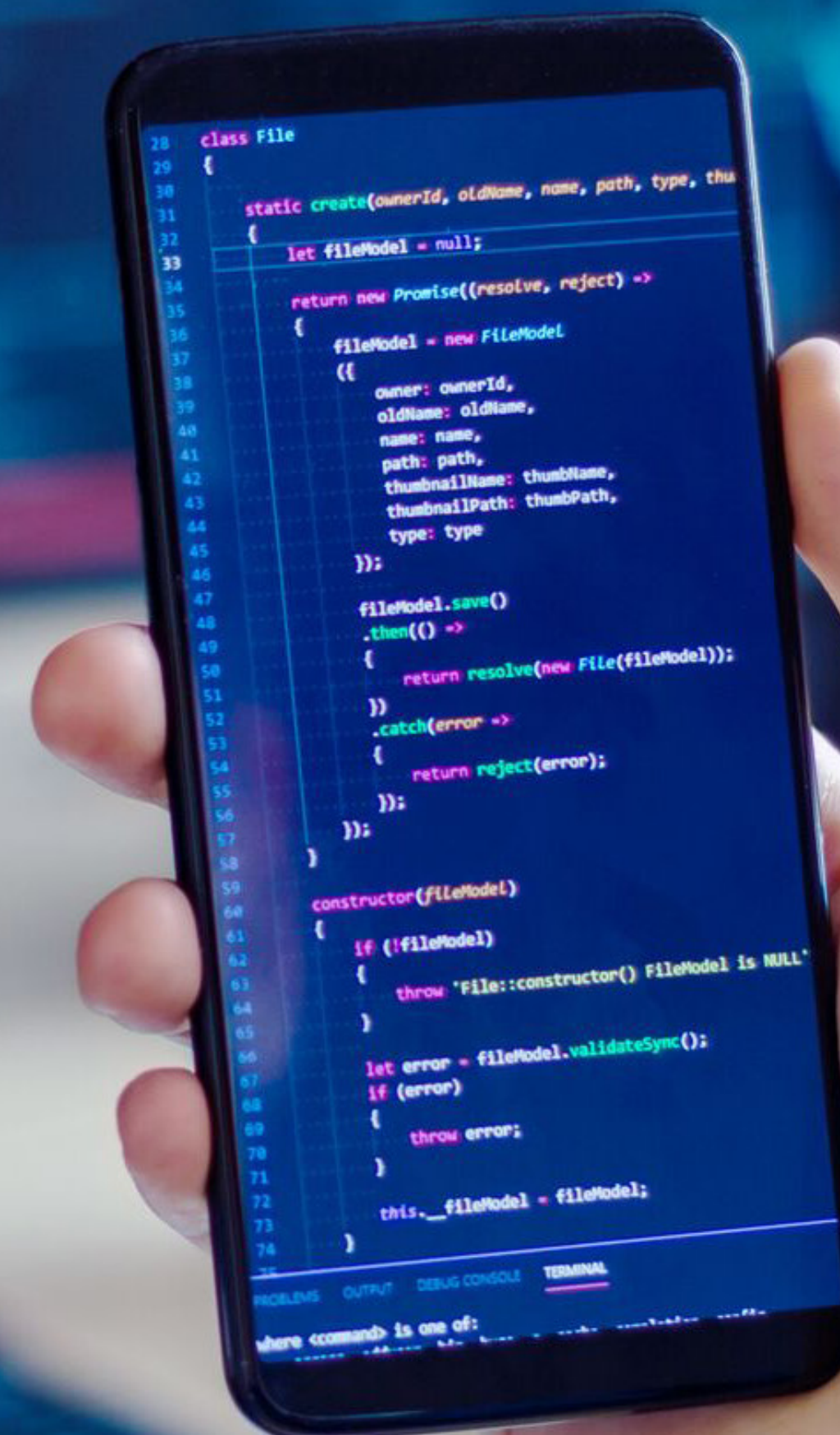
Looking forward, we anticipate this trend to continue, propelled by advances in technology and a wider adoption of AI in everyday business processes. The future promises even more data, more integrations, and a continued commitment from Segment to help make sense of it all.





Chapter 04

# Effortless integration: Segment's rise in destination adoption





On the Twilio Segment platform, something interesting is happening. Businesses are now sending their data to more places than before – 12.5% more to be exact.

This increased demand for apps and destinations on the Segment platform can be seen as a bellwether for the broader economy. In 2023, businesses have shown a marked increase in confidence, as evidenced by their investment in new technologies aimed at gaining a competitive edge.

Does this finding contradict the **ongoing movement towards software consolidation?**

Interestingly, no.

The key lies in understanding how businesses are navigating digital transformation. While they are using a diverse suite of applications to cater to specialized needs, there's a simultaneous push towards integrating these disparate systems into a cohesive ecosystem.

In a seemingly paradoxical scenario, these trends are not conflicting but are, in fact, symbiotic.

The Twilio Segment platform serves as a prime example, allowing these varied applications to be consolidated into a unified system.

This consolidation ensures that data flows seamlessly between different applications, improving overall efficiency and reducing the complexity that typically comes with using multiple standalone tools.



**12.5%**  
Increase in the median destination count on the Twilio Segment platform



Chapter 05

# The rise of the data warehouse:

Top destination categories through the years





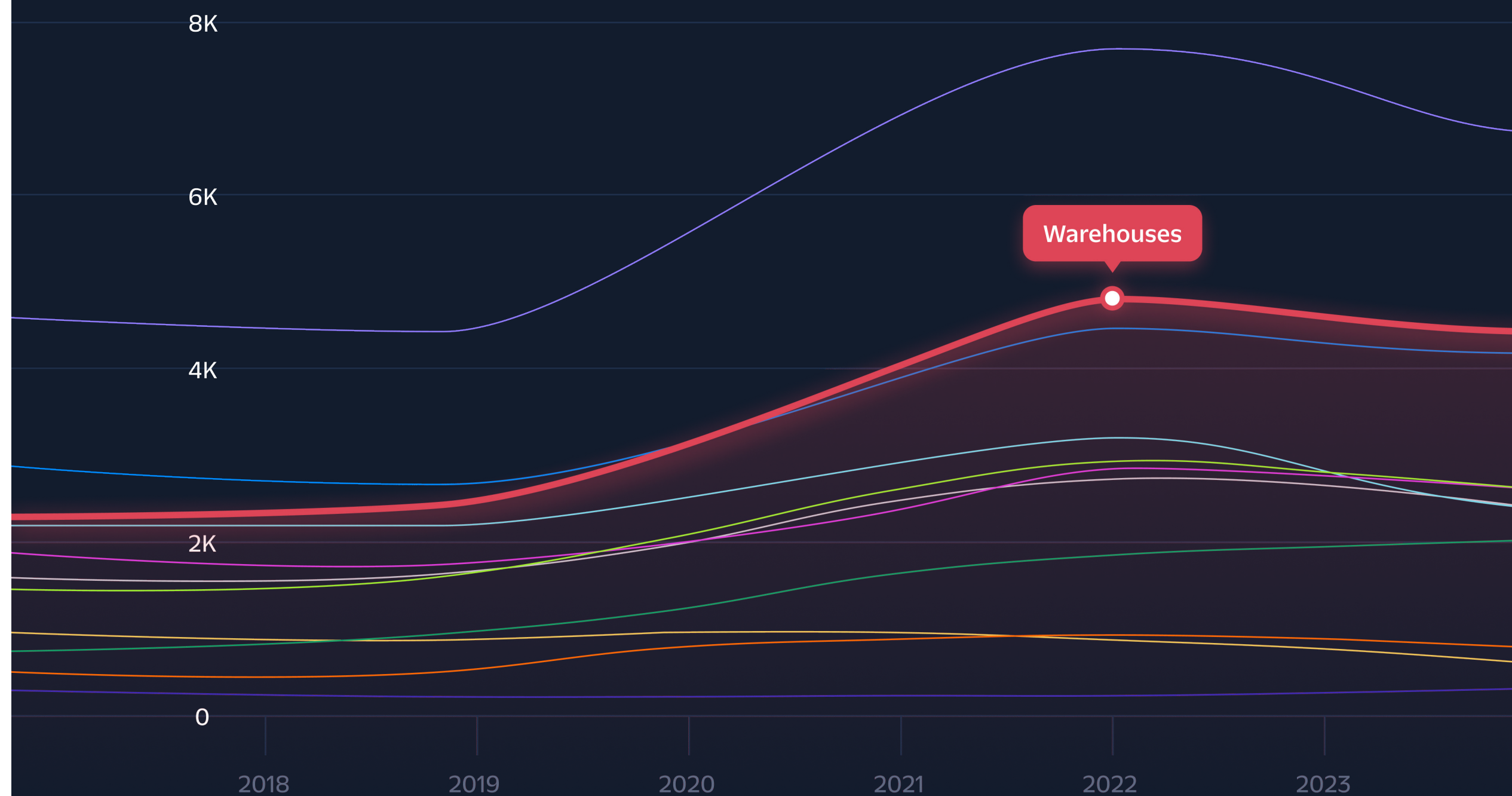
As we plot the trajectory of top destination categories over the past five years, one trend towers above the rest: the steady rise of the data warehouse. This graph not only illustrates a growth pattern – it narrates the evolving priorities of businesses in an increasingly data-centric world.

Data warehouses, represented by the bold red line, have undergone an extraordinary surge, particularly notable from 2020 onwards. This trend can be attributed to several factors:

- Increasing challenges faced by data architects and platform leads, such as fragmented customer data and the need for efficient real-time data processing
- The market demand for platforms that offer integration flexibility with existing systems and scalability to meet evolving business needs
- Businesses outgrowing the limitations of traditional CRMs in favor of versatile, computation-ready data warehouses, spurred by the need for a single source of truth

The expansion of data warehouse usage reflects a broader shift toward data centralization, quality, consistency, which are critical for leveraging AI and analytics effectively. Data warehouses enable a holistic view of customer interactions and behaviors, driving more informed decision-making and personalized customer engagement strategies.

## Destination Growth on the Twilio Segment Platform 2018-2023



- A/B Testing
- Advertising
- Analytics
- Customer Success
- Email
- Heatmaps & Recording
- Performance Monitoring
- Personalization
- Raw Data
- Tag Managers
- Warehouses



**Profiles Sync** and **Reverse ETL** make Twilio Segment's industry-leading unified customer profiles more portable and extensible. With these solutions data teams can create hyper-tailored audiences that power personalized customer experiences in their domain-of-choice, *the data warehouse*, and business users can sync rich profiles and other valuable data stored in the warehouse to all of the mission-critical tools they rely on to engage customers and personalize experiences.

We've also seen a consistent upward trend across all categories, from A/B Testing to Personalization, reflecting how businesses are integrating a diverse range of tools to collect, analyze, and act upon data.

Analytics, shown in the robust purple line, is the number one destination category on the Twilio Segment platform, forming the backbone of data-driven strategies. However, the introduction of **Google Analytics 4 (GA4)**, with its user-centric and event-based measurement model, has reshaped the category, steering away from session-based tracking and gearing up for a cookieless future.

The blue Advertising line shows substantial growth as well, suggesting a pivot to data-driven marketing in response to challenges like the deprecation of third-party cookies and the evolution of privacy-first tracking initiatives such as **Google's Topics API**, which has significant implications for future advertising practices.

While the growth in Customer Success and Email categories may appear modest, their roles in a holistic engagement strategy remain critical. In an economy marked by uncertainty, savvy businesses are intensifying their focus on customer retention, recognizing the **cost-effectiveness of nurturing existing relationships** over acquiring new customers. These platforms are instrumental to driving customer retention, facilitating sustained engagement through strategic communication and support.

We can also surmise from the aqua blue line for Heatmaps & Recording tools that businesses are keen on understanding user interactions and system health at a granular level, feeding this data back into the warehouse for a 360-degree view of operations.

In essence, the rise of analytics and data warehouses encapsulates a digital era where data is not just an asset but the currency of competitive advantage. As we move forward, we can expect the data warehouse to not just rise but evolve, accommodating real-time processing and more advanced analytics capabilities, solidifying its place at the heart of the data-driven enterprise and future AI-powered use cases.





Chapter 06

# What's your source? **Most popular data connections**





## Most Popular Sources on the Twilio Segment Platform

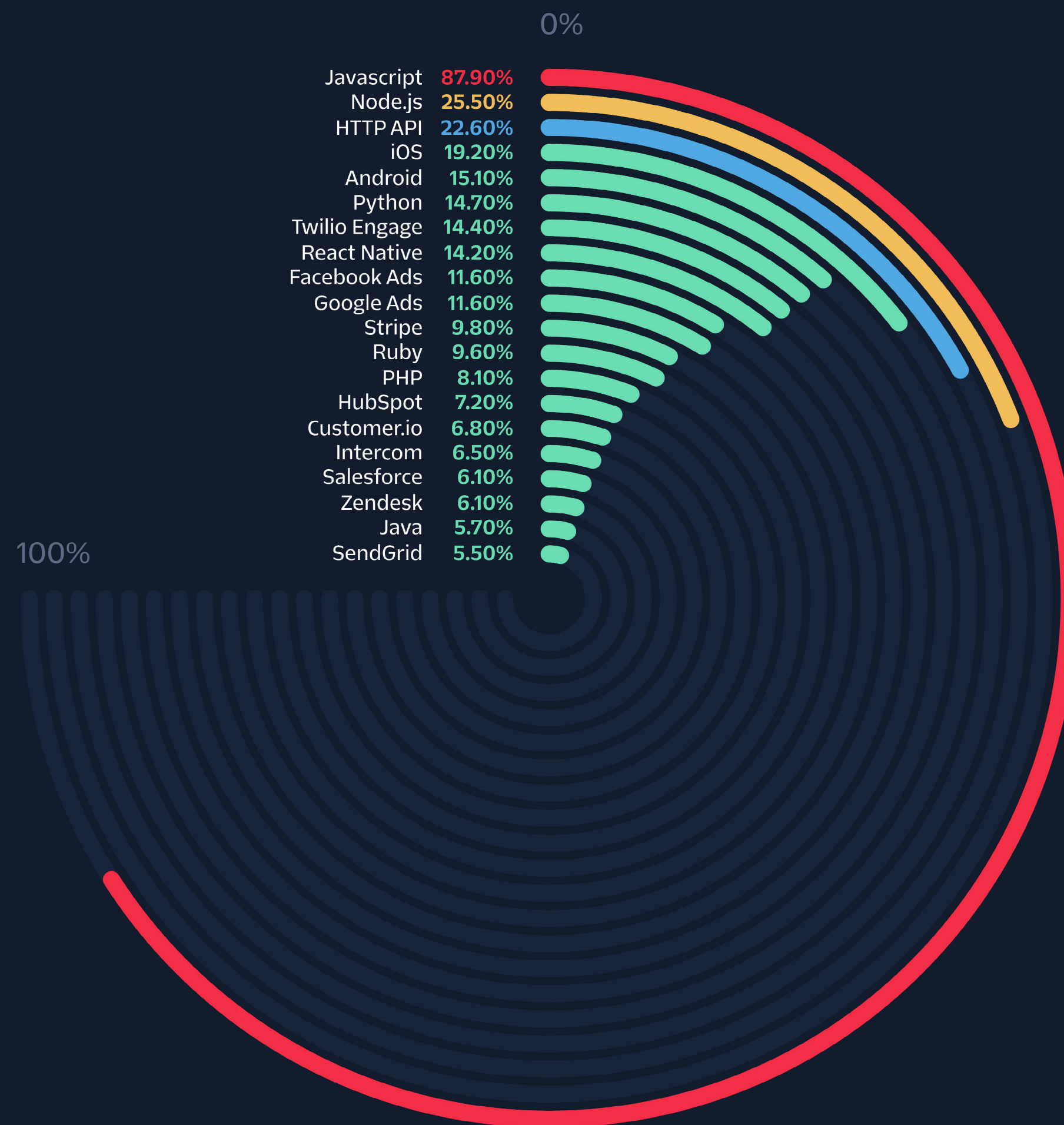
Over the last five years, the customer journey has become incredibly fragmented.

TransUnion reports that **80% of web users hop from one device to another to complete a task**, and Cisco estimates that there are approximately **13 networked devices per person** in the United States.

Increasingly, businesses like Fox, Instacart, and IBM **are turning to CDPs** to help solve this, and connect all types and sources of customer data, whether that's from websites, mobile applications, devices, servers, and more.

This raises an interesting question: what were the most popular types of data fed into Segment in 2023?

So we tallied up Segment's most connected sources of customer data to take a look:



Twilio customer usage percentage vs. source\*



## 1. Website and mobile sources

JavaScript tops the list, with nearly 88% customer usage, more than the rest of the top five data sources combined.

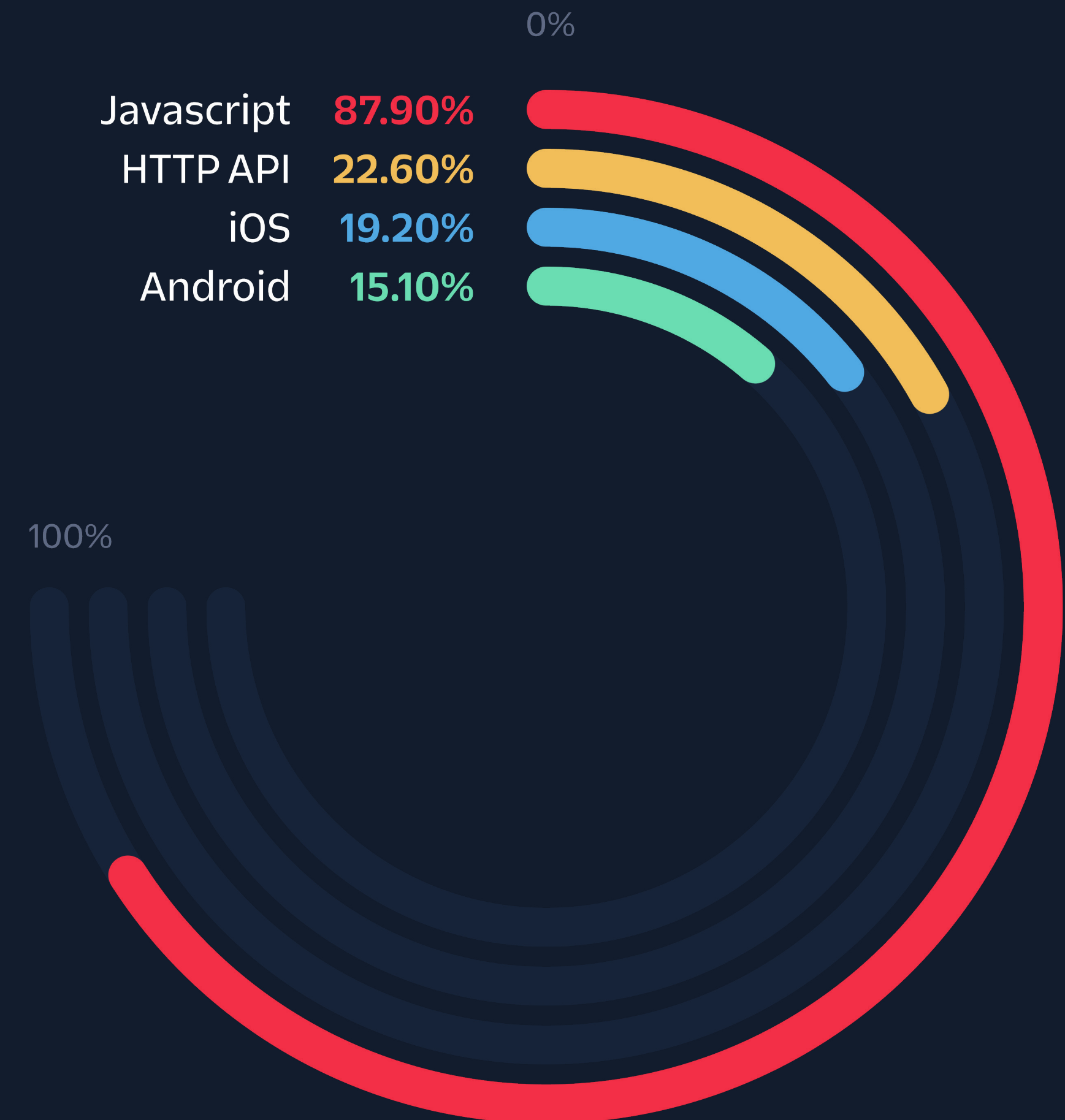
This isn't *hugely* surprising, given that JavaScript is the ubiquitous data collection method for a clean, versatile, and actionable source of customer data.

Many tools (including **Google** and **Segment**) rely on JavaScript code snippets embedded within websites to collect data on **who the users are, what they're doing, where they're doing it**, and more. We can conclude from this that websites, both desktop, and mobile, are the most prevalent source where businesses collect data on the Twilio Segment platform.

**HTTP API** comes in at #3 (22.6%) thanks to it being a fairly broad category. If you don't want to use a **native source** in Segment (like JavaScript, Android, etc.), you can use HTTP API to collect data on any website or app. You can think of it as a catchall for website and app data that's not collected through JavaScript or mobile means.

**iOS** comes in at #5 (19.2%), and **Android** is close behind at #6 (15.1%). Both of these data sources are used to collect in-app user behavior data. Such high rankings are a reflection of customer behavior as the world becomes increasingly mobile-centric, with **85% of the adult U.S. population owning a smartphone**.

Because users are online across multiple devices, data sources that are versatile and mobile-first dominate this list.







## 2. Server-side sources

Server-side data sources had a strong showing as well. This reveals that CDPs are used not just to help marketing, and product teams collect behavioral data, but also for technical work by development and engineering teams.

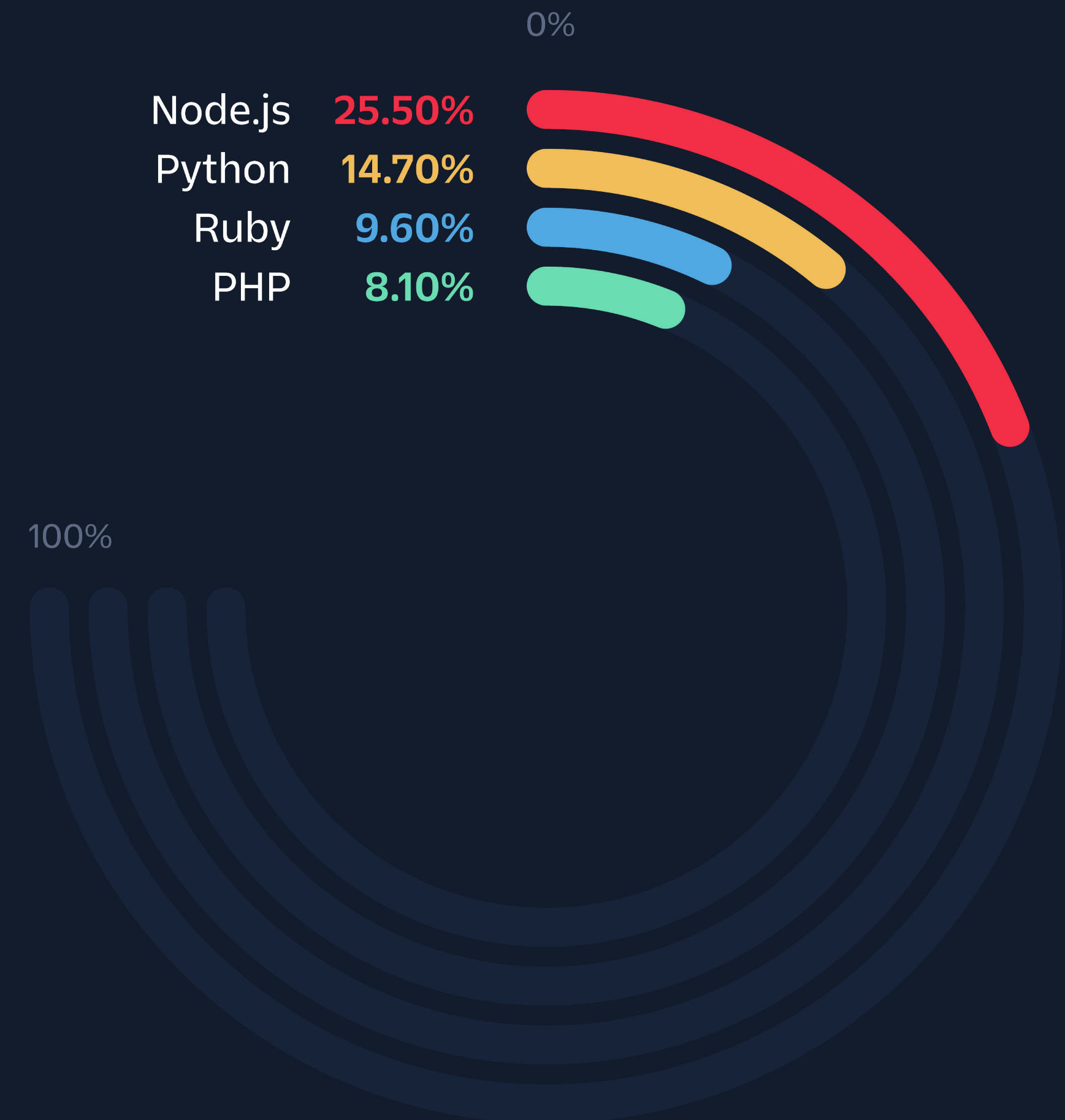
When businesses collect server-side data, they're pulling data from the servers and databases they own. The **alternative is client-side data**, which is data pulled from web browsers. Businesses use server-side data to understand the data they own, such as user behavior data in their software.

**Node.js** stands as #2 most popular data source in 2023 (25.5%). Node.js a runtime environment for JavaScript that's popular because it lets you **run scalable, real-time applications**.

Following Node.js, **Python** comes in at #7 (14.7%), making the top 10 likely due to its general-purpose nature and wide usage – it ranks as the **most in-demand coding language**.

All of these sources are used to create applications and to collect data on user behavior within them. Using these sources indicates that businesses are likely collecting data within a proprietary app or software to understand how it's used.

Again, versatile data sources dominate, meaning flexibility is most valued among server-side data sources.





### 3. Cloud sources

The rest of the top data sources are what we refer to as “cloud sources”, a wide variety of marketing tools focused on stages of the customer journey.

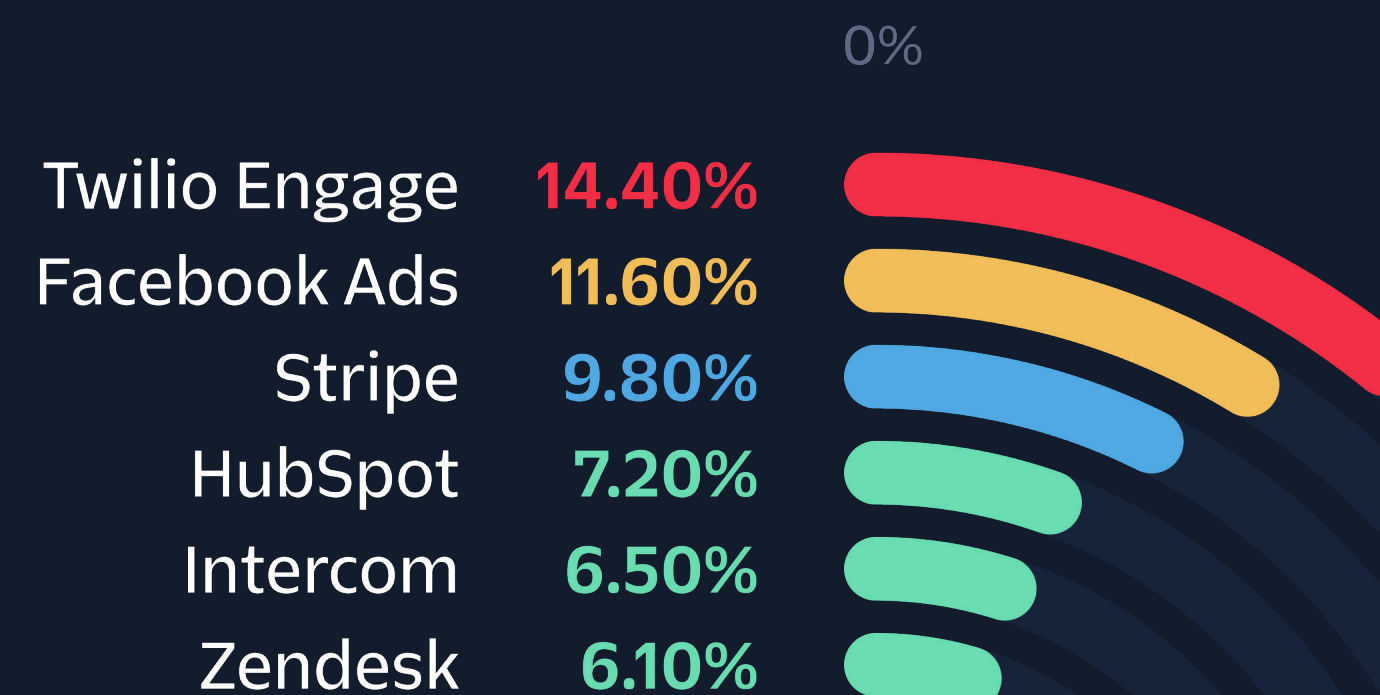
**Twilio Engage** comes in at #8 (14.4%). Using Engage as a data source means that the business collects data from the unified customer profiles that Segment creates. This data can provide an overview of the entire customer journey.

**Facebook Ads** is at #10 (11.6%), thanks in part to Facebook’s **strength in the advertising sector**. Businesses that use this data source collect data from their ads to gauge their success at driving awareness and traffic.

**Stripe** comes in at #12 (9.8%) and, similar to Facebook, this is likely thanks to its **market domination**. When businesses use Stripe as a data source, they’re collecting data at the point of purchase, which is the conversion stage of the customer journey.

After that, a group of customer management and support software starts to take over: **HubSpot** at #15 (7.2%), **Intercom** at #17 (6.5%), and **Zendesk** at #19 (6.1%). These tools specialize in the engagement and retention stages of the customer journey. When businesses use the tools as data sources, they’re collecting data on touchpoints such as customer support chats, emails, and more.

Besides Engage, these data sources eschew versatility in favor of a laser focus on specific stages of the customer journey. This data is collected at clearly defined touchpoints, like when an ad is clicked, an email is opened, or an item is bought.





Chapter 07

# **Most popular apps** on the Twilio Segment Platform





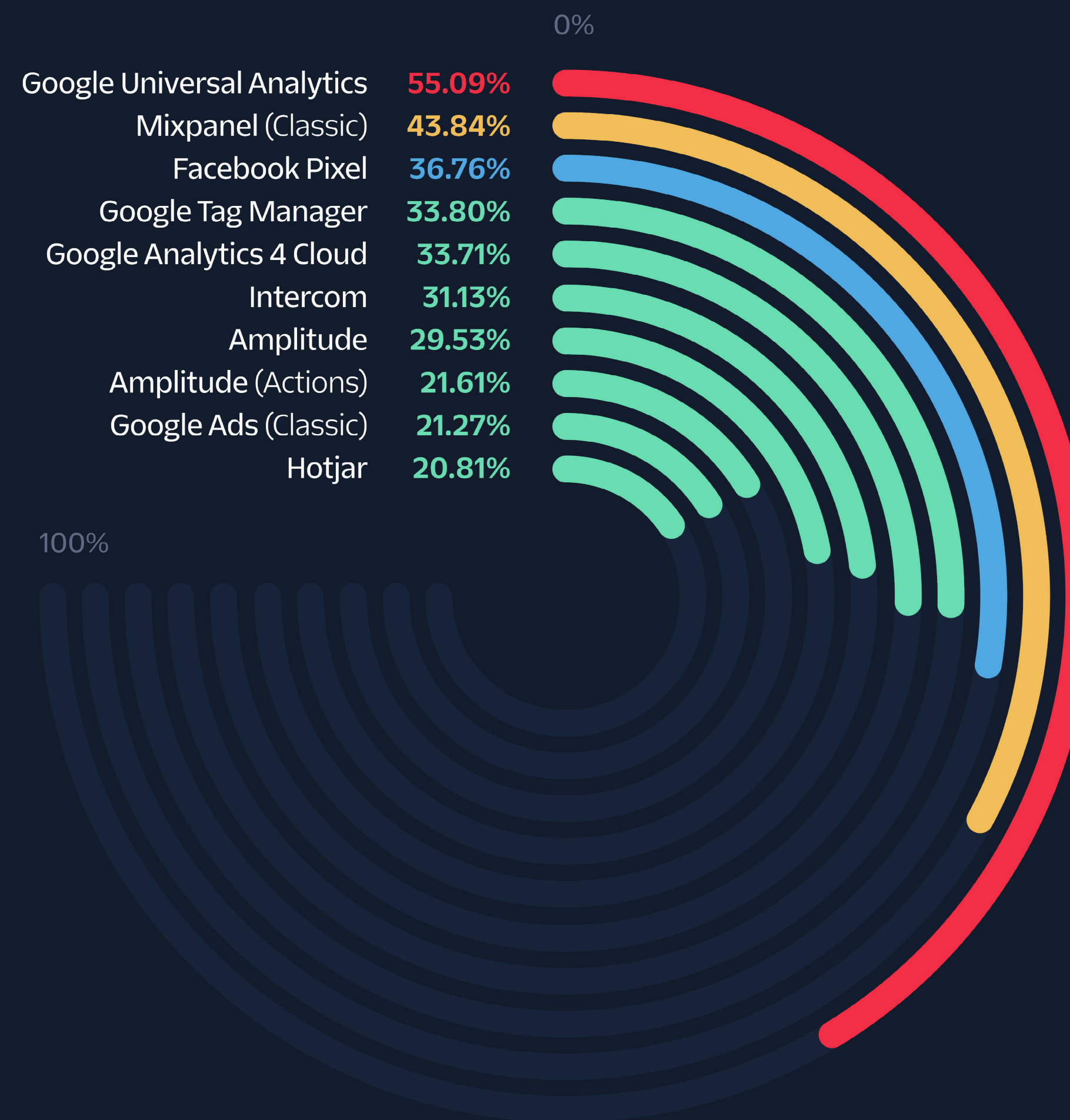
Aside from collecting data from all digital touchpoints, Twilio Segment helps our customers connect that data to 450+ out-of-the-box integrations. And, with **Functions**, integrating virtually any application on the market becomes possible, providing unparalleled flexibility.

Therefore, we're able to gather unique insight into how the market is evolving for analytics, marketing, and growth teams.

Our catalog features a mix of well-known tools and innovative newcomers, each distinct in approach. What they share, however, is a clear focus on driving tangible business outcomes: improved customer experiences, retention, LTV.

Google Universal Analytics commands the lion's share (55%) of Segment's customer base, speaking to its entrenched position as the analytics backbone for countless businesses. However, **as of July 1, 2023**, Universal Analytics properties stopped processing new hits, making its successor, Google Analytics 4 (GA4), the default analytics platform.

## Most Popular Destinations on the Twilio Segment Platform



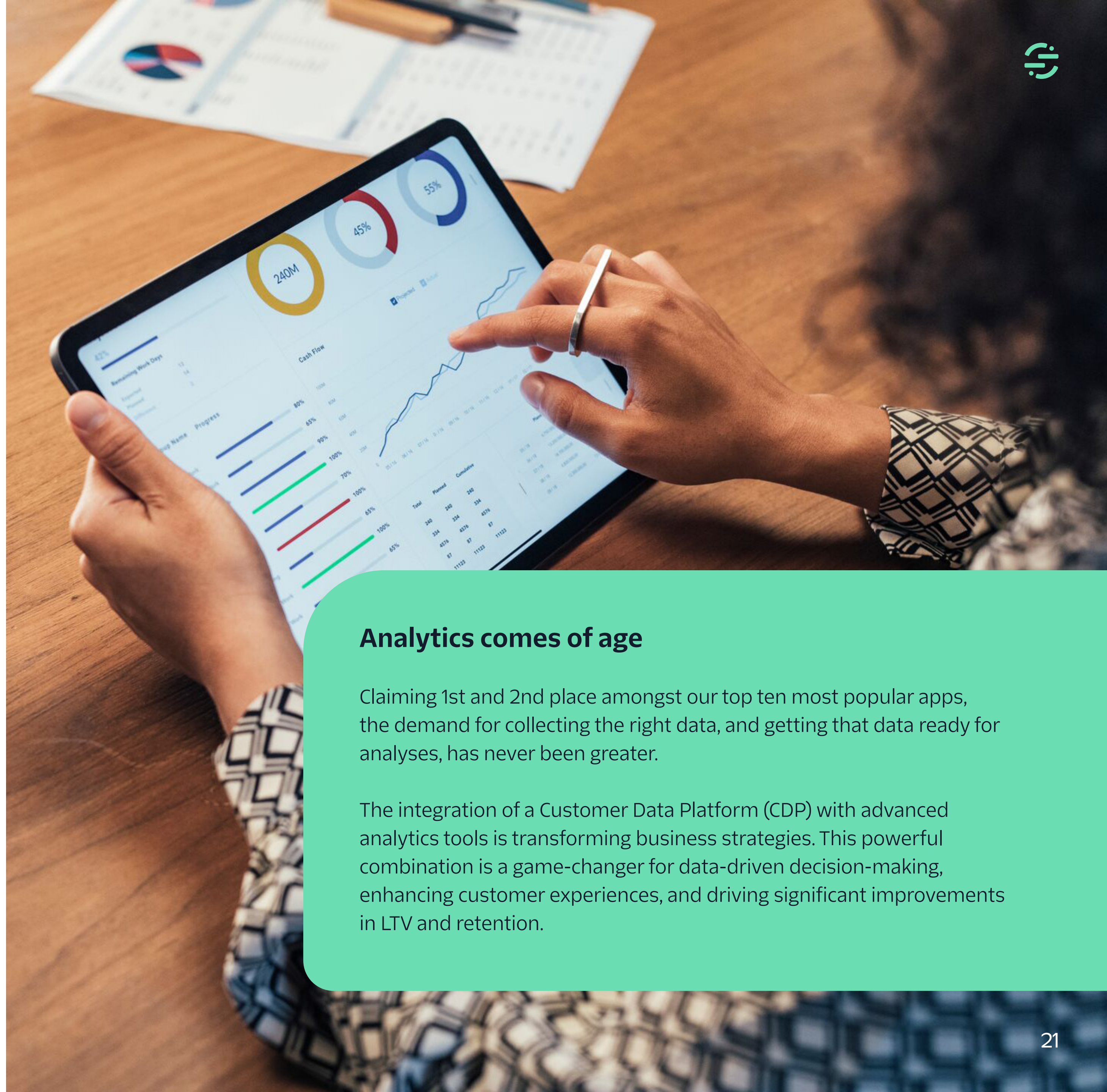
Twilio customer usage percentage vs. destination\*



GA4 - #5 on our list- represents a shift in how data is collected and organized, focusing on a user-centric measurement strategy rather than session-based tracking like Universal Analytics. It is designed to provide more granular data controls in response to increasing privacy demands and changes in consumer behavior. GA4 uses **machine learning to fill in data gaps** and provide predictive insights about user behavior and conversions, aiming to help businesses adapt to a future with or without cookies and identifiers.

Mixpanel follows suit, used by nearly 44% of our customers, indicative of the high value businesses place on time-tested tools that offer granular user analytics. Mixpanel's ability to dissect user interactions and funnel performance remains - **now with the power of generative AI** - a critical asset for businesses aiming to optimize user journeys and retain engagement.

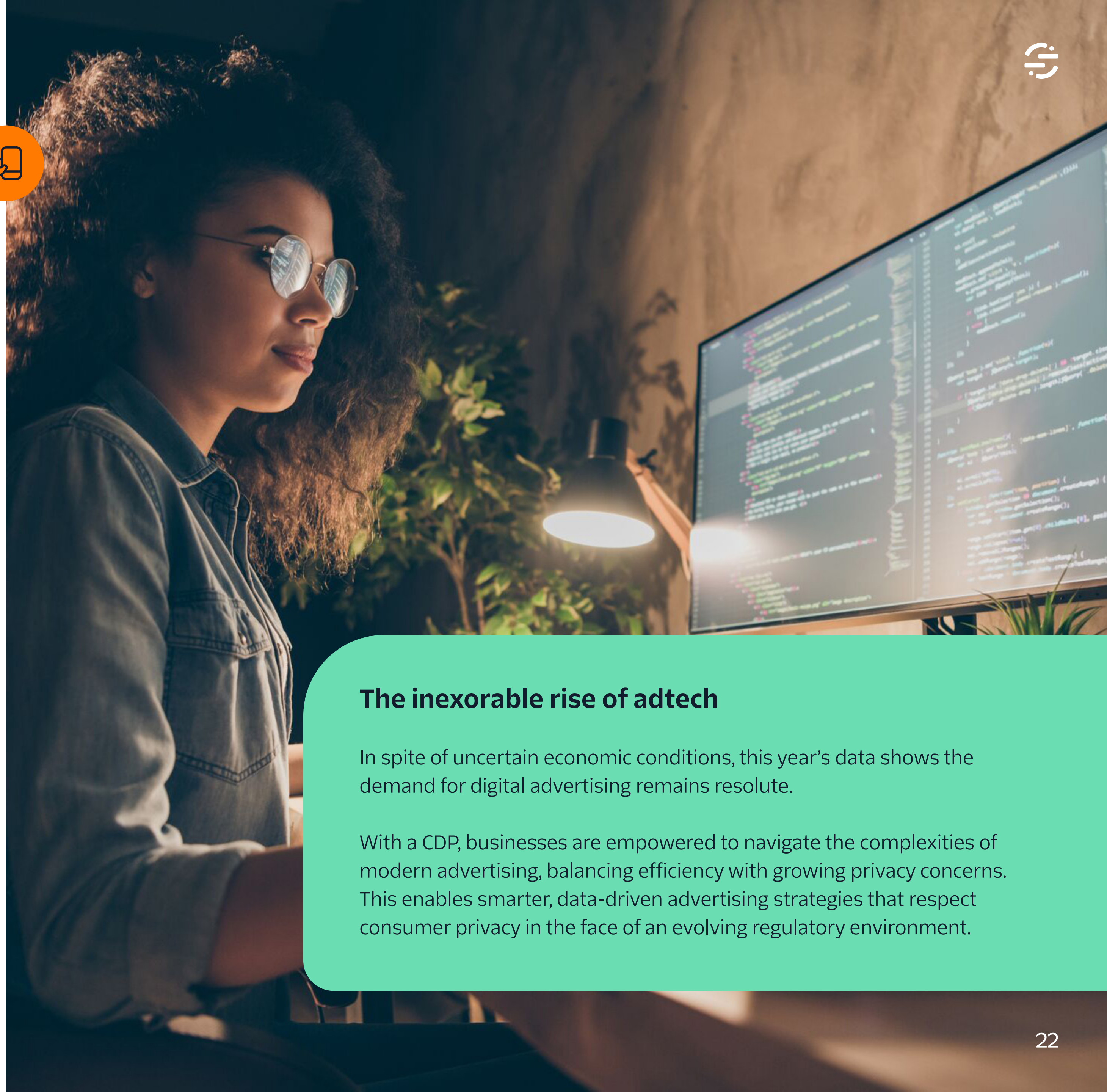
Facebook Pixel and Google Tag Manager, both tools heavily utilized for optimizing advertising efforts and website performance, find themselves at the crossroads of emerging privacy trends. As businesses continue to leverage these tools for targeted advertising and efficient tracking, they also must navigate a world where privacy concerns are becoming more pronounced.



### Analytics comes of age

Claiming 1st and 2nd place amongst our top ten most popular apps, the demand for collecting the right data, and getting that data ready for analyses, has never been greater.

The integration of a Customer Data Platform (CDP) with advanced analytics tools is transforming business strategies. This powerful combination is a game-changer for data-driven decision-making, enhancing customer experiences, and driving significant improvements in LTV and retention.



As it stands, the European Union is playing a pivotal role in shaping the privacy narrative, with new regulations such as the proposed **AI Act and AI Liability Directive**, which are likely to influence how AI, a technology underpinning tools like Facebook Pixel, is governed.

Amplitude, **boasting a new set of AI features**, rounds out the top 10, highlighting the evergreen importance of product analytics in driving strategic decisions.

As businesses anticipate the potential of AI to bring **\$4.4 trillion in economic value**, tools like Mixpanel, Amplitude, and GA4 offer a new generation of analytics powered by machine learning, catering to the growing need for an integrated and privacy-focused approach to data.

## The inexorable rise of adtech

In spite of uncertain economic conditions, this year's data shows the demand for digital advertising remains resolute.

With a CDP, businesses are empowered to navigate the complexities of modern advertising, balancing efficiency with growing privacy concerns. This enables smarter, data-driven advertising strategies that respect consumer privacy in the face of an evolving regulatory environment.



Chapter 08

Actions speak louder:  
**Fastest growing  
destinations  
of 2023**





As we pivot to the fastest-growing apps of the year, we witness a new chapter in the Segment platform's evolution.

The story this year is the rise of **destinations, built using our Actions Framework**, with Mixpanel (Actions) soaring by 541% in usage and Salesforce (Actions) by 272% as large swaths of our customer base adopt these new integrations.

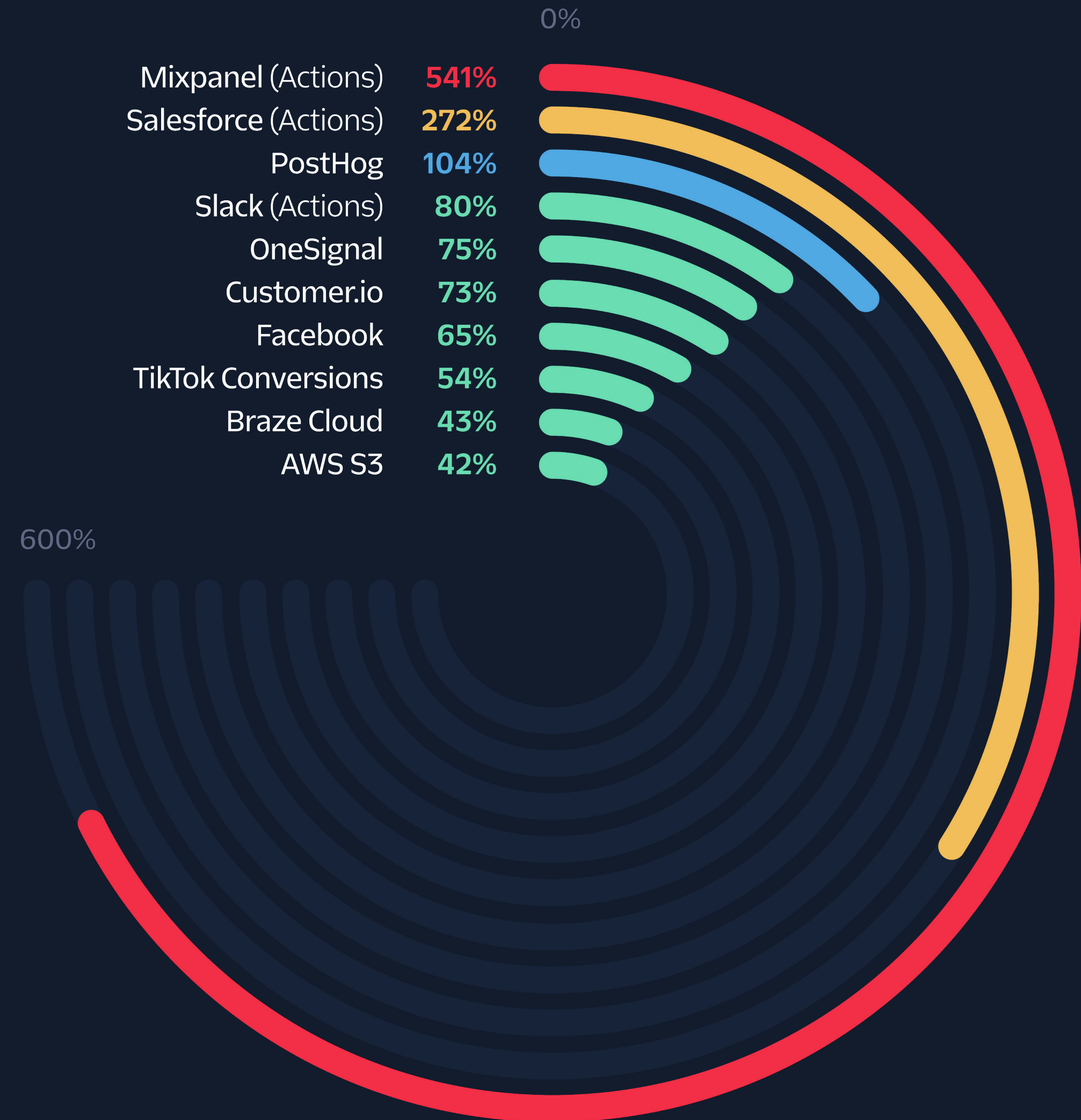
So, what exactly is this Actions Framework? It is an approach to integrations within Twilio Segment that allows businesses to send customer data to various applications in a more efficient and flexible way. Think of actions-based destinations as a bridge that carries data to exactly where it's needed in the most effective format.

This isn't only helpful for developers - it's designed to be user-friendly for non-technical teams as well.

So why does this matter for businesses? As customer habits evolve, the technology that companies use needs to keep pace. Destination Actions represent a leap forward from classic integrations, allowing businesses to leverage real-time data to craft an engagement strategy that's as dynamic and customizable as the digital world demands.

With the continued rise of Destination Actions, businesses are equipped to future-proof their customer data strategies, ensuring they can deliver the exceptional and personalized experiences customers crave.

## Fastest growing destinations of 2023





Chapter 09

# Unboxing e-commerce: From browsing to checkout





Now that we've understood what apps customers are adopting in the Segment platform, let's turn our attention to the types of data being collected across our customer base.

In this regard, e-commerce events such as 'order\_completed,' 'page\_viewed,' and 'product\_viewed' lead the pack.

In fact, over the past year, Twilio Segment recorded nearly 13,000 unique events across digital storefronts and websites.

These events are not just metrics - they are the pulse of e-commerce, each beat revealing deeper insights into customer journeys.

'Order\_completed' stands as a testament to successful conversions, while 'page\_viewed' and 'product\_viewed' events illuminate the paths consumers tread before reaching the checkout. These events signal the critical touchpoints where browsing transforms into buying, where interest is piqued, and decisions are made.

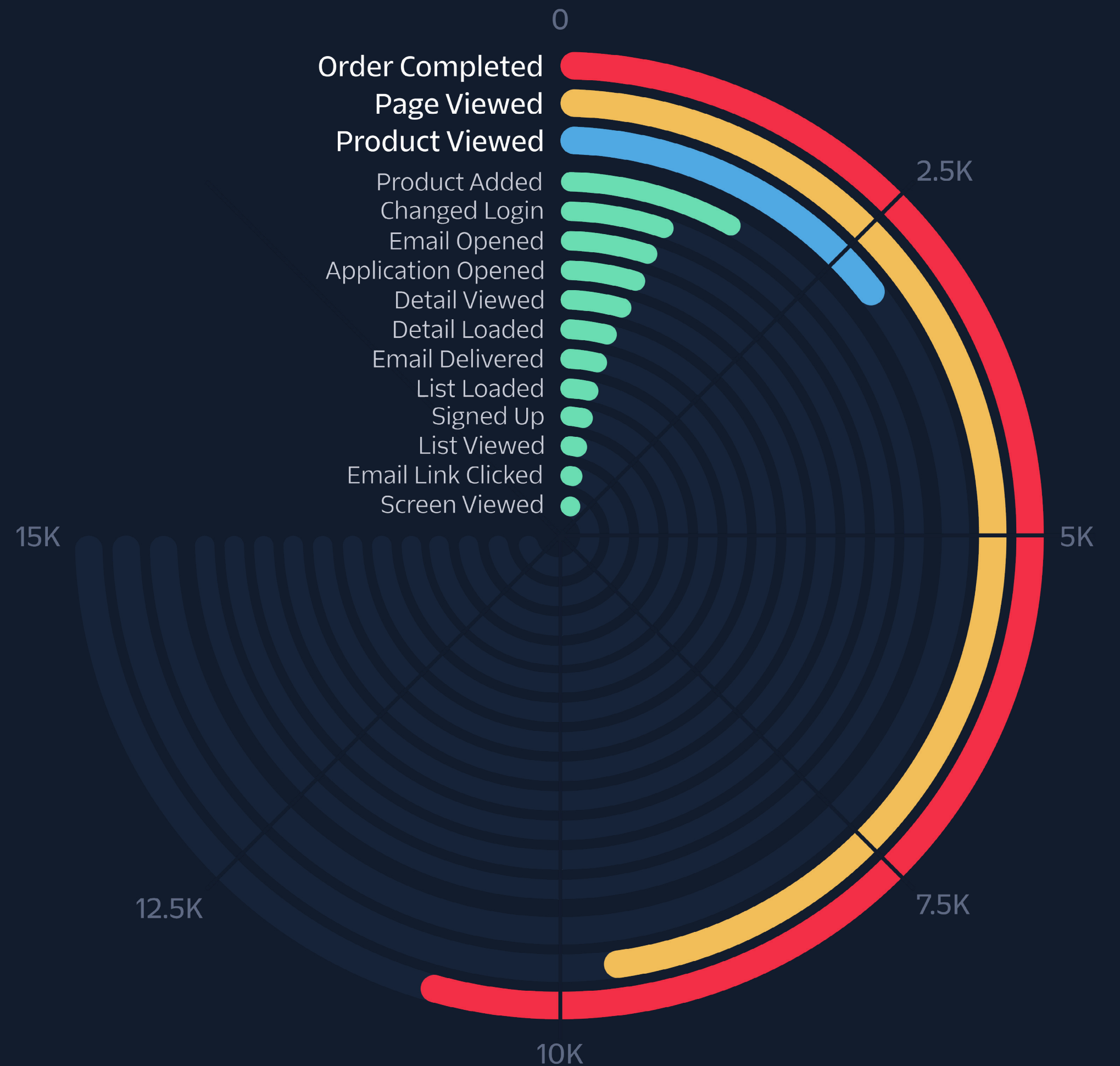
Our data paints a vivid picture of digital commerce, where every click and every scroll tells a story.

The nuances of how customers interact with online storefronts - from the first glance at a product to the final confirmation of purchase - are insights that can guide strategic decision-making.

**12,969**

Unique events tracked by businesses on Twilio Segment Platform in 2023

## Top 15 Unique Events on the Twilio Segment Platform





“As marketers, the holy grail is to reach your customers and prospects in a way that is meaningful, relevant, and additive to them. CustomerAI Predictions has equipped Box’s marketing team with the ability to forecast customer behavior to a degree that was simply unavailable to us before. Tools like Predictions put marketers at the center of this new era of AI which transforming how companies engage and retain their customers.”

**Chris Koehler**

CMO at Box

Chapter 10

# **The rise of AI:** A look at CustomerAI Predictions





The businesses leading the way in customer engagement seem to have a preternatural sense around users' needs, preferences, and behavior. This kind of business acumen and "intuition" isn't the product of some sixth sense. It's a strategic combination of data, machine learning, and artificial intelligence (AI) that fuels predictive analytics.

Predictive modeling is by no means new, but it's certainly become more advanced in recent years. From advancements in AI to the exponential rise in data being generated, businesses now have the ability to unlock and act on incredibly nuanced customer insights in a fraction of the time it once took.

Twilio Segment's latest feature, **CustomerAI Predictions**, empowers businesses to target users with an increased likelihood of performing an event such as an online purchase, without needing to tap data science teams. In short, it helps businesses move from a reactionary approach to a proactive customer engagement strategy.

These predictions also operate completely on your own customer data. This is crucial for two reasons. First, the insights are unique to your business. Second, you can rest assured that the data fueling these out-of-the-box predictive models meets your internal standards for accuracy, cleanliness, and compliance.

With 426 Predictive Traits (so far) created on the Twilio Segment platform, organizations are not merely navigating the present but are charting a course for what's ahead.



**426**  
Predictive Traits on  
the Twilio Segment  
Platform (so far)



Chapter 11

# Your AI is only as **good as your data**





Because CustomerAI, **Twilio Segment's new suite of AI capabilities**, is in its infancy, we have a limited selection of platform usage data to explore how businesses are utilizing AI.

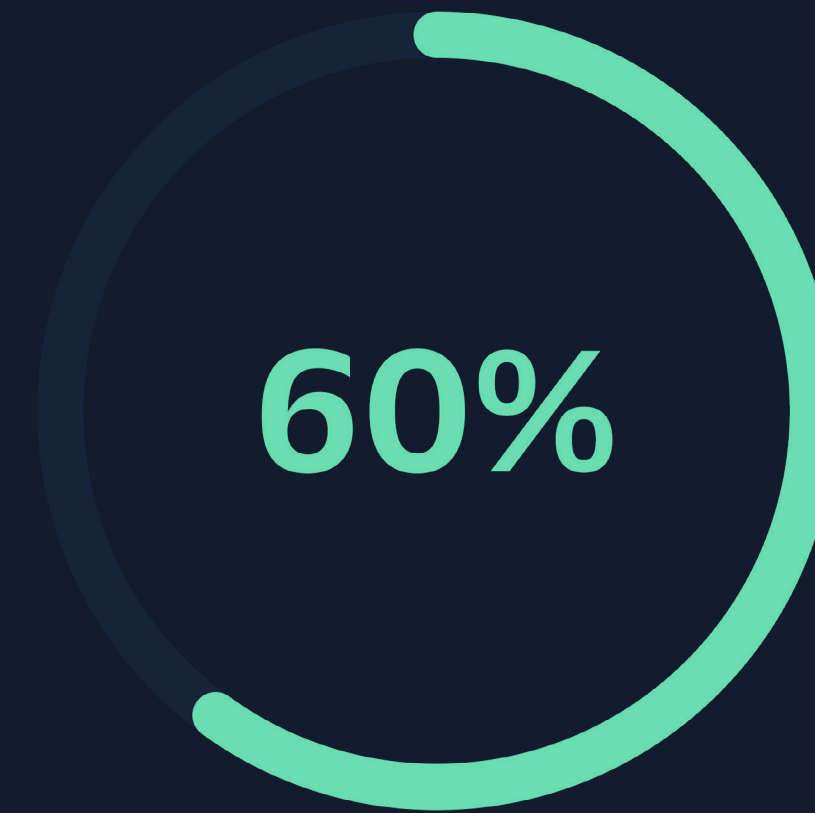
However survey results from our 2023 **Growth Report: AI Edition** tell us that 71% of business leaders believe AI could deliver more value with better data.

Make no mistake. This is an urgent call to action.

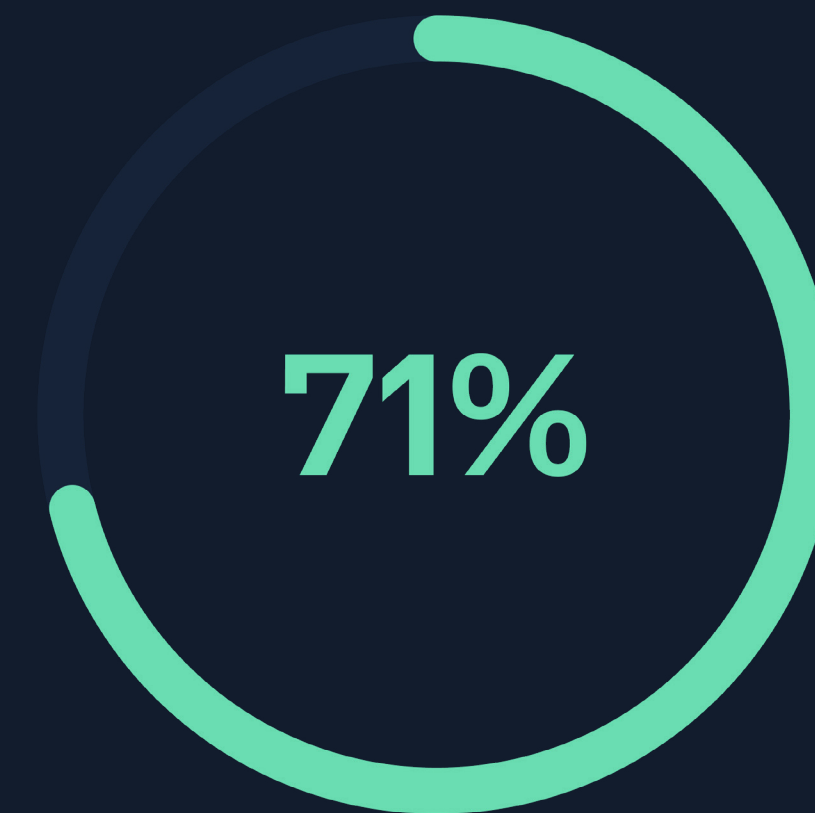
The potential of AI is more than algorithms or computing power – it's about the quality and depth of the data it digests.

Businesses are coming to realize that AI is not a magic wand but a precision tool – one that requires the finest raw material to produce its best work.

For businesses looking to harness the transformative power of AI, the message is clear: investment in data quality is a strategic necessity that will separate the leaders from the laggards in a race where AI is the pace-setter.



of businesses say **quality, accurate data is one of the most important** ingredients for growth



of **respondents feel like AI could be more useful** with access to higher-quality data



## About Twilio Segment

Twilio Segment is the leading CDP with more than 450 pre-built integrations to different data sources and destinations. It provides a complete solution that eliminates the need for manual data cleansing, complex data engineering processes, and analytics reporting functions. By automating all of the backend customer data operations, Twilio Segment puts companies in a position to get the most out of their first-party data and retain customers at a higher rate.

As consumer sentiment, industry trends, and regulatory enforcement push companies away from depending on third-party data, the need for an alternative source of customer data cannot be understated. First-party data is the solution, bringing a competitive advantage as it fills the gaps where third-party data falls short: accuracy, relevance, and building customer trust.

### Want to learn more about customer data platforms?

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

[Request a demo](#)



# Recommended Reading



## 15 Ways to Use Data to Engage Your Customers

This guide shares 15 different ways you can use Segment and Twilio to make your customer engagement more intelligent across every channel.

[Find out more>](#)



## Digital Advertising in the Cookieless World

Learn how to deliver personalized and more transparent experiences in the absence of third-party cookies.

[Find out more>](#)



## 50 CDP Use Cases to Drive Growth

In this guide, we explore a world where 50 visionary companies spanning fintech, technology, retail, and beyond are rewriting the rules of innovation and customer experiences.

[Find out more>](#)



Today's leading companies trust Twilio's Customer Engagement Platform (CEP) to build direct, personalized relationships with their customers everywhere in the world. Twilio enables companies to use their communications and data to add intelligence and security to every step of the customer journey, from sales to marketing to growth, customer service and many more engagement use cases in a flexible, programmatic way. Across 180 countries, millions of developers and hundreds of thousands of businesses use Twilio to create magical experiences for their customers.

For more information about Twilio (NYSE: TWLO), visit: [www.twilio.com](http://www.twilio.com).

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