

A photograph of two men sitting at a desk in a modern office, working on laptops. The man on the left is wearing a blue plaid shirt and an orange beanie, looking at his laptop with a slight smile. The man on the right is wearing a yellow sweater and glasses, looking intently at his laptop. The background shows a bright, open-plan office with wooden tables and white chairs.

10 essential steps to build an AI-ready organization



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This content is co-authored by Twilio, SendGrid, and Segment teams.

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Introduction



In the rapidly evolving digital landscape, harnessing the power of [artificial intelligence \(AI\)](#) and machine learning (ML) has become imperative for businesses. These transformative technologies are reshaping the way we interact with customers, make data-driven decisions, and unlock new avenues for growth.

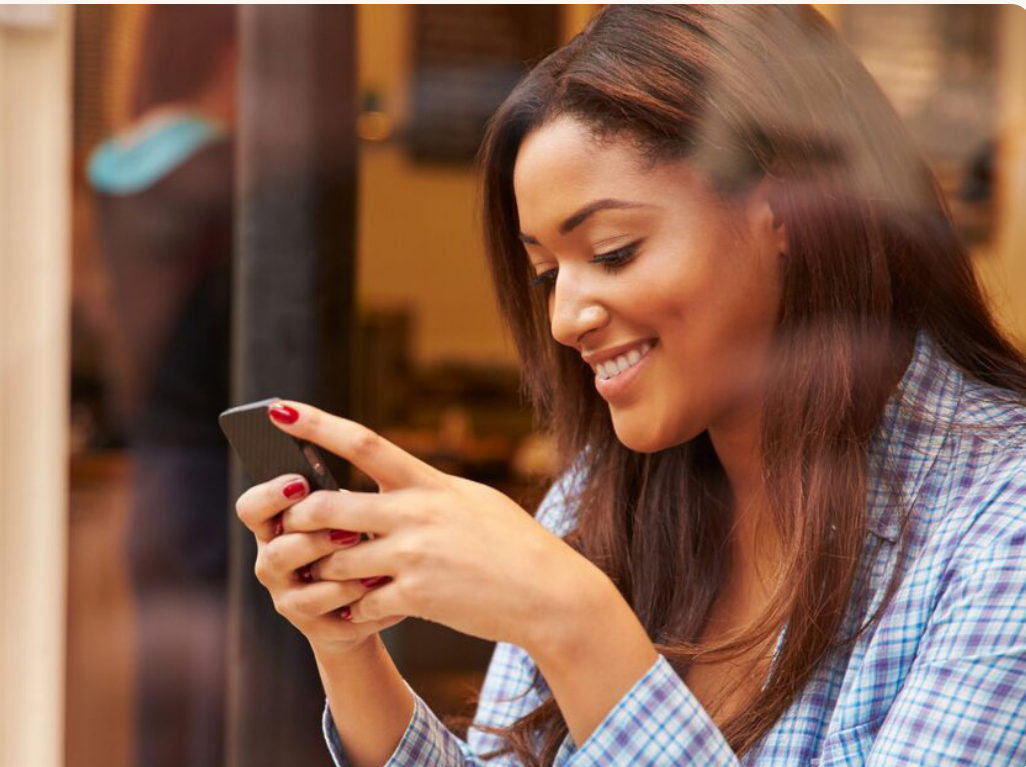
However, the road to AI maturity is riddled with complex challenges that require thoughtful strategy and precise execution.

In this comprehensive guide, we explore the key considerations that will shape your AI journey. From the indispensability of data quality and real-time processing to the importance of ethical data use and stringent regulatory compliance, we unpack the essential components of a robust AI strategy.

We also delve into the role customer data platforms (CDPs) play in ensuring your data is AI-ready and discuss how businesses can leverage AI to drive customer engagement and propel their growth.

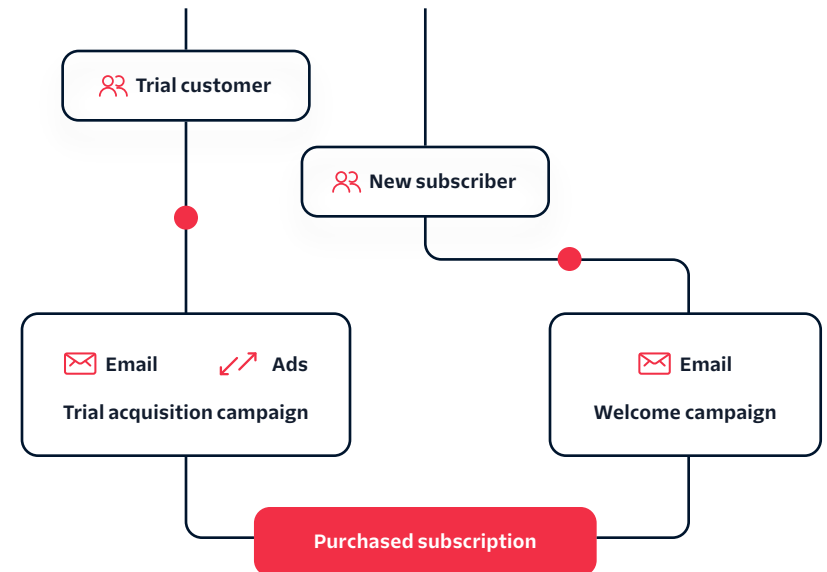
Whether you are embarking on your AI journey or looking to refine your existing AI strategy, we'll provide you with valuable insights and practical tips to navigate the exciting yet complex world of AI. So, buckle up and let's dive into the future of AI together.

1. The potential of AI-driven customer engagement



AI/ML technologies have revolutionized personalization, making it easier than ever to offer unique, tailor-made experiences to each customer. Understanding and harnessing the power of AI-driven personalization is essential for businesses seeking to gain a competitive edge in today's digital marketplace.

Personalization driven by AI goes far beyond merely inserting a customer's name into an email. It leverages customer data to understand individual behaviors, preferences, and patterns. This deeper understanding enables businesses to tailor their offerings and interactions with each customer, enhancing the customer experience and improving engagement, loyalty, and conversion rates.

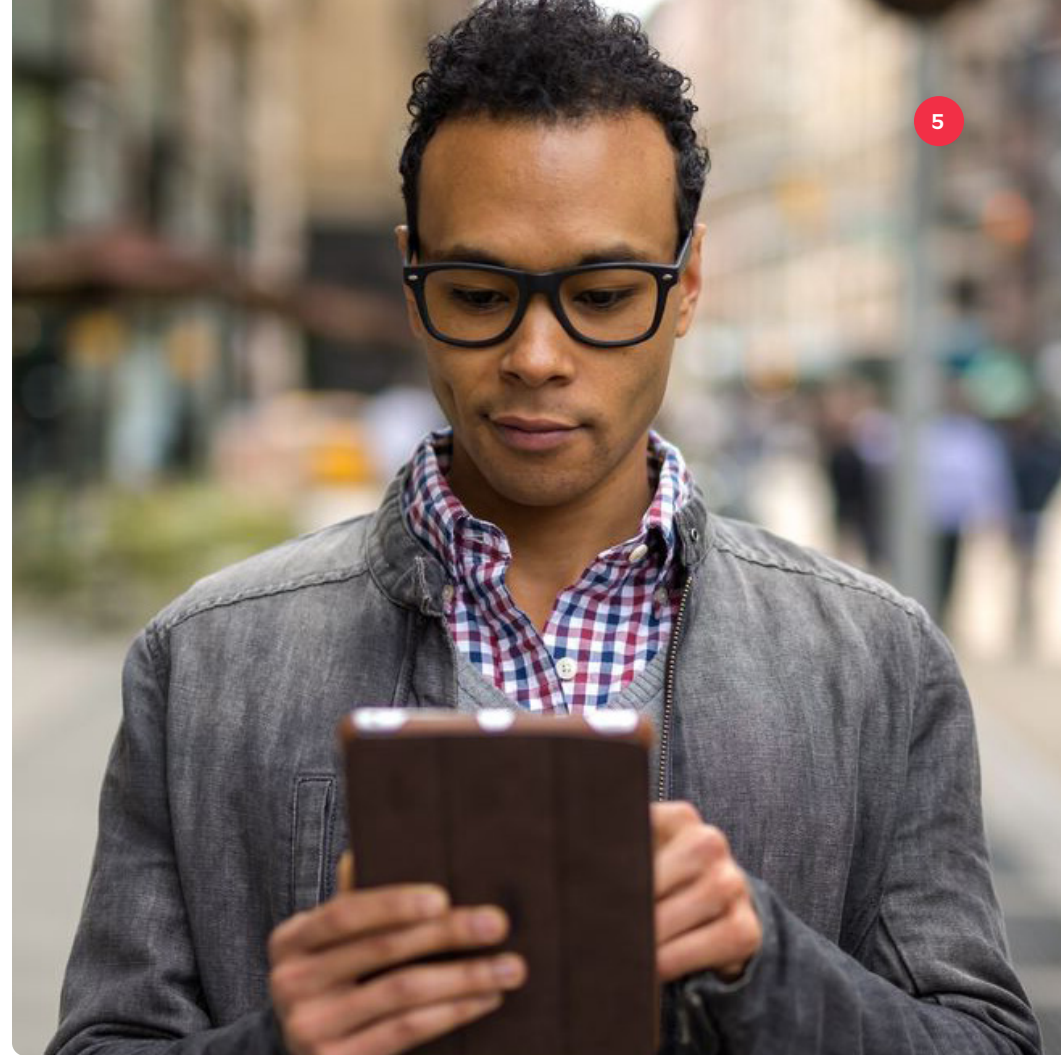


10 essential steps to build an AI-ready organization

AI can process vast amounts of data and identify meaningful trends and patterns far more efficiently than a human ever could. It can analyze a customer's browsing history, purchase history, and interactions with your brand across various channels to generate personalized recommendations, targeted promotions, and [personalized content](#).

Take the example of an online retail business. AI can analyze a customer's past purchases, items they have viewed, and their responses to past promotions. It can use this information to recommend products that the customer is likely to be interested in and tailor promotions to their individual preferences.

The use of AI-driven personalization extends to [customer service](#) as well. For instance, AI can identify the most effective way to interact with a customer based on their past interactions. It could determine whether a customer prefers communication via email, phone, or live chat, what time of day they are most responsive, and what kind of language or tone resonates with them.



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How to anticipate a customer's readiness to buy with Twilio Segment

Learn how to leverage AI-driven predictive traits derived from past customer behavior to pinpoint users with a high propensity to convert.

[See the full recipe here →](#)

2. The role of quality data



Data quality is one of the most fundamental factors in the success of any AI initiative. The quality of your data has a direct impact on the outcomes of your AI models. In essence, garbage in, garbage out; if your data is incomplete, inconsistent, or inaccurate, your AI model will produce unreliable results. High-quality data, on the other hand, leads to accurate and effective AI solutions.

Data quality is not a single characteristic but a combination of several critical aspects, including:

- **Accuracy**, or whether the data correctly represents reality
- **Completeness**, or whether any crucial data is missing
- **Consistency**, or whether the data aligns across different systems
- **Timeliness**, or whether the data is up to date

Inaccurate or incomplete data can mislead AI algorithms, leading them to make erroneous assumptions or predictions. For instance, if an AI model for predictive maintenance is trained on inaccurate machinery performance data, it could fail to predict an impending failure, leading to costly downtime.

Similarly, inconsistent data can impair the performance of AI algorithms. If data about a single entity (such as a customer) is inconsistent across different systems, an AI model may fail to develop a complete or correct understanding of that entity. This could result in missed opportunities or wasted resources.

Moreover, outdated data can hinder the effectiveness of AI. AI algorithms need to be trained on the most recent data to make accurate predictions about current or future situations. Using outdated data could lead the AI to make decisions based on conditions that no longer exist.

Investing in data quality should be a priority for every organization embarking on an AI journey. This can involve adopting data quality management tools, establishing data governance policies, and fostering a data-driven culture that values and understands the importance of high-quality data. By prioritizing data quality, organizations can lay a solid foundation for successful AI initiatives.



3. Obstacles to AI-ready data



Just because you implement AI doesn't mean you're immediately going to send top-tier, personalized content. After all, AI is only as good as the data you share with it. And it is *high quality data* that bridges the gap between receiving personalized content and ensuring that said personalization is indeed accurate.

Unfortunately, poor quality data is all too common. Let's take a look at the havoc it can wreak:

Different teams within your organization rely on a different source of truth for their data. The marketing team could use a customer relationship management (CRM) system, analytics may use a data warehouse, and customer success could file all customer information in tickets.

Disparate systems make forming a single view of the customer incredibly difficult. Not only is this time consuming to try and resolve, but it also becomes harder to derive meaningful insights and make reliable decisions.

In an attempt to fix this, engineering teams often pull lists manually to share with marketers. Unfortunately, this information gets stale quickly, and creates a lag between insight and action.

Having data in multiple forms can:

- Result in poor quality data because it introduces inconsistencies, redundancies, and inaccuracies.
- Become challenging to ensure data integrity and uniformity as inconsistencies in data formatting, naming conventions, or data types can lead to confusion and errors during analysis.
- Be redundant, creating duplication and making it difficult to identify the true and up-to-date information.

Ultimately, bad data can lead to poor customer experiences, loss of loyalty, and a loss of revenue. In a world where we rely on AI to improve customer experiences and drive growth, we must strive for high-quality data as the cornerstone of accurate predictions, personalized interactions, and informed decision-making. Without it, businesses risk compromising the effectiveness of their AI initiatives.



Building a single view of the customer with identity resolution

Learn how to aggregate data from multiple user touchpoints to build a 360-degree view of your customer.

[Get the guide →](#)



4. The road to high quality data



Good data doesn't just happen. It requires significant time and resource investments in order to cultivate and maintain.

Wondering how your business can prioritize data quality? We've outlined 6 steps to ensure your organization has access to high quality data for a more consistent and reliable AI approach:

1. Audit your existing data

Take the time to look through the existing data that your company relies on. Bring in company stakeholders who can explain what data they rely on and where this data comes from. Then, map out where your data is stored and run your report.

Search for and make note of duplicate data, spelling errors, conflicting naming conventions, and other issues that might disrupt your operations, analyses, or campaign performance. Then, designate a team member to implement these changes.

Try to audit your data twice a year, or once a quarter, to ensure that it remains accurate and manageable.

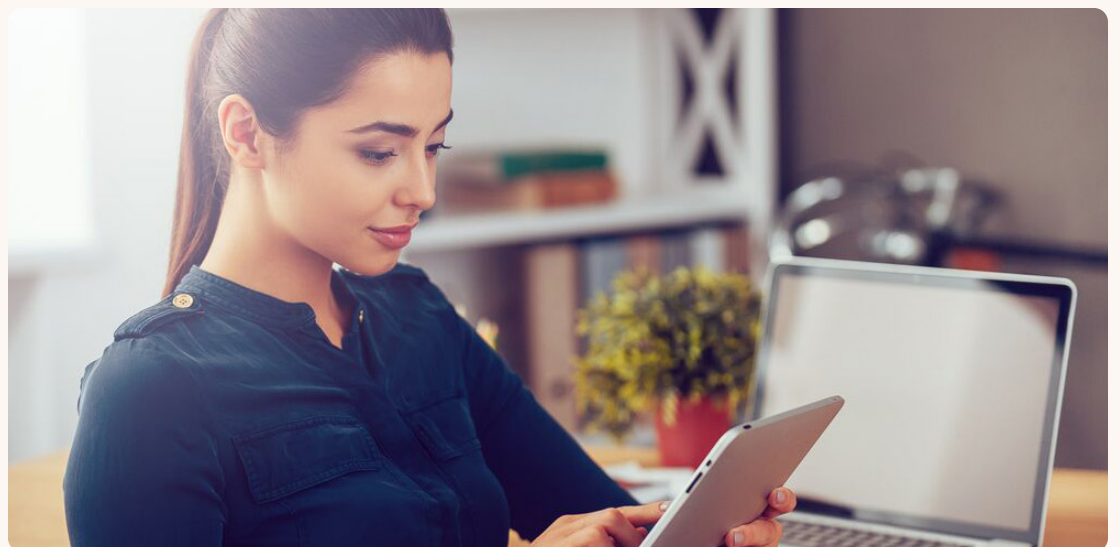
2. Establish a clear data tracking plan

A [tracking plan](#) is a “source of truth” document used across teams to help standardize how data is tracked and align teams around one strategy for data collection.

This plan consists of a list of events (i.e., user actions) that are paired with a description for each event. These events are used to map the most important steps of the customer journey, from free trial sign-up to recurring subscription to churn. Here’s an example of what a tracking plan looks like:

This document allows every member of your team to understand what data you’re tracking, where you’re tracking that data, and why to ensure your data remains clean and compliant.

Name	Why	Properties	Location
Signed up	Key event for user interest, marketing conversion	<code>userLogin</code> <code>type</code> <code>organizationId</code>	Signup after form submission
Data sent	Engagement metric, how we measure active users	<code>ownerId</code> <code>ownerTrialActive</code> <code>calls</code> <code>libraries</code> <code>integrations</code>	Daily job sent from server at 10pm PT
Subscription started	Conversion metric, shows how people pay us	<code>ownerId</code> <code>ownerType</code> <code>ownerEmail</code> <code>planName</code> <code>planValue</code> <code>previousPlan</code>	Account billing page (server side)



3. Standardize naming conventions

Now that you understand how your business collects data, it's time to ensure you standardize naming conventions. Standardization ensures all data entries are uniform and that one event isn't being counted multiple times. It can also help your business automatically block events that don't adhere to the tracking plan, protecting data at scale.

You can take a deeper dive and see more naming convention examples [here](#).

4. Block bad data at the source

With a CDP like Twilio Segment, you can prevent data that doesn't meet your standards from ever entering your downstream destinations thanks to our [Tracking Plan feature](#).

What does this look like in practice? Say you implemented an event that had a typo in it: "Product Viewed" instead of your approved naming convention, "product_viewed." Using Track Plan, you could prevent that event from making it to your downstream tools (like your CRM, ad platforms, and more). Instead, you have the option to forward this event to be cleaned and replayed later on so no data is lost.

Segment is granular enough where you can just block the properties that don't match the spec, or block the entire event. This allows you to rest assured that all of your data remains high quality so you can continue building campaigns knowing you're using the most up-to-date and accurate customer data.



5. Choose the right analytics database

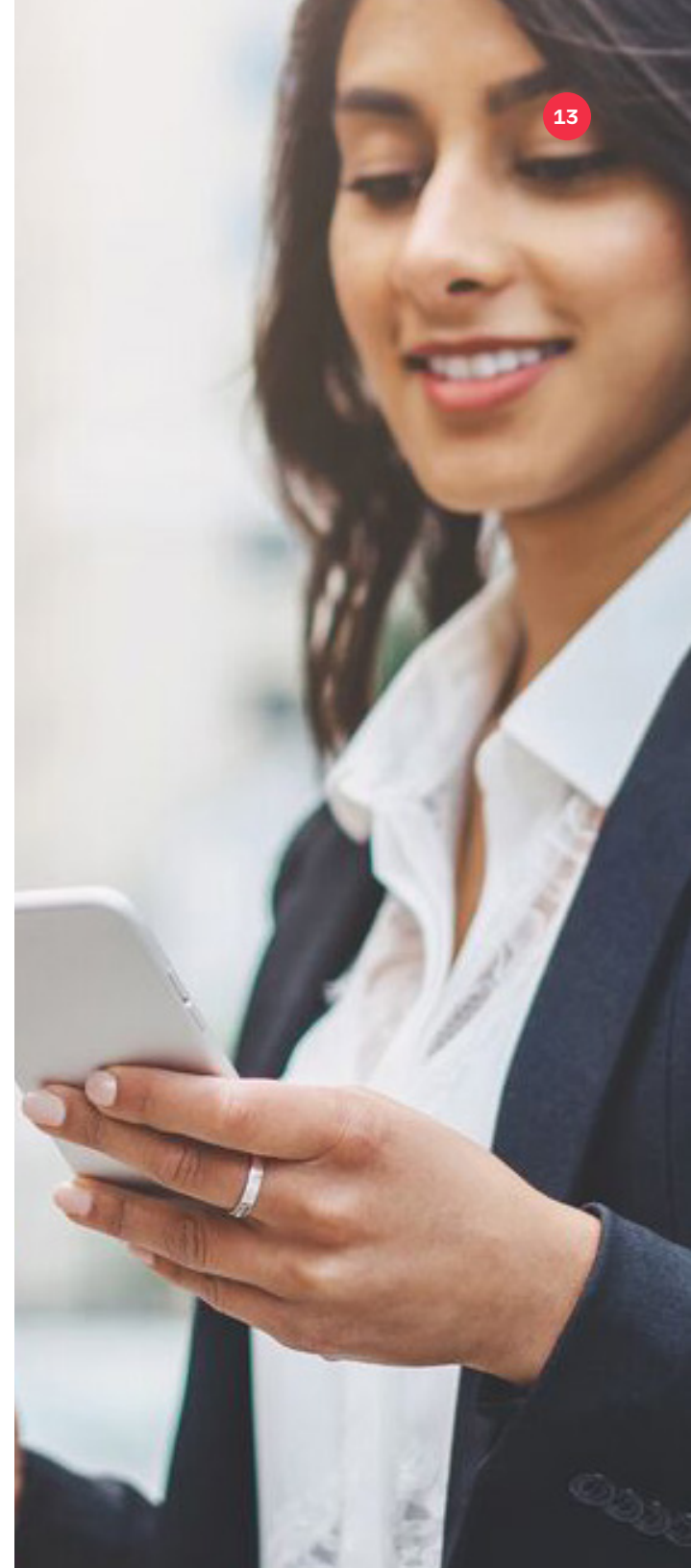
An [analytics database](#) is a scalable data management platform designed for efficient storage and retrieval of data, typically integrated within a comprehensive data warehouse or data lake. It enables rapid analysis of large datasets, allowing you to identify patterns, trends, and anomalies more swiftly than manual exploration.

These factors collectively contribute to ensuring high-quality data and promoting reliability, accuracy, and trustworthiness in the analytics and insights derived from the data.

6. Communicate the new process to your team

You've done all this work to enable high quality data, now it's time to keep it clean. We recommend that you host a meeting with your team to outline your new schema, share the tracking plan, explain your naming convention, and discuss the process for tracking new events. This sets expectations and puts everyone on the same page.

Designate an individual that each team needs to run events by and establish a time when events are decided within the product development process. Some companies even choose to make one data leader responsible for owning the schema and approving all new events that go into apps and websites. Whatever you decide on, be sure to document this process well so your teams can reference it and share it with any new hires moving forwards.



5. Develop a culture of AI literacy



AI can only enhance your business operations when it's understood and effectively utilized across your entire organization. That means fostering a culture of AI literacy is integral to your overall AI strategy and its success.

According to research by Qlik, just 20% of employees believe their employer is preparing them for a more data-oriented and automated workplace. Consequently, we recommend training your employees on the basic concepts and potential applications of AI and ML and push them to explore how this technology can help with their day-to-day roles:

- ➔ **Approach AI from a problem-solving perspective:** Focus on how these tools can enhance your employees' daily work and the business overall. This is not just for your technical teams, but for every department – marketing, sales, HR, customer service, and more. Encourage them to play around with your tools and brainstorm ways AI can help automate manual processes or alleviate burdensome tasks – this can not only help boost workplace efficiency, but also employee engagement!
- ➔ **Show them the strategic value of AI:** It's also important to engage with stakeholders and decision-makers and ensure they understand the strategic value of AI. When the leadership comprehends the potential of AI, they can make more informed decisions, align AI initiatives with business objectives, and champion the drive towards AI maturity. Taking a top-down approach to AI can ensure its adoption at every level of your organization.

- **Explain how your AI applications work:** Make sure your teams understand not just the ‘how’ but also the ‘why’ behind your AI models. Explain how the data is used, how the models make predictions, and why particular outcomes are achieved. This transparency will increase trust and confidence in your AI applications, encouraging wider adoption.
- **Cover responsible use:** Any AI training would be remiss to ignore the limitations of the technology. Remind employees that AI is a tool to enhance their work, but not a replacement for human intelligence and emotionality. All AI-generated work needs to be reviewed by a human and fact checked to ensure accuracy and readability.

Plus, anything your employees share with a free tool can leak proprietary information, compromise customer or patient privacy, and present legal implications for your business. Be sure to put together organizational AI guidelines so your employees know how to use these tools responsibly and safeguard your company and customer information.

Promoting AI literacy across the organization creates a workforce that is prepared for the future of work and facilitates a smoother, more effective AI adoption. This literacy can also act as a safeguard against potential ethical and legal pitfalls, as informed employees are more likely to use AI tools responsibly and comply with regulations.



6. Using real-time data for AI applications

The ability to process real-time data and act upon it instantly can be a game changer for businesses, enabling them to respond to customer behavior immediately, make accurate predictions, and drive dynamic business strategies. In the context of AI applications, real-time data provides the means to make accurate, moment-by-moment decisions and predictions.

Let's take the example of an AI-powered recommendation engine for an e-commerce site. If the system is using outdated data, it might suggest items to a customer that they have already purchased or viewed. In contrast, a recommendation system that uses real-time data can suggest items based on the customer's most recent browsing activity, increasing the chances of a purchase.

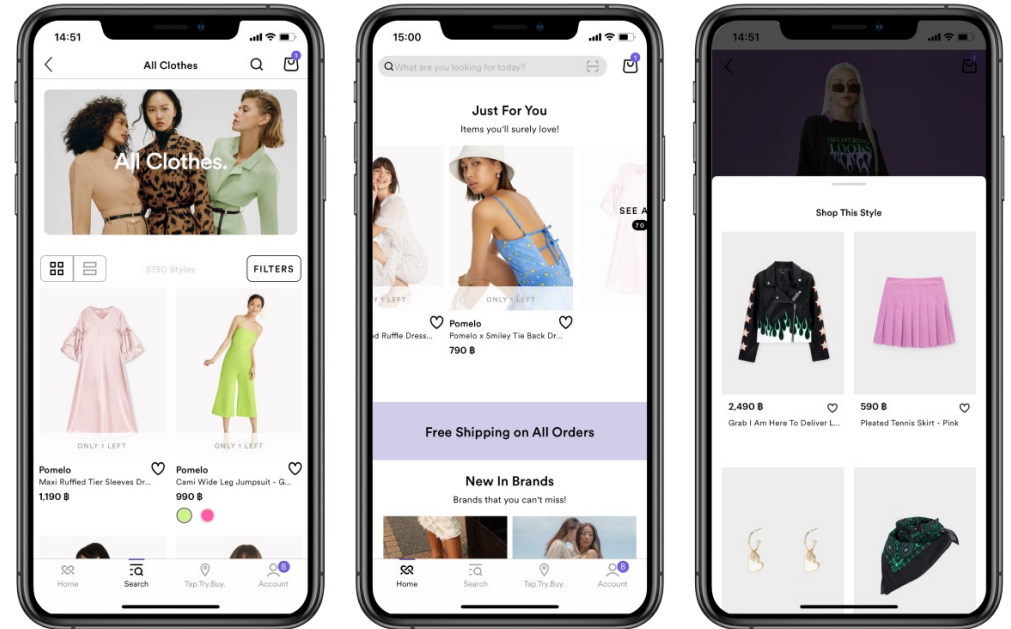


Real-time data is also crucial in fraud detection systems. By using real-time data, these systems can identify fraudulent transactions as they occur and halt them before they're completed. This immediacy drastically reduces the potential for financial loss and increases customer trust in the safety of their transactions.

However, processing real-time data for AI applications comes with its own set of challenges. It requires robust data infrastructure capable of ingesting, processing, and analyzing large volumes of data in real time. Additionally, data quality and consistency become even more crucial, as there's often little to no time to manually clean or preprocess the data before it's fed into the AI system.

In order to maintain the integrity and reliability of real-time data, businesses can implement a customer data platform. A CDP like Twilio Segment can collect and process data in real time, ensuring the data is clean and consistent before it is fed into the AI system.

To sum it up, real-time data allows AI applications to provide immediate insights, react to changes as they happen, and offer enhanced user experiences. By ensuring the real-time flow of high-quality and consistent data, businesses can fully leverage the power of their AI systems.



E-commerce fashion retailer [Pomelo](#) uses Twilio Segment and machine learning to deliver personalized shopping recommendations in real-time



Beyond the basics: marketing personalization tactics that actually convert

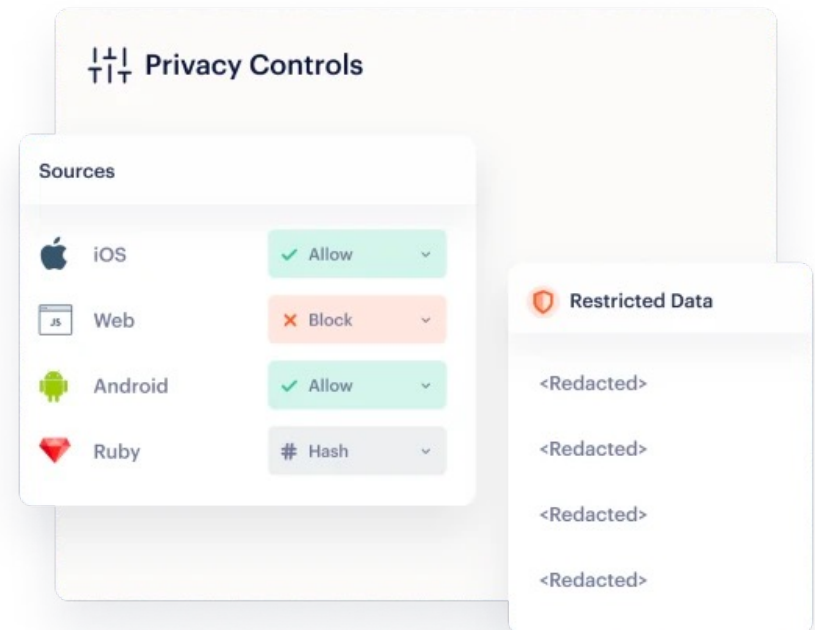
Learn how to navigate the complexities of personalization at scale to start having a real impact on your customers' experience with your brand.

[Get the guide →](#)

7. Protecting privacy in the age of AI



In the digital age, balancing AI capabilities with data privacy can feel like walking a tightrope. Businesses are eager to harness AI's predictive and analytical power, but they must do so without infringing on the privacy of their customers' data. Navigating this balance is crucial for maintaining customer trust and compliance with data protection laws.



On one hand, AI requires vast quantities of data to deliver precise and valuable outputs. Machine learning models, in particular, thrive on data, learning and improving from every piece of information they process. In areas such as personalized marketing, product recommendations, and customer service, AI has the potential to revolutionize the customer experience.

However, the vast quantities of data AI requires come with inherent privacy risks. Consumers are becoming increasingly aware of and concerned about how their data is collected, stored, and used. And they expect businesses to respect their privacy and keep their data secure.

In order to maintain consumer trust and safeguard data privacy, businesses leveraging AI must:

→ **Be transparent with consumers:** Collecting and using customer data while also keeping it safe requires a thoughtful and proactive approach to data management and privacy. Businesses must be transparent with consumers about how their data will be used and provide mechanisms for consumers to exercise their privacy rights.

→ **Abide by global privacy regulations:** Moreover, regulations such as the [General Data Protection Regulation \(GDPR\)](#) in the EU and the [California Consumer Privacy Act \(CCPA\)](#) in the U.S. have established strict rules for how businesses must handle consumer data. These laws give consumers the right to know what data is collected about them, to access that data, and to request deletion of their data. Violations can lead to significant penalties, both financial and reputational.

→ **Prioritize “privacy by design”:** Incorporating privacy into the design of AI systems, a concept known as [privacy by design](#), is another important strategy. This involves making privacy an integral part of system architecture, rather than an afterthought. For example, businesses could use techniques like anonymization or differential privacy to protect sensitive data in AI datasets.

→ **Establish data governance processes:** Finally, businesses must ensure they have robust data governance processes in place. Data governance encompasses the people, processes, and technologies that manage and protect data. It involves setting policies for data collection, storage, and use, and ensuring those policies are

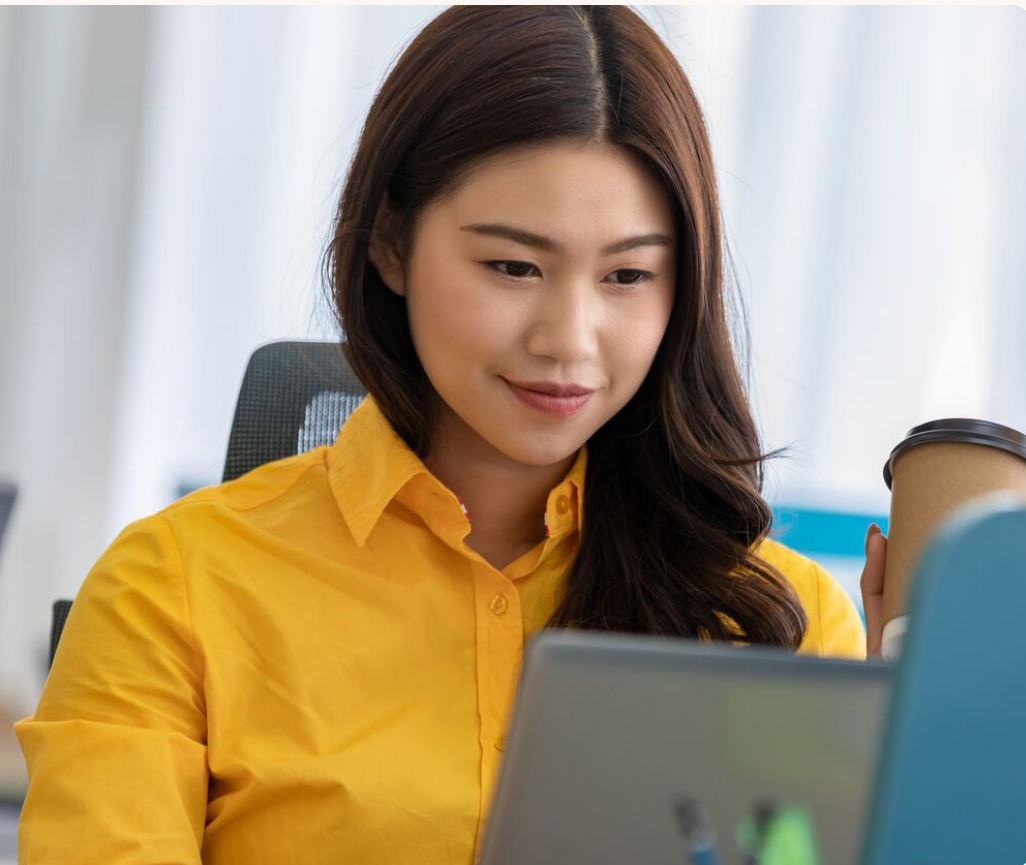
enforced. It also involves regular audits and risk assessments to identify and address potential privacy risks.

Data privacy made easy

With the Segment Privacy Portal, you can get real-time visibility into what personal information you’re collecting, where you’re collecting it from, and where you’re sending it. Then, set rules to automatically protect it.

[Learn more →](#)

8. Ethical use of AI and machine learning



Ethics in AI is an increasingly critical consideration, with society beginning to grapple with the potential consequences of autonomous systems making decisions that were traditionally the preserve of humans. This is especially true in fields such as healthcare, finance, and law enforcement, where AI decision-making can have significant ramifications on individual lives and society at large.

AI models, like all tools, are neutral by themselves. It is the usage and the intentions of the humans behind them that determine whether they are used for beneficial or harmful purposes. One of the most pressing ethical issues in AI is ensuring that the systems are fair and do not perpetuate existing biases.

It's important to remember that AI models learn from the data they're fed. If the training data reflects the biases present in society, the AI model can unwittingly perpetuate and even amplify these biases. For example, an AI model used for hiring might discriminate against certain demographic groups if the training data predominantly includes successful candidates from other demographics.

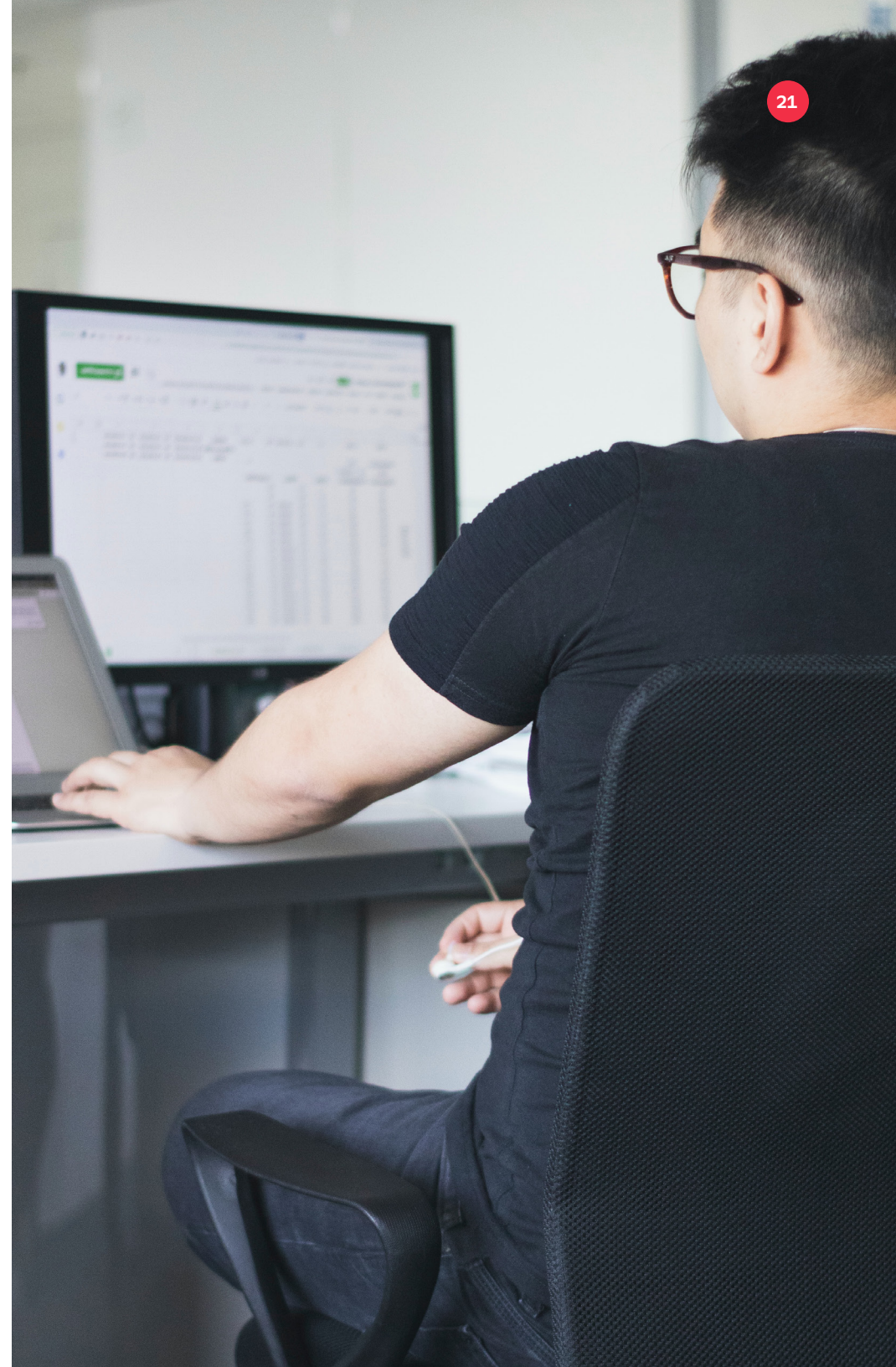
10 essential steps to build an AI-ready organization

Transparency is another essential aspect of ethical AI. Stakeholders need to understand how AI models make their decisions. However, many complex AI models, like deep learning networks, are often termed “black boxes” because it’s challenging to decipher how they arrive at a particular decision. This can lead to mistrust and apprehension among users.

There are also concerns about privacy and data protection. As AI systems often need vast amounts of data for training, organizations must ensure they are collecting and using this data ethically and legally. This includes respecting user privacy and adhering to regulations like GDPR.

The ethical considerations in AI are numerous and complex, and they cannot be an afterthought.

Instead, ethics should be a core consideration from the inception of any AI project. This can involve measures like bias audits of AI models, fostering transparency through explainable AI, and implementing robust data privacy practices. By ensuring the ethical use of AI, organizations can build systems that are not only technically sound but also trusted and accepted by their users.



9. The role of customer data platforms (CDPs)



As we navigate the maze of data readiness for AI applications, a crucial player in the mix is the customer data platform. CDPs play an increasingly important role in preparing data for AI applications, offering a solution that addresses multiple data-related challenges, all under one roof.

A CDP is a software that collects and organizes customer data across various channels into a single, unified customer database. By doing so, it provides a holistic and real-time view of the customer, making it a valuable resource for AI applications focused on enhancing the customer experience.

One of the primary benefits of a CDP is data unification. As we've discussed earlier, data silos are one of the significant barriers to AI-readiness. With a CDP, customer data from different sources like websites, mobile apps, CRM systems, and even offline sources, can be consolidated, thereby breaking down data silos and ensuring that the data fed into AI systems is complete and coherent.

Data quality is another area where CDPs can make a significant impact. In fact, a CDP like Twilio Segment has [built-in features to cleanse and standardize data](#), removing duplicates, correcting errors, and ensuring consistency in data formatting. By doing this, it ensures the data ingested by AI systems is of high quality, thereby improving the accuracy and reliability of the AI's output.

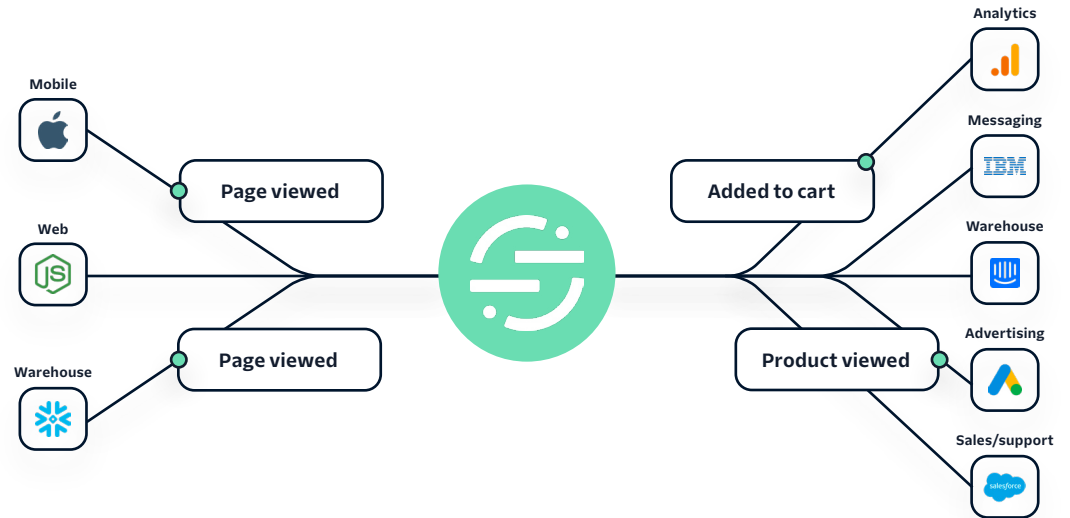
CDPs also enable **real-time data processing**, which is vital for AI applications that rely on instantaneous insights and actions. With a CDP, data collected from various sources can be processed and made available to AI systems in real time, thereby enabling them to react to changes as they happen.

In addition to these, CDPs also play a crucial role in **data compliance**.

With stringent data privacy laws like GDPR and CCPA, it's essential that the data fed into AI systems is compliant with all relevant regulations. CDPs can help businesses adhere to these regulations by providing features for data governance, including tracking consent, anonymizing data, and enabling data rights management.

One popular CDP in the market is [Twilio Segment](#). It offers a range of features that simplify data collection, cleaning, real-time processing, and compliance, making it an excellent tool for businesses seeking to get their data AI-ready.

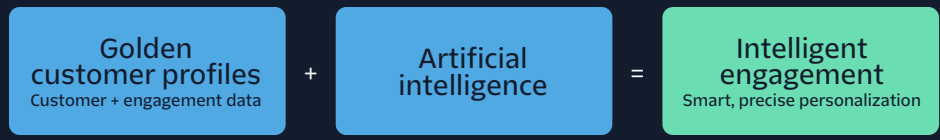
In short, CDPs are invaluable in the [journey towards AI-readiness](#). By centralizing, cleaning, and real-time processing of data, they provide a robust foundation for businesses to leverage the full potential of AI.



Build digital greatness with Twilio's CustomerAI

Twilio's CustomerAI technology combines living customer profiles and real-time engagement data with AI to help businesses serve customers better. With Segment's "golden customer profiles" and generative and predictive AI, your business can build smart, precise personalization that engages your customers and keeps them coming back for more.

[Learn more →](#)



10. Leveraging AI for business growth

AI offers immense potential for driving business growth. By delivering personalized experiences, generating insights, and automating processes, AI can help companies increase customer satisfaction, improve operational efficiency, and drive revenue growth.

The best part? AI isn't reserved for technical teams. Almost every role within your organization can benefit from the technology in some way. In fact, here are a few popular AI use cases across different departments:

Sales	Marketing	HR	Customer service	Finance
Automate time-consuming tasks	Expedite copywriting	Review resumes	Analyze customer sentiment and intent	Detect and fight fraud
Eliminate manual data entry	Personalize content and user experiences	Source job candidates	Improve agent efficiency and productivity	Automate bookkeeping
Personalize reach outs	Segment audiences	Analyze employee surveys	Offer 24/7 service with AI chatbots	Assess risk
Improve sales forecasting	Optimize paid ad performance	Predict future staffing needs	Assist with request routing and prioritization	Ensure compliance

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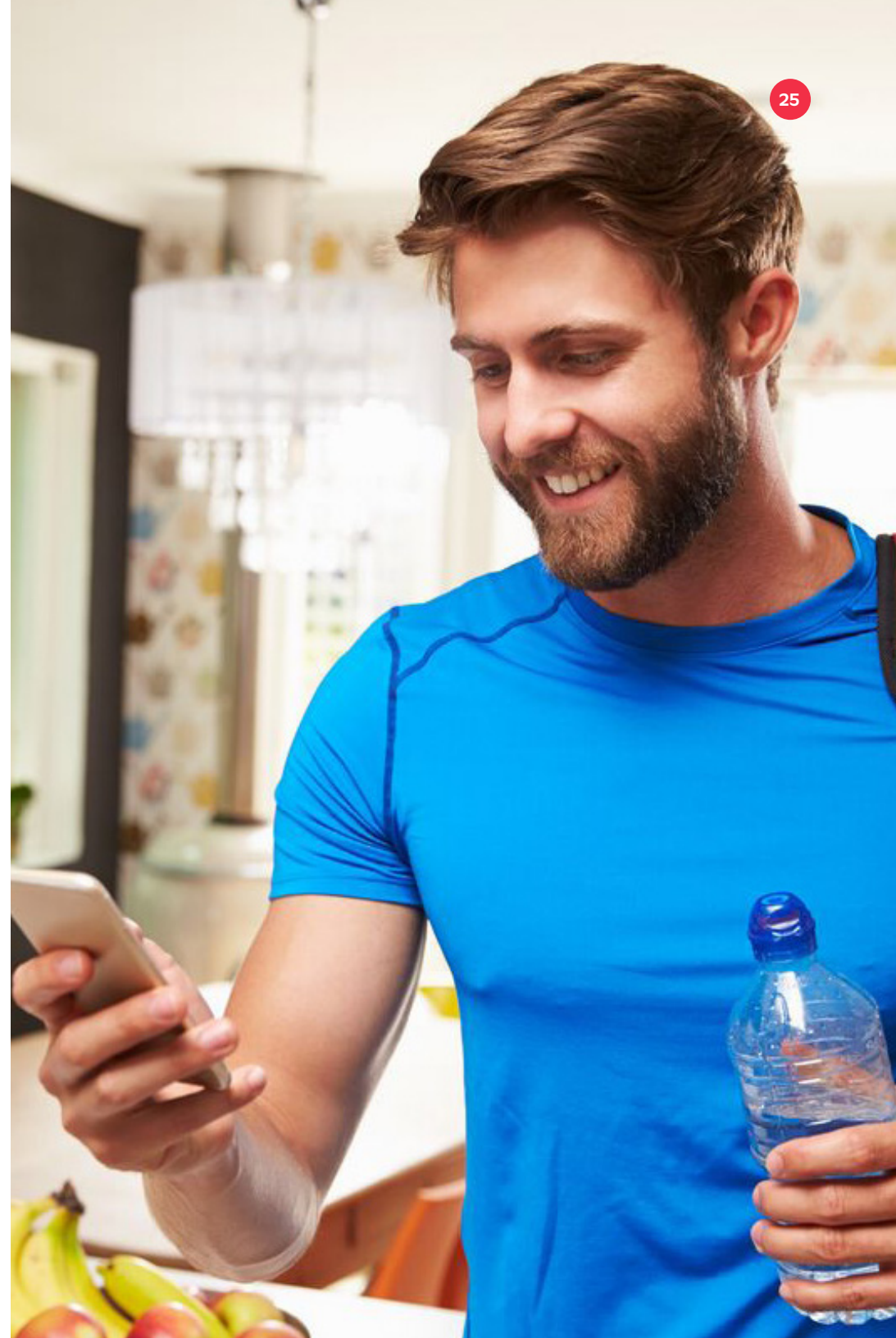
While AI is still an emerging technology, there is already so much it can do.

- **For your employees**, it can increase productivity and efficiency, automating mundane tasks and freeing up more time for meaningful, strategic work.
- **For your business**, it can help you make better decisions, improve your products and services, and reduce fraud.

And by choosing the right software solutions, your business can achieve so much more with AI.

In fact, Twilio's [2023 State of Customer Engagement Report](#) found that the most successful brands use digital customer engagement services to drive growth and increase resilience in today's rapidly changing business environment. In fact, 60% of brands say that investing in a digital customer engagement service like Twilio has improved their ability to meet changing customer needs—and 90% say it's increased revenue.

Again, in order to empower your teams to use AI and boost better business outcomes, you need to invest in internal AI literacy and the right data. Only then can your team unlock the full potential of your customer data and transform your business.





Get AI-ready with Twilio Segment

In the last few years, AI has attracted the attention of many businesses looking to edge out the competition and raise workforce efficiency. With the right AI strategy, businesses can seize market opportunities, stay ahead of the competition, and drive their growth in the AI-driven future.

But before you dive right in to using this emerging technology, remember: A successful AI strategy requires more than simply collecting first-party data. To leverage AI to its full potential, your business needs to ensure your data is AI-ready. This means ensuring your data is both clean and accurate, as well as addressing the challenges associated with data quality, data silos, data privacy, and regulatory compliance. Only then can you leverage your data to engage customers in a way that speaks to their needs in real time.

After all, AI is only as good as the data you share with it.

Luckily, using a CDP like Twilio Segment can give you the tools you need to collect and clean customer data in real time. Our trusted data infrastructure, unified profiles, and open platform can help your business establish a strong data foundation that you can use to power your AI strategy and help your business achieve digital greatness.

[Schedule a demo now](#) to learn more about how Segment can help make your AI more precise, intelligent, and impactful with trusted customer 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.

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

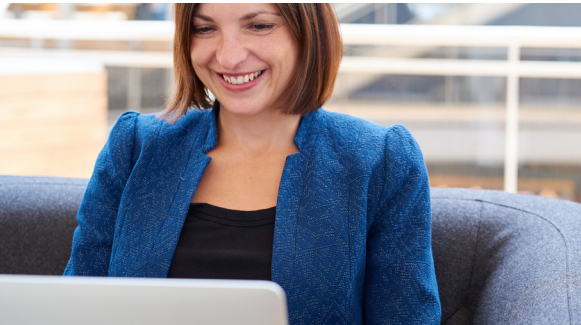
Recommended reading



Personalization in the age of AI: how 4 brands are shaping the future

See how top businesses harness the power of AI-driven personalization and leverage real-time customer data to fuel growth.

[Download now](#)



7 ways to use AI to supercharge your marketing strategy

From automating manual tasks to optimizing ad campaigns, here's how marketers can use AI to work smarter, not harder.

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How to collect, unify, and activate customer data to drive your AI strategy

Learn how to lay the groundwork for a successful AI strategy that unlocks a holistic customer view and helps deliver powerful personalized experiences.

[Watch now](#)



Thanks for reading

If you would like to learn more about what Twilio can do for your business, please [contact the Segment sales team.](#)