

Enhancing customer experience with AI-powered solutions:

A smarter way to upgrade your tech stack



As businesses grow and customer expectations evolve, companies often find themselves at a crossroads when it comes to upgrading their customer experience technologies. Should you replace your existing tools with a new system, or is there a smarter way to build on what you already have?

Replacing systems can seem like a tempting solution, promising streamlined operations and cutting-edge features. However, it comes with significant costs, disruption, and a lengthy implementation process. There's often a better way forward—by augmenting your current tech stack instead of ripping it out entirely.

This guide provides a proven framework for enhancing your existing systems with AI-powered solutions, focusing on three key use cases:

- Enabling efficiency with intelligent self-service
- Transforming one-way communications into two-way conversations
- Maximizing omnichannel ROI with AI-powered solutions

You'll also learn how to enrich your tools with open APIs while leveraging customer data and eliminating silos with a Customer Data Platform (CDP). This approach empowers your teams to deliver more personalized, frictionless experiences without the need for a full system overhaul.

The result? Deeper customer engagement, higher satisfaction scores, and substantially improved ROI.

Augmenting your tech stack with AI

Replacing your tech stack when needing to find solutions to new business challenges can be costly and time-consuming. Instead, enhancing your current tools is a more cost-effective approach that delivers faster results. By integrating new features like chatbots and virtual assistants, smart routing, and near real-time comprehensive analytics (qualitative: Voice Intelligence and quantitative: Voice insights) with your existing software, teams can immediately benefit without the need for long onboarding periods or major disruptions. Customer experience teams can continue working with the systems they're familiar with, while also gaining access to new capabilities. This approach offers scalability, allowing businesses to add features as needed without committing to a full system replacement.



Unlocking more use cases with open APIs

Open APIs (Application Programming Interfaces) give customer experience teams the flexibility to integrate, customize, and scale their tools without being locked into rigid systems. By seamlessly connecting platforms, they break down silos, automate workflows, and personalize customer experiences.

However, not all APIs are truly open—many limit customization and restrict use cases. A true open API, like Twilio's, integrates seamlessly with any tech stack, offering full developer control without platform lock-in. This modular approach enables businesses to orchestrate omnichannel customer journeys—whether through messaging, voice, email, or customer data—ensuring a consistent and personalized experience at every touchpoint.

Why open APIs matter for customer experience teams

- **Unify customer data** across CRM, marketing, and analytics tools
- **Enable near real-time, two-way engagement** via SMS, WhatsApp, or voice
- **Automate workflows** with AI-driven insights and smart routing
- **Scale without vendor lock-in**, adapting solutions as business needs evolve

Avoid closed API pitfalls

Some vendors claim to offer open APIs but impose restrictions that limit integration and innovation. When evaluating solutions, ask whether full customization is possible, or are features locked behind approvals. Does the API support near real-time data sharing and automation? And can it scale with my business, or does it force predefined workflows?

Twilio's open API approach

Unlike rigid, pre-packaged solutions, Twilio's APIs are fully modular and composable. Businesses can build custom engagement solutions that integrate effortlessly into existing systems—ensuring flexibility, interoperability, and long-term scalability.

5

use cases unlocked
by Twilio open APIs

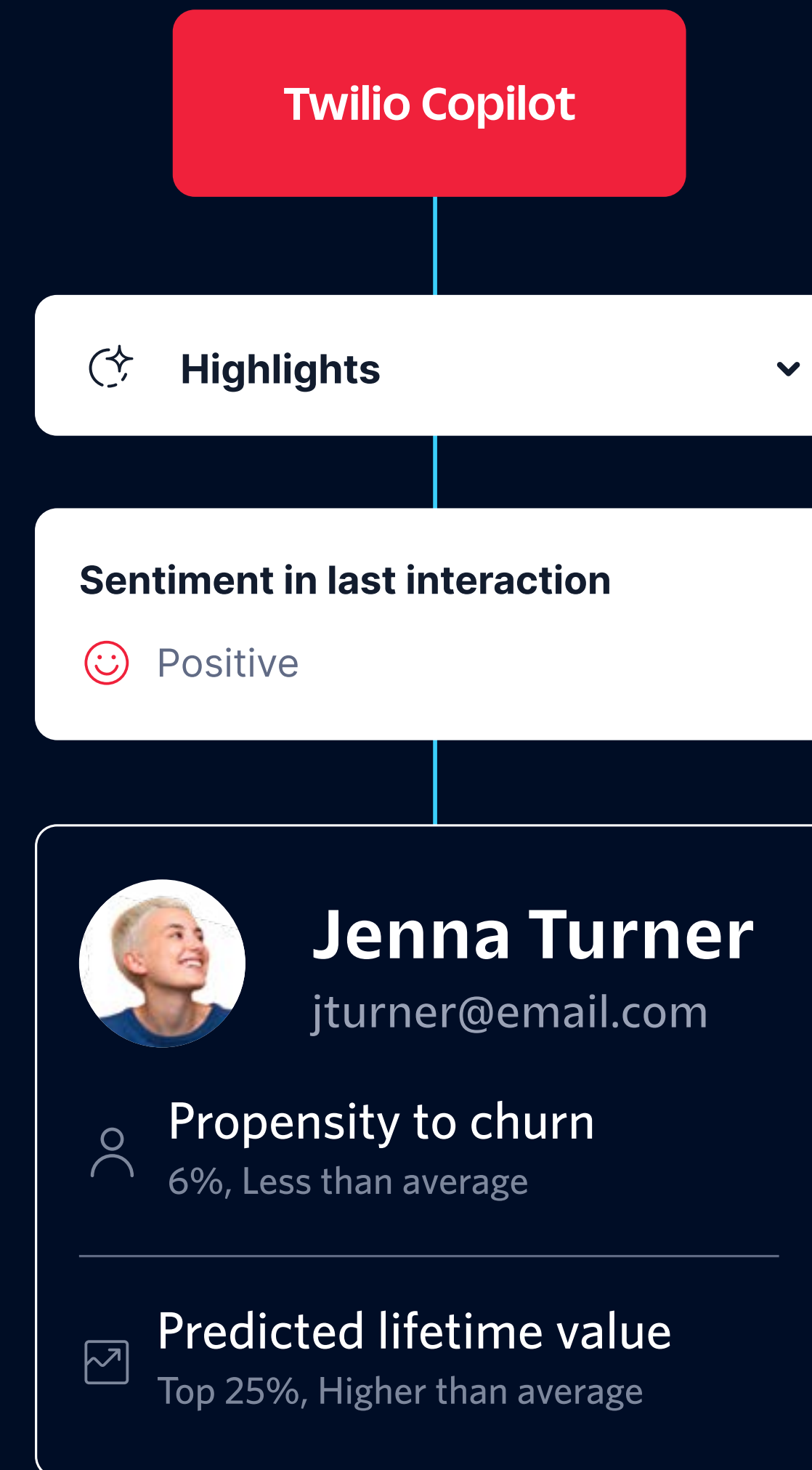


USE CASE 1

AI-powered customer experience with Agent Copilot

Twilio's open API integrates with CRMs and AI-driven tools like Agent Copilot, a feature of Flex, to enhance agent productivity by using generative AI to streamline post-conversation wrap-ups with automated summaries, sentiment analysis, and disposition code assignments.

Benefit: Agents complete conversation follow-ups faster, allowing them to focus more on delivering seamless and personalized customer experiences.





USE CASE 2

Proactive customer engagement via messaging

Customer experience teams can trigger automated SMS or WhatsApp messages via Twilio's API when a lead exhibits high-intent behavior, like visiting a pricing page or abandoning a cart.

Benefit: Reaching customers in near real time increases response rates and conversion opportunities.

USE CASE 3

Omnichannel support across voice, SMS & chat

Twilio Flex, powered by open APIs, enables businesses to unify customer interactions across multiple channels—including voice, email, and live chat—without switching platforms.

Benefit: Agents gain full context of past interactions, leading to more seamless and personalized customer experiences.





USE CASE 4

Automated post-call summaries & sentiment analysis

Twilio's AI-driven APIs analyze call recordings, transcribe conversations, and summarize key points, including sentiment and resolution status.

Benefit: Reduces manual effort, enables faster follow-ups, and provides insights into customer satisfaction trends.

USE CASE 5

Intelligent lead qualification & follow-ups

By integrating Twilio APIs with a CDP like Segment, businesses can automatically score leads based on engagement data and trigger personalized follow-ups via email, SMS, or voice.

Benefit: Customer experience teams prioritize high-value leads, improving conversion rates while reducing manual outreach efforts.





Enabling efficiency with intelligent self-service

AI-powered virtual agents are transforming customer experience through intelligent self-service by automating routine interactions, handling common queries, and providing quick, accessible solutions. They reduce the need for live agent support, cutting costs and improving efficiency while allowing customers to resolve issues independently. This not only deflects expensive live interactions but also meets the growing demand for self-service, making them a key tool for businesses looking to streamline operations and enhance customer satisfaction.

As AI-powered virtual agents continue to transform customer experiences across industries, their impact on healthcare is particularly significant. The complexities of medical billing make it an ideal area for intelligent automation, where AI-driven solutions can streamline communication, reduce administrative burdens, and improve patient satisfaction. Cedar, a leading patient financial experience platform, is leveraging these advancements to simplify billing and enhance the financial journey for patients and providers alike. Let's see how they're doing it.

Cedar and Twilio collaborate to improve patient billing experiences with AI-powered solutions

Navigating healthcare bills can be complex and overwhelming, particularly for patients managing multiple providers or lacking insurance. At the same time, healthcare providers face high administrative costs due to the volume of patient inquiries about financial obligations. To address these challenges, Cedar, a leading patient financial experience platform, partnered with Twilio to streamline patient communications using AI-driven automation and empathetic support. By integrating Twilio's AI-powered ConversationRelay service, SMS, and Voice APIs, Cedar enhances accessibility, improves financial interactions, and reduces operational expenses for providers.

Twilio's technology delivers several key benefits to Cedar's platform. With streamlined communication, Twilio's SMS capabilities **enable timely bill notifications and appointment reminders, improving patient engagement.** The seamless payment experience is enhanced through Twilio's Voice API and Stripe Pay Connector, which allow **secure IVR-based payments, supporting FSA and HSA accounts to help patients maximize available resources.** Additionally, AI-powered voice agents provide smart, personalized support by reducing wait times and offering instant responses, ensuring human agents intervene when necessary for a more meaningful patient experience.



At Cedar, the patient experience is at the core of all the work we do. Our work with Twilio enables us to combine AI-powered technology and empathetic service design, transforming how providers engage with patients about their bills.

Dugan Winkie

Head of Commercial Strategy, Cedar



Powered by Twilio's AI-driven technology, Cedar is revolutionizing healthcare billing by **lowering provider costs and creating a more seamless, patient-centric financial experience.** This integration ensures patients receive clear, personalized, and empathetic support, fostering greater trust and satisfaction in the billing process.

[Read the case study >](#)

Transforming one-way communication into two-way conversations

Traditional outreach methods like emails, ads, and voicemails create one-way interactions, limiting near real-time engagement. This slows issue resolution for customer experience teams, and prevents them from responding instantly to customer needs.

By integrating a CDP with messaging platforms, businesses can enable two-way conversations through SMS, WhatsApp, chatbots, or AI-driven assistants like Twilio's Agent Copilot. This allows customer experience teams to proactively assist customers and engage sales the moment a customer shows interest.

Agent Copilot, part of Twilio Flex, enhances customer interactions across voice and messaging channels by:

- **Automating wrap-ups:** Summarizing interactions with sentiment analysis and key topics
- **Recommending next steps:** Offering insights into customer effort, loyalty, and sentiment
- **Optimizing call routing:** Ensuring the right agent handles each case
- **Reducing resolution times:** Automating post-call summaries
- **Personalizing interactions:** Using past behavior to tailor responses

Without a CDP, these messaging channels operate in silos, making it difficult to personalize interactions. But with Twilio's Unified Profiles, powered by Segment, all customer data—past purchases, browsing behavior, support history, and marketing engagement—is consolidated into a single, near real-time profile.

Now, when a customer reaches out, customer experience teams have full context at their fingertips, allowing them to resolve issues faster and uncover upsell and cross-sell opportunities. Teams can leverage AI-driven insights to engage at the right moment, proactively addressing needs before they arise. Unified Profiles transforms fragmented interactions into seamless, two-way customer experiences.

This kind of engagement fosters stronger customer connections, increasing loyalty and satisfaction. For example, Toyota Connected leveraged Twilio Flex to transform its customer experience, enabling near real-time, two-way communication between drivers and agents. Let's take a closer look.

How Toyota Connected uses two-way communication to improve the customer agent experience on a global scale

Toyota Connected North America (TCNA) needed a dynamic, scalable call center solution that could not only respond to customer needs in near real time but also drive innovation on a global scale. With Twilio Flex, TCNA transformed its customer experience by enabling seamless communication between drivers and customer experience agents—improving responsiveness, efficiency, and overall service quality.

TCNA powers Drivelink, its telematics platform serving over 6 million Toyota and Lexus drivers with critical safety and convenience features like roadside assistance, stolen vehicle tracking, and automated crash notifications. To enhance customer interactions and scale efficiently, TCNA transitioned from a third-party contact center to Twilio Flex, unlocking near real-time, personalized support.

Twilio Flex's flexible architecture empowered TCNA to streamline agent workflows and reduce friction in customer interactions. With features like instant call reconnections, automated public safety routing, and seamless Salesforce CRM integration, agents could resolve issues faster and with greater accuracy. As a result, **after-call work decreased by 13%**, and **monthly handle time dropped by 18%**.



The switch to Twilio Flex was seamless, and our automated crash notifications worked immediately.

Steve Basra

CEO & President, Toyota Connected

By partnering with Twilio's Professional Services, TCNA optimized its telematics support operations, equipping agents with the tools to deliver faster, more personalized service. This two-way communication capability not only strengthened customer trust but also ensured TCNA remained at the forefront of innovation in connected mobility.

[Read the case study >](#)

Maximizing omnichannel ROI with AI-powered solutions

We've all been there—contacting customer experience teams, repeating your issue, and re-explaining past conversations because their systems aren't connected. You'd think this wouldn't happen in 2025, yet it still does.

Customer experience teams aim to provide seamless omnichannel experiences, but disconnected tools often get in the way. Instead of a costly rip-and-replace approach, augmenting your existing tech stack with open APIs and AI-powered solutions offers a smarter, more scalable path to improved customer experiences and business growth.

With an open API-first approach, your systems can integrate in near real-time across email, SMS, social media, and support portals—ensuring every interaction maintains context. AI-powered solutions like predictive routing, intelligent chatbots, and near real-time analytics further enhance engagement by automating responses, surfacing customer insights, and optimizing interactions across channels. Unlike closed systems with rigid constraints,

open APIs let you enhance existing tools, scale dynamically, and avoid unnecessary licensing fees or call limits.

The benefits? Seamless experiences across all customer touchpoints, richer data insights, and more effective customer journey mapping. Implementation can be gradual—starting with key channels, unifying data, ensuring consistent messaging, and leveraging cross-channel analytics to refine engagement strategies.





The ROI impacts speak for themselves

Companies leveraging AI-driven omnichannel solutions see:

- **Higher sales** through near real-time, personalized engagement across multiple channels
- **Improved customer retention** with proactive AI-powered support and predictive insights
- **Significant cost savings** by automating workflows, reducing manual effort, and optimizing agent efficiency

By following best practices—gradual implementation, ongoing staff training, performance monitoring, and customer feedback loops—businesses can transform disconnected channels into a unified, AI-driven system that delivers seamless, data-driven engagement across every touchpoint.

One company that has successfully implemented this approach is Universidad Uk, a digital-first university serving students across Latin America and the U.S. Faced with the challenge of delivering high-quality, personalized student experiences at scale, the university turned to Twilio Flex and AI-powered automation to transform its engagement strategy. By integrating omnichannel communications, real-time analytics, and intelligent automation, Universidad Uk not only improved student support but also achieved significant operational efficiencies and cost savings. Here's how they did it.



How Universidad Uk optimizes student and employee omnichannel experiences with AI

Universidad Uk leveraged Twilio Flex to achieve high ROI by transforming its student engagement through omnichannel communications. By integrating near real-time student data with Twilio Flex's scalable contact center platform, the university personalized interactions and provided 24/7 customer experience support via WhatsApp, SMS, and voice. Twilio's Unified Profiles and Agent Copilot streamlined operations, **reducing agent handle time by 30%** and **improving conversion rates by 25%**. The flexibility of Twilio's APIs enabled Universidad Uk to customize its contact center, integrating seamlessly with CRM systems and third-party applications to optimize student interactions.

The university also enhanced lead generation and operational efficiency with Twilio-powered chatbots and automation. Chatbots pre-qualified prospective students, **improving conversion rates by 2.5X** and **reducing enrollment time by 60%**.

The implementation of a supervisor chatbot ensured accurate lead management, cutting manual data validation tasks significantly. Additionally, Universidad Uk consolidated all conversational data into a single portal, **reducing audit-related work hours by 45%**.



 Twilio Flex offers us the flexibility to build solutions tailored to our processes and ability to personalize them as our processes evolve. The reliability of Twilio Flex gave us the confidence that every communication we sent would be delivered. 

Iván Cantú
COO, Universidad Uk



By leveraging Twilio's advanced AI and omnichannel capabilities, Universidad Uk improved both student experience and operational efficiency, driving measurable business impact.

[Read the case study >](#)



Leveraging data for AI-powered customer experiences

Customer data refers to all the interactions, behaviors, and attributes collected from various touchpoints—such as websites, mobile apps, emails, SMS, social media, in-store visits, and customer experience interactions. This data includes:

- Behavioral data (website visits, app usage, email opens, purchase history)
- Demographic data (name, age, location, preferences)
- Transactional data (purchases, returns, subscriptions)
- Engagement data (support tickets, chat interactions, survey responses)

Importance of data quality when using AI-powered tools

Customer data becomes actionable intelligence when processed through AI, enabling customer experience teams to deliver personalized experiences at scale. However, a CDP is essential for maximizing AI solutions relating to customer experiences for three key reasons:

- 1. Unified customer view:** CDPs aggregate data from all touchpoints (website, app, voice, email, chat) to create complete customer profiles. Without this unified view, AI tools receive fragmented data, producing less accurate predictions and personalization.
- 2. Near real-time data accessibility:** CDPs make customer data available to AI systems, enabling near real-time personalization during calls, adaptive IVR responses, and timely agent suggestions. This immediacy is crucial for in-the-moment decision making.
- 3. Data quality and governance:** CDPs standardize data formats, remove duplicates, and ensure compliance—critical for AI systems that depend on clean, consistent data to function properly.

When built on a robust CDP, AI solutions can deliver truly personalized experiences, accurate predictions, and meaningful insights that drive measurable business outcomes.

For customer experience support teams:

- Voice analytics detect frustration, allowing agents to adapt in near real time
- IVR systems use past interactions to route efficiently and offer relevant self-service
- Agent copilots surface relevant case history and suggest solutions during calls
- Omnichannel analytics reveal support trends across channels, improving resource allocation
- Predictive models identify at-risk customers before they churn

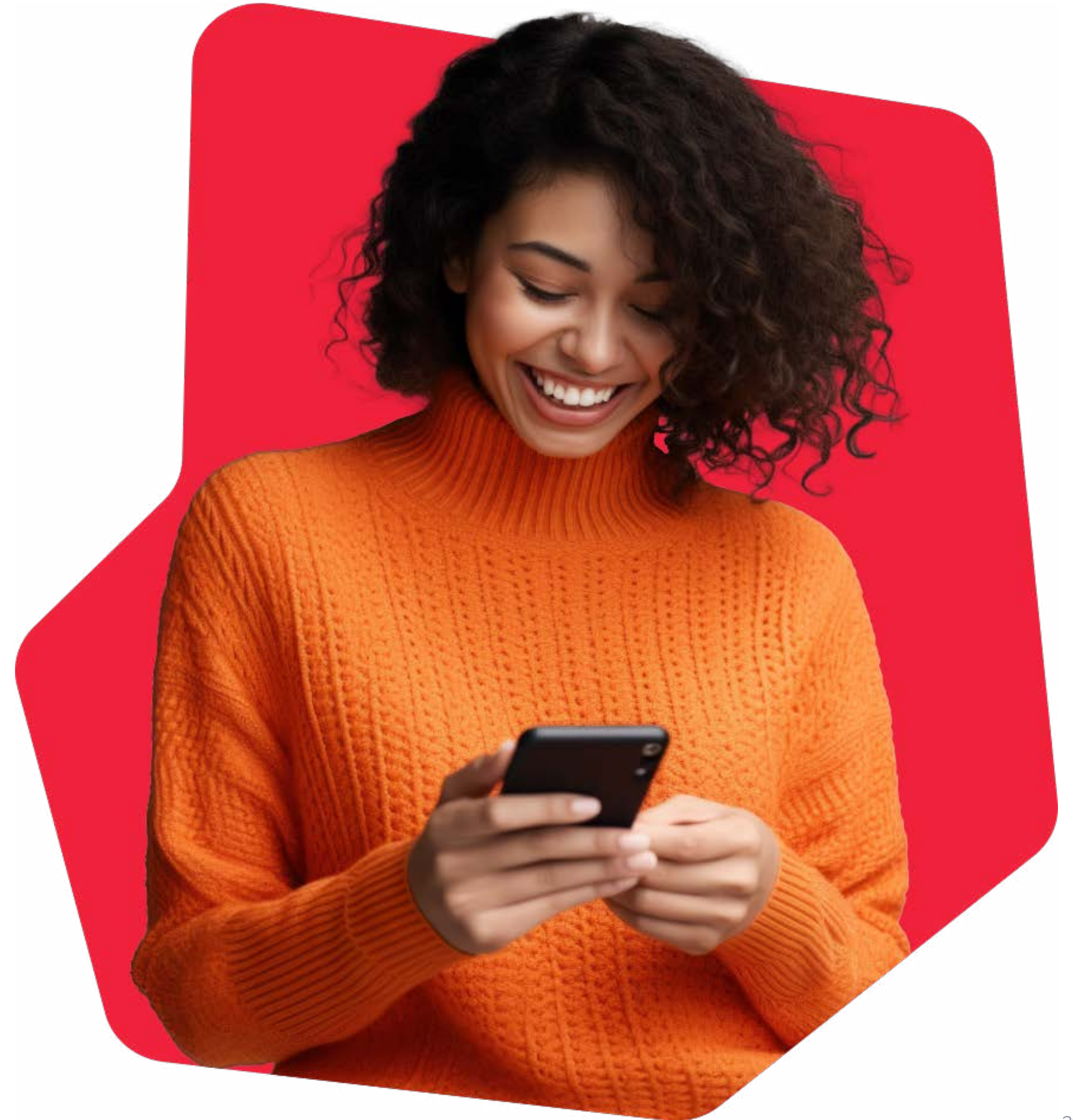
For customer experience sales teams:

- Voice intelligence spots buying signals in conversations
- Customer profiles combine web behavior with voice interaction history for targeted offers
- Transactional analysis reveals optimal upsell timing and products
- Engagement patterns show which customers are primed for expansion
- AI identifies cross-sell opportunities based on similar customer journeys

The combination of rich customer data and AI-powered analysis transforms reactive support into proactive relationship building, while enabling customer experience teams to target the right opportunities at the perfect moment.

Agent assist: using AI to elevate efficiency and unlock potential

AI-powered tools empower agents by providing near real-time guidance, automating routine tasks, and surfacing relevant customer insights—boosting efficiency and performance. By reducing cognitive load, AI enables agents to focus on meaningful interactions, respond faster, and deliver more personalized assistance. This not only enhances productivity but also unlocks their full potential, allowing them to develop expertise, tackle complex issues, and drive exceptional customer outcomes.





Unlocking new use cases with a CDP

If your company is investing in new tools, you need confidence that it will scale alongside your evolving needs. A CDP powered by first-party data delivers a comprehensive, near real-time view of customer interactions, unlocking valuable opportunities across customer experience, and beyond.

Here's a perfect example to illustrate this:

Sarah leads the customer experience team at a fast-growing e-commerce company. Lately, her team has been drowning in support tickets, and customers are frustrated with long wait times. They have a CRM, so agents can see basic customer details like names, past purchases, and support history—but that's not enough. They're still handling every case reactively, with no real way to prioritize or personalize interactions.

Enter the CDP. Sarah's company integrates Twilio Segment, pulling in near real-time behavioral data from their website, app, and email engagement. Suddenly, her team has a full picture of each customer's journey—not just their past purchases, but also what they've been browsing, whether

they abandoned a cart, or if they recently interacted with a marketing campaign.

Now, when a high-value customer submits a ticket about a delayed order, the system flags them as a priority, ensuring they get faster service. If another customer reaches out with a product issue, the agent sees that they've been watching troubleshooting videos but still need help, allowing for a more targeted and efficient response.

Even better? With AI-powered insights, the CDP suggests that customers who frequently contact customer experience departments about sizing issues also tend to return items. So, Sarah's team proactively sends a fit guide to customers browsing those products, reducing future support requests.

By unlocking these new use cases, the CDP transforms customer experience from a reactive cost center into a proactive, revenue-driving team, improving customer satisfaction while making the agents' jobs easier.

Breaking down organizational silos for better engagement

Let's revisit Sarah's story. She always knew data silos were a challenge, but she never realized just how much they were holding her team back—until she saw firsthand what a CDP could do.

Before, her customer experience team relied solely on their CRM. While it tracked past interactions, it lacked critical context—like recent marketing engagements, browsing behavior, or predictive insights. Meanwhile, marketing had its own system tracking campaign performance, and customer experience teams relied on separate tools for deal management and prospect activity. None of these systems communicated, leaving teams with an incomplete, fragmented view of the customer.

That all changed when her company implemented Twilio's Unified Profiles, powered by Segment. Now, instead of isolated data points, Sarah's team has a near real-time, 360-degree customer profile—merging purchase history, website activity, marketing interactions, and AI-driven insights into a single, actionable view. With Agent Copilot integrated, customer experience agents receive nearly instant context and AI-powered recommendations, making every interaction more personalized and effective.

This shift dramatically improved customer engagement. When a frustrated customer reaches out about a delayed order, the agent doesn't just see their past support tickets. They also see that the customer recently clicked on a promo email, browsed new products, and abandoned their cart. Instead of a routine support resolution, the agent turns the conversation into an opportunity—offering a personalized discount to complete their purchase while providing reassurance about their existing order.

But the impact goes far beyond the contact center. With a CDP:

- **Customer experience teams** proactively identify at-risk customers based on support trends and reach out before they churn
- **Marketing teams** turn one-way campaigns into dynamic, two-way conversations, using near real-time support data to refine outreach and deliver more relevant messaging
- **Data teams** build predictive models that help every department anticipate customer needs instead of reacting after the fact

By bridging gaps between teams and replacing siloed CRMs with a unified data foundation, Sarah's company isn't just resolving issues faster—it's transforming every customer touchpoint. Satisfaction is up, support tickets are down, and revenue is growing. With a CDP, they didn't just improve customer experiences; they unlocked the full potential of customer engagement across the business.

Ready to take the next step?

By now you should have a clear understanding of how AI is revolutionizing the customer experience by integrating tools that deliver faster, more personalized assistance.

By augmenting your existing tech stack instead of replacing it leads to cost savings, faster implementation, and minimal disruption. By exploring open API-based integrations and adopting a CDP, teams can significantly improve customer engagement and streamline communication.

Contact the **Twilio sales team** today to learn how we can help you transform customer experiences with Twilio and the power of AI.

