twilio
segment

The Definitive Guide
to Customer Data
Platforms

Table of
Contents

Is your data strategy falling behind?

Businesses are producing more data than ever before.

The rate of data growth worldwide in the past few years has been greater than in the previous two decades. Data is predicted to more than double again over the next few years – reaching 175 zettabytes in 2025, according to IDC.

Data from your website, mobile apps, email, call centers, and support tickets are now just a fraction of what your business needs to track.

But more data isn't corresponding to more insights. In the race to digitally transform, businesses are unprepared to manage the volume of data being thrown at them.

Data sits in silos and can't be integrated with the analytics and marketing tools needed to drive decision-making and power personalized customer experiences.

As the digital ecosystem continues to evolve, so does the need for robust solutions that consolidate, analyze, and leverage customer information effectively.

It's not surprising then that Customer Data Platforms (CDPs) are becoming a cornerstone of the modern marketing stack and the underlying data architecture that supports it.
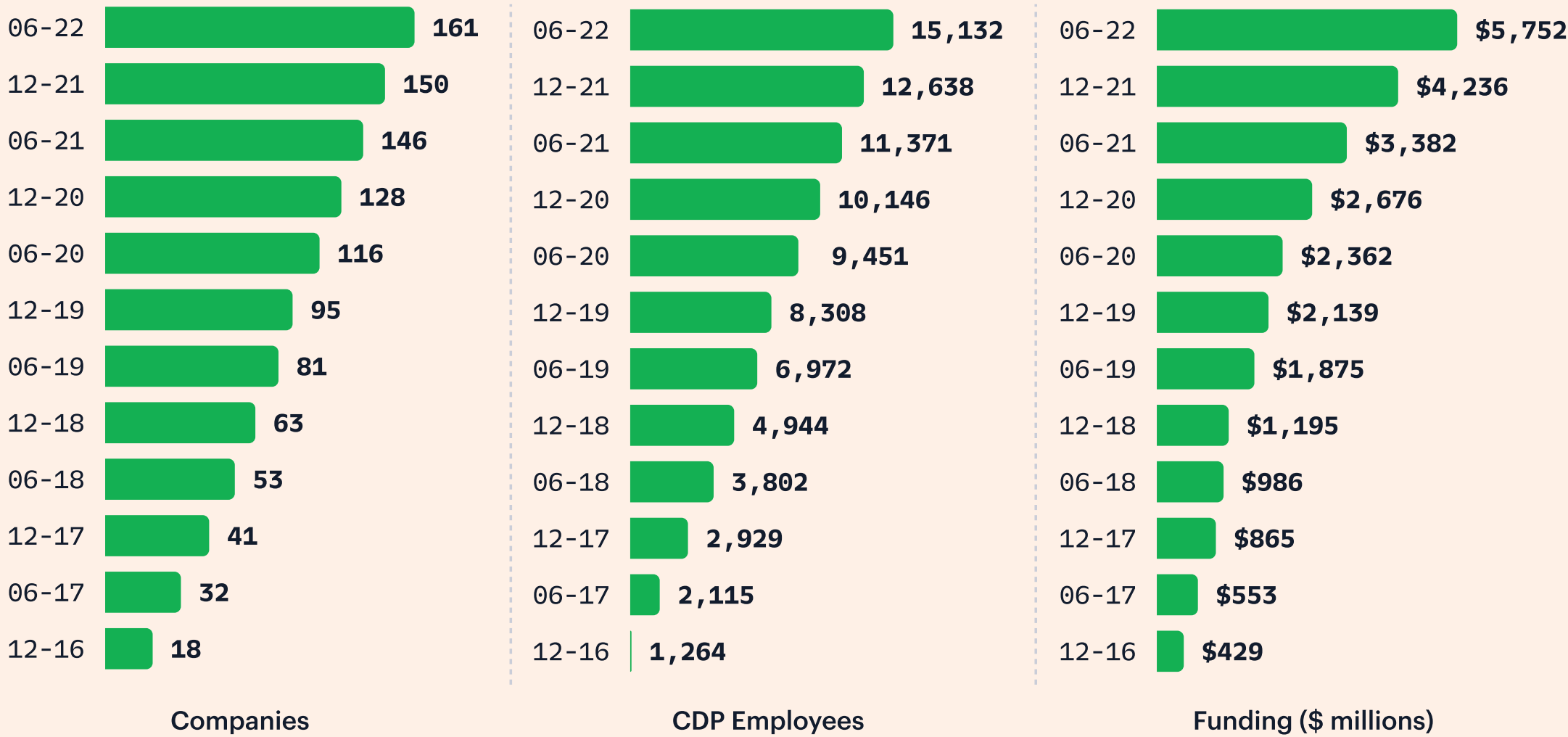
175
Zettabytes in
2025

By collecting customer data from many different channels, and unifying it into one location, CDPs offer all teams within the business – from marketing to analytics – a single, accessible, and real-time view of their customer.

In doing so, CDPs have real business impact. A **recent study by Forrester** found that companies using a CDP earn 2.5x more in customer lifetime value than those who do not use a CDP.

The rapid growth of CDP as a category, however, hasn't been without growing pains. In the annual hype cycle, Gartner recently placed CDPs in the "**trough of disillusionment**," suggesting that CDP buyers expect this technology to do more than it is capable of delivering. However, this guide will help you understand the benefits and capabilities of a customer data platform.

To offer greater clarity into what a CDP is and who it benefits in your business, Twilio Segment has put together our Definitive Guide to Customer Data Platforms.

CDP Industry Growth

	Companies	CDP Employees	Funding ($ millions)
06-22	161	15,132	$5,752
12-21	150	12,638	$4,236
06-21	146	11,371	$3,382
12-20	128	10,146	$2,676
06-20	116	9,451	$2,362
12-19	95	8,308	$2,139
06-19	81	6,972	$1,875
12-18	63	4,944	$1,195
06-18	53	3,802	$986
12-17	41	2,929	$865
06-17	32	2,115	$553
12-16	18	1,264	$429

What is a CDP?

A Customer Data Platform is a tool to help you bring reliable customer data to every other tool and team in your organization. CDPs help you:

Collect

Bringing together data from your website, app, and other business applications.
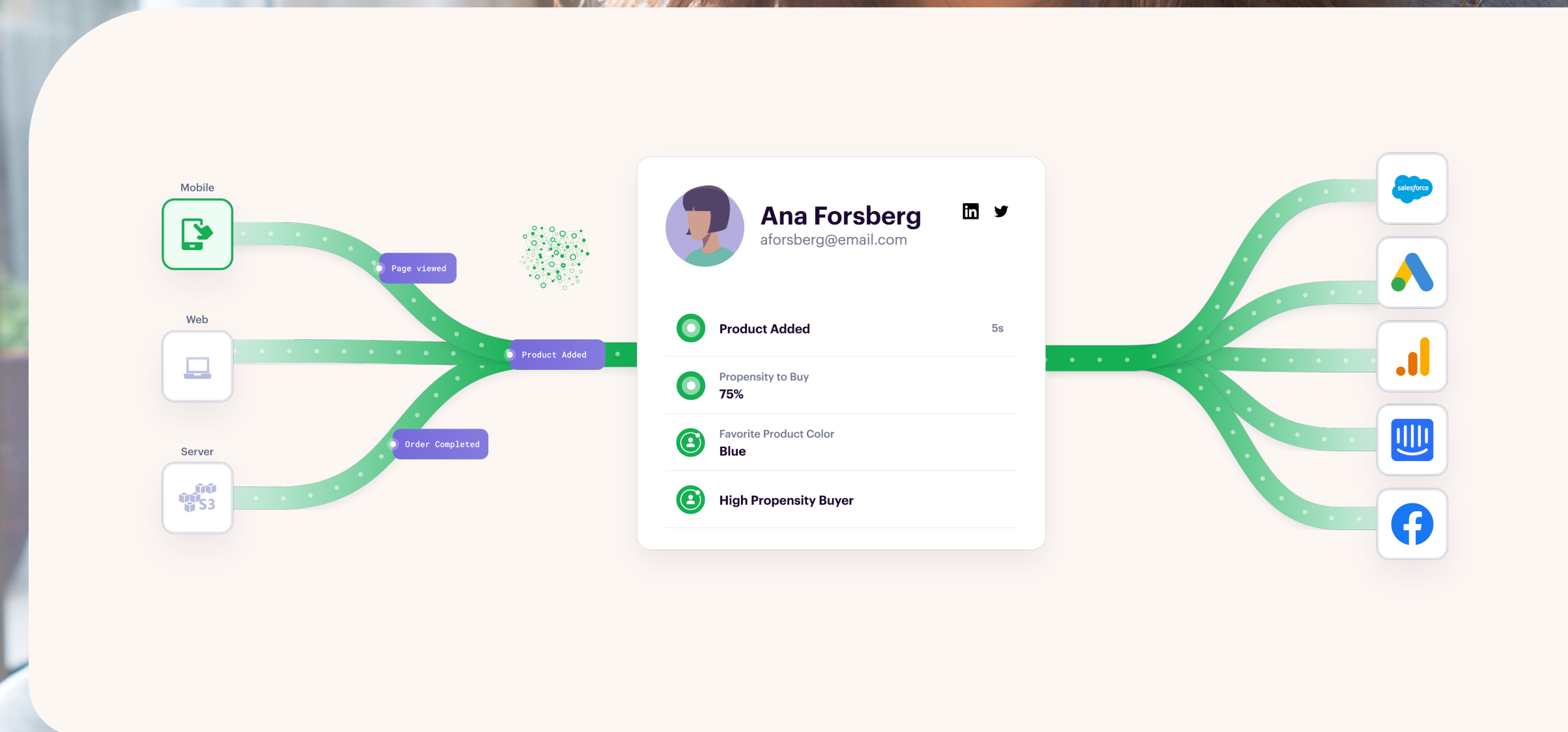
Govern

Standardizing your data to ensure accuracy, reliability, and privacy compliance.

Synthesize

Combining all of your customer data to create and enrich unified profiles.

Activate

Connecting customer profiles to your growth and analytics tool stack to improve the customer experience.

Data collection

A CDP enables you to capture complete customer data from wherever your customers interact with your brand. This includes your "owned" platforms like your website and mobile apps. It also includes your advertising channels, your email, CRM, payment systems, and support tools.
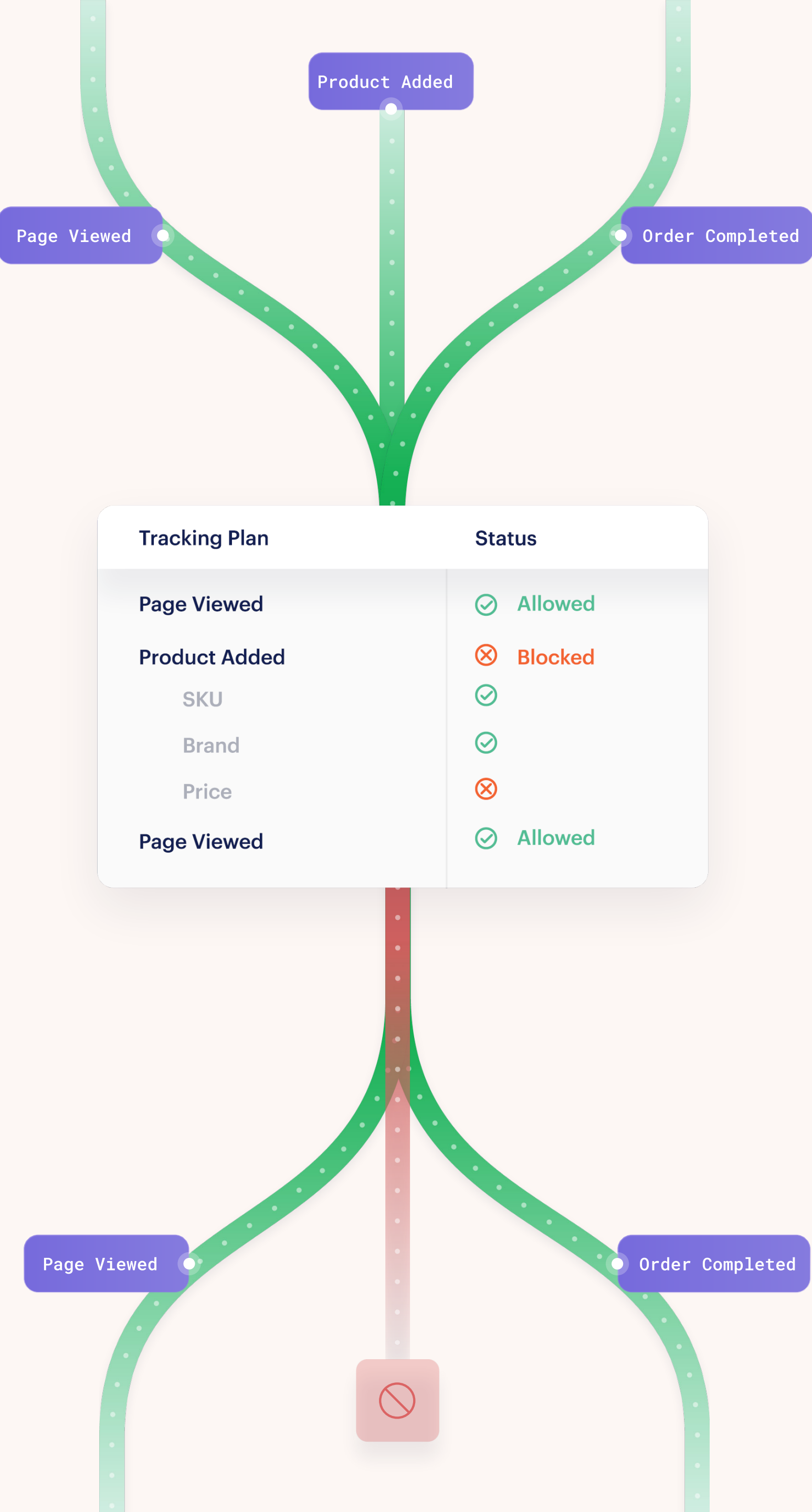
Your CDP creates a single source of truth for your data which connects to the internal systems and servers you use to run your business.
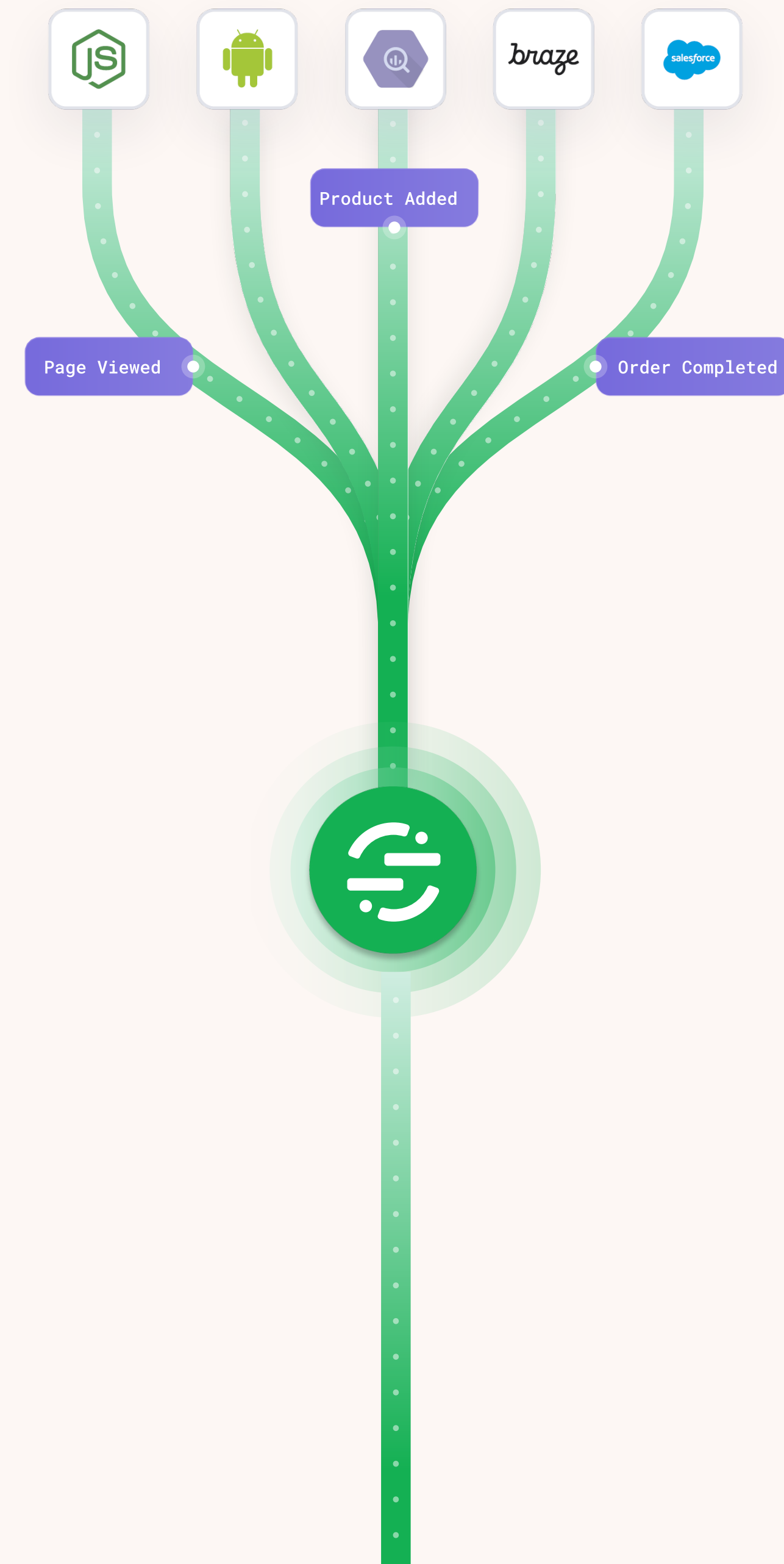
Data governance

A CDP must apply **common data standards** to ensure the data you are collecting is correct and privacy compliant. This means you can quickly diagnose data quality issues and get data production-ready before acting on it.

If the data is not up to specifications (e.g., an event is improperly named), CDPs can automatically block or transform an event to maintain data integrity.

Tracking Plan	Status
Page Viewed	✅ Allowed
Product Added	❌ Blocked
SKU	✅
Brand	✅
Price	❌
Page Viewed	✅ Allowed

Practical applications of a CDP

Increase conversion with personalized lifecycle campaigns

Identify and prioritize high-value support tickets

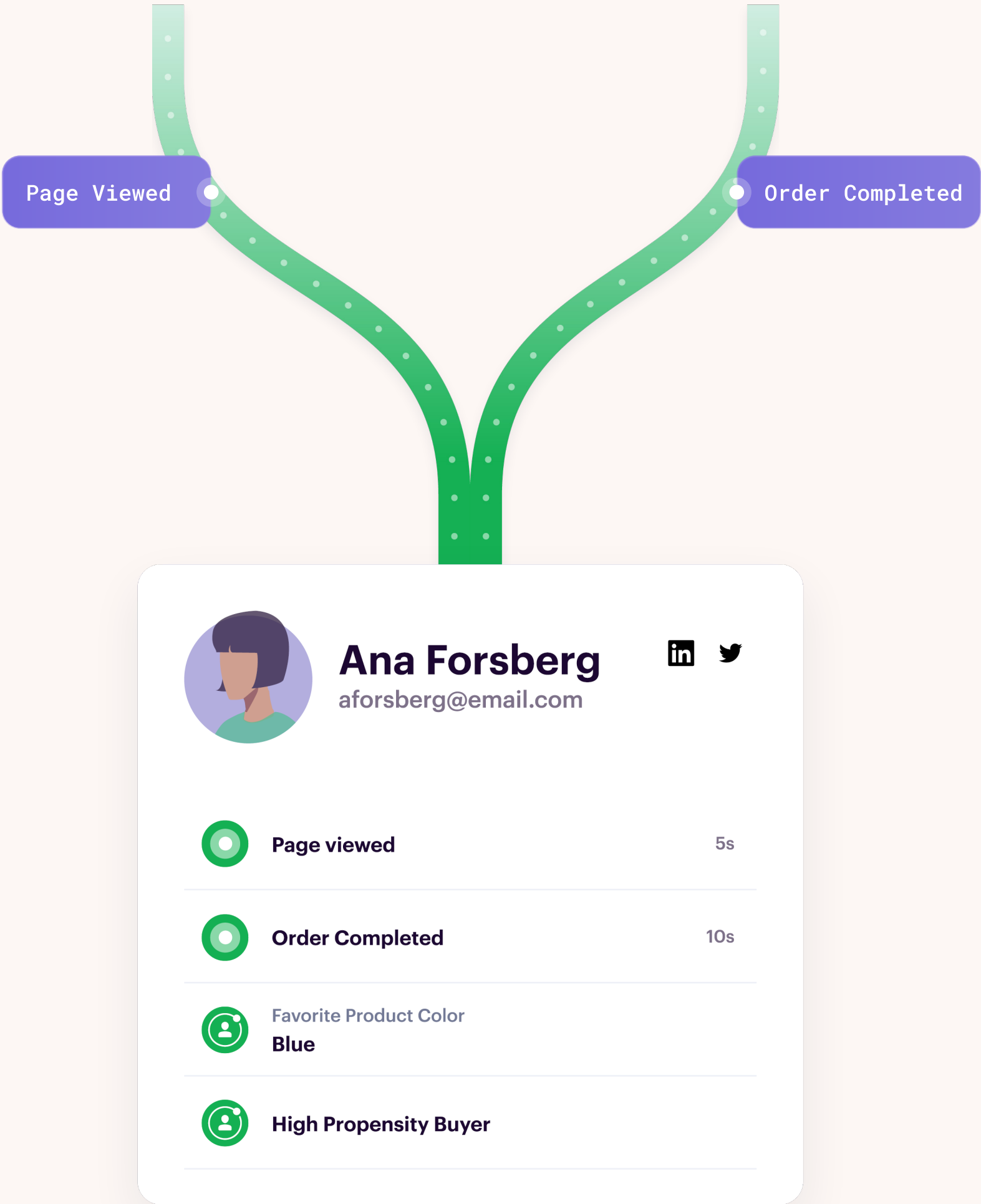**Spot and remove bottlenecks in your funnel**

Data synthesis

The ability to put individual customers into related groups enables you to see all the activity of a user, from any channel, online or offline, in one place.

A good CDP will also create "anonymous" customer profiles (i.e., prospects who are visiting your website but have not signed up yet). Once these visitors become "known" (i.e., they have identified themselves through a website form), you can stitch them together into a single customer profile.
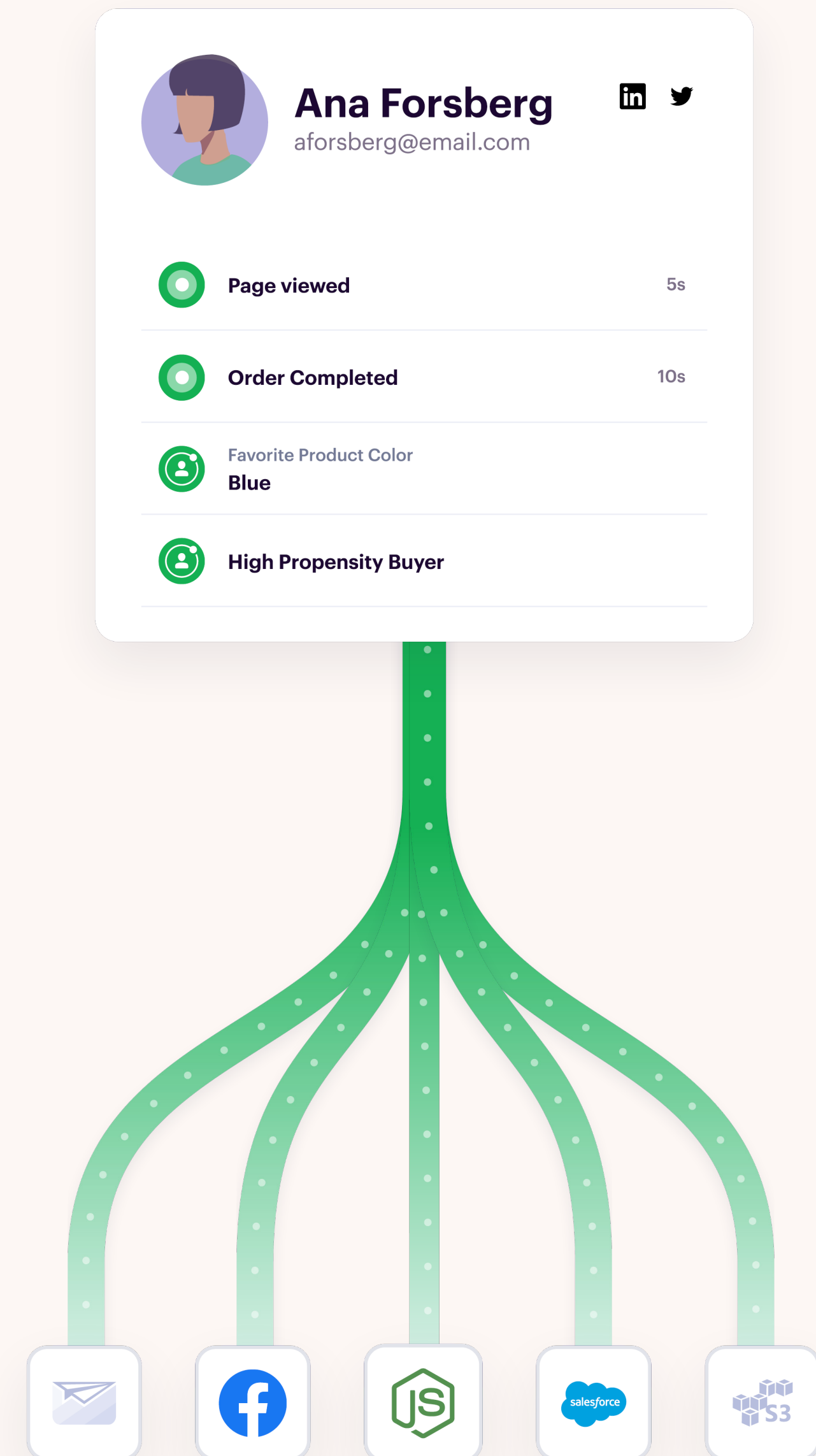
With a CDP, no data point falls between the cracks.

Page Viewed

Order Completed

Ana Forsberg
aforsberg@email.com

Page viewed   5s

Order Completed   10s

Favorite Product Color
Blue

High Propensity Buyer

Data activation

A core competency of a CDP is the ability to easily route data to the **tools you use every day**. CDPs are ideally data-agnostic by design, meaning that the data you collect and route through them can be activated in any tool or channel.

In some cases, a CDP may provide some basic functionality to allow you to execute campaigns on the customer data that it collects. However, in most cases, CDPs are the "pipes" that enable you to connect your clean, unified data from its point of collection to the tools that you use to drive engagement, retention, and lifetime value.

Ana Forsberg
aforsberg@email.com

|		
Page viewed		5s
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Favorite Product Color **Blue**		
High Propensity Buyer		

How is a CDP different from other solutions?

Rapid shifts in customer behavior and the regulatory environment has made it nearly impossible for businesses to get ahead of customer demands with their current tech stack.

- Customer experiences transitioned from offline to online
- Customers require personalized, relevant, and streamlined experiences
- Privacy has become paramount

As customer behavior changes, businesses must follow suit by implementing new solutions to support those use cases. And, as business needs change, technology solutions that once worked have become outdated.
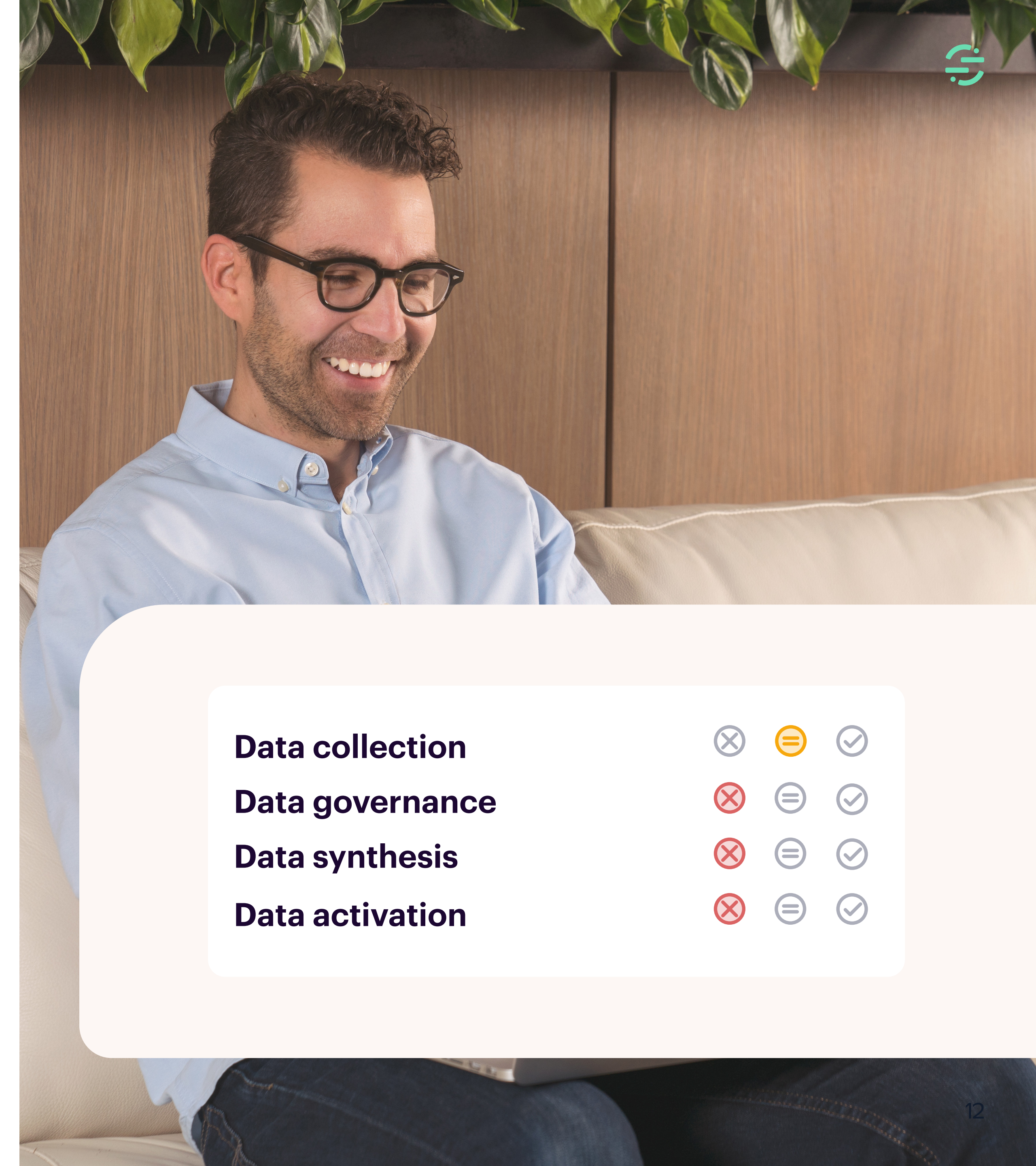
CRMs

CRMs, like Oracle and Salesforce, were developed to help companies create a single customer record. However, CRMs weren't designed to support the digital engagement needs of companies and their end consumers, especially as the number of data sources, types, and applications grew.

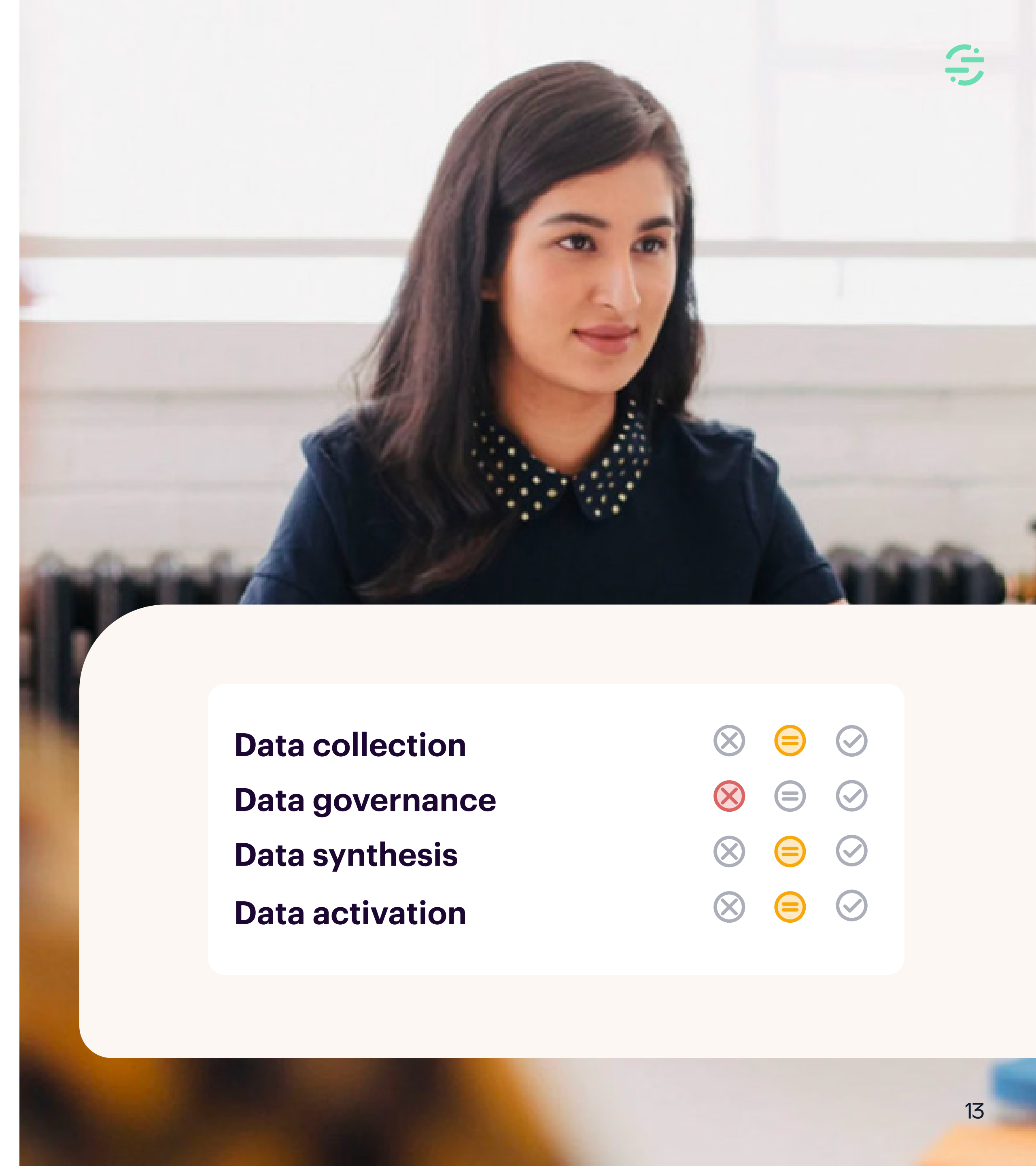**Data collection**

Data governance

Data synthesis

Data activation

Marketing Clouds

CRMs slowly evolved into marketing clouds. They acquired marketing automation tools like Marketo, ExactTarget, and Pardot to add an engagement layer to enable action. However, marketing clouds are mostly limited to email and can't extend data beyond their own applications. They are riddled with bad data due to their single connection point with CRM systems that relied primarily on manual data entry.

Data collection

Data governance

Data synthesis

Data activation

DMPs and Data Providers

Promising to help brands tap into digital ad opportunities, DMPs were bolted on to marketing clouds. However, the inability to standardize data and deliver a unified experience was exacerbated by the addition of DMPs. DMPs function primarily on generalized, third-party data, going against consumer demands for privacy and the ongoing shift to first-party data.

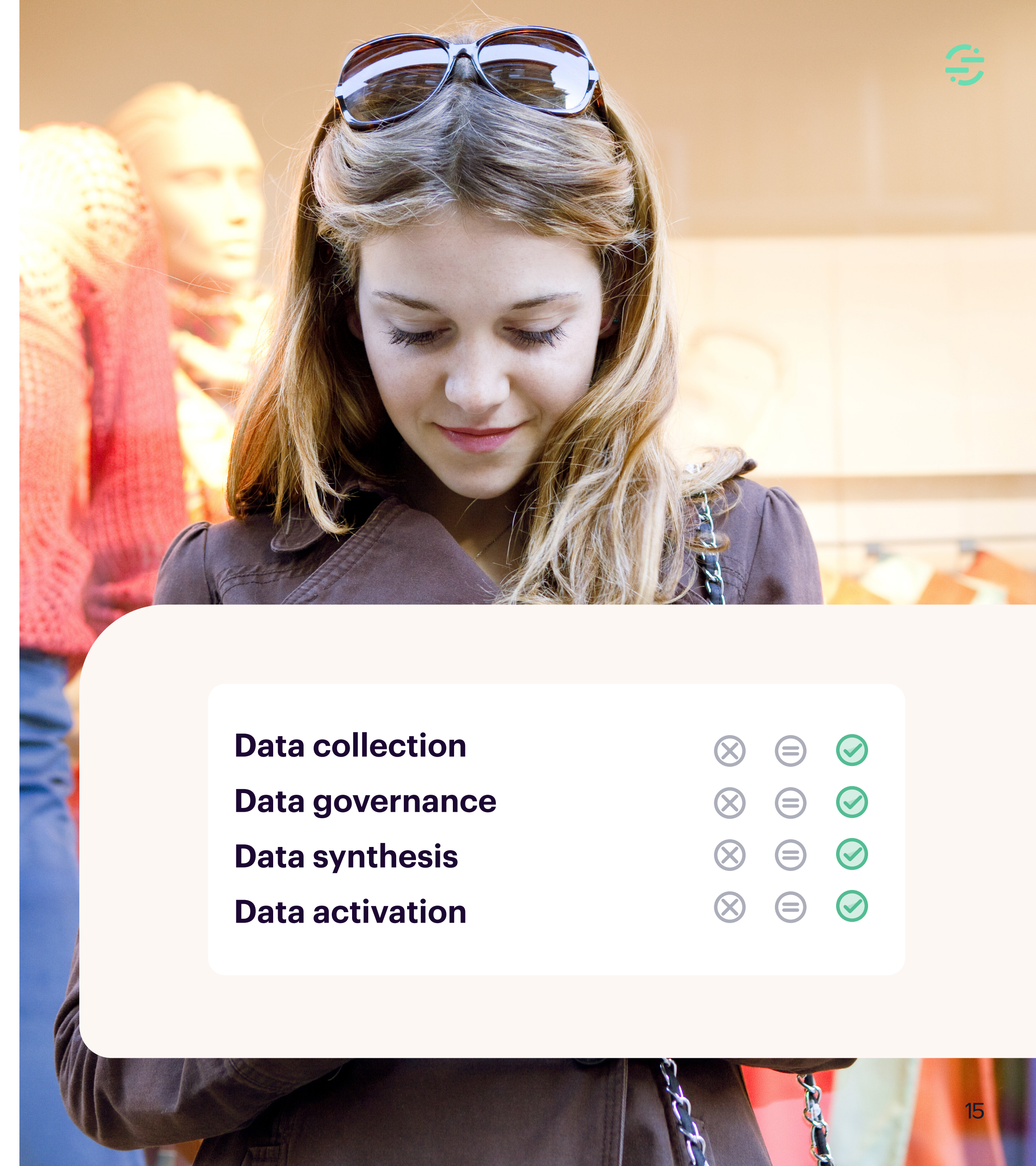|			
Data collection	⊗	=	✓
Data governance	⊗	=	✓
Data synthesis	⊗	=	✓
Data activation	⊗	=	✓

14

CDPs

Companies quickly realized that they needed to collect data from and engage with customers on more channels than just email and ads. They needed more connections. With the introduction of the GDPR and consumers' renewed focus on privacy, companies also needed less reliance on third-party data. And, they needed a way to keep data clean and accurate.

Data collection

Data governance

Data synthesis

Data activation

Who is a CDP for?

The business goal of a CDP is to bring reliable customer data together in one central location so that every team can improve the decisions they make, their speed in delivery, and ultimately the customer experience. As such, CDPs can provide discrete benefits for each team in an organization.

Executive/Founder

Marketing

Product

Engineering

Analytics

Executive/Founder

The role of an executive or founder is to establish a vision and ensure the company is achieving key milestones towards that end goal. Data is imperative in both setting a realistic vision and accurately gauging company progress. With a CDP, the data required is both readily available and trustworthy.

How CDPs can help

Make data-driven decisions

Use customer insights to fuel better outcomes.

Personalize user experiences

Tailor customer journeys to maximize value.

Accelerate time to value

Easily launch new products and new markets.

How to measure success

- Revenue growth
- Cost reduction
- Mitigation of privacy and security risks
- Ability to identify and capture new opportunities
- Team productivity

> " As our business grows, it has become increasingly important to understand how online spend influences offline behavior, which Facebook and Segment have made possible. "
>
> **MICKY ONVURAL**
> CEO, Bonobos

Marketing

CDPs make it easier to connect all of your digital experiences – from advertising campaigns to websites to email marketing. This connected user journey helps marketing teams understand customer behavior, build better performing advertising audiences, and concretely showcase the marketing team's impact.

How CDPs can help

Understand the full user journey

Connect everything online and offline.

Build your own real-time audiences

Use the same real-time audience in every tool.

Power marketing attribution

Understand your best acquisition channels and reliably measure your impact

How to measure success

- Advertising efficiency (e.g., conversion rates, return on ad spend)
- Unique visits to website
- Inbound lead or signup volume
  Website conversion to lead/signup
- Customer engagement (e.g., lifetime value, Net Promoter Score)

> " Segment allows us to be a lot more precise with how we dynamically suppress or target users in ad campaigns based on actual product uses. "
>
> **SAM COREN**
> Senior Demand Generation
> Manager, DigitalOcean

Product

CDPs break down data silos so product teams can access the data they need to measure and improve crucial KPIs. CDPs can also help quickly scale **growth stacks** – from your product analytics tools to data warehouses – and can deliver critical product insights immediately.

How CDPs can help

Make product adoption and usage data "self-serve"

Democratize data across your organization and move faster without analytics bottlenecks

Build the best growth stack

Get new tools working in days not months.

Measure and improve KPIs

Move the needle on KPIs like adoption, retention, and product usability.

How to measure success

- Product usage
- Activation rate
- Adoption of products and features
- Product engagement
- Net Promoter Score
- Customer engagement (e.g., lifetime value, Net Promoter Score)

> " Segment is the glue that holds our experimentation infrastructure together. "
>
> **PATTI CHAN**
> VP of Product, Imperfect Foods

19

Engineering

CDPs protect one of the engineering team's most precious resources – time. With a CDP, engineers can use one API for all customer data collection. They don't need to spend weeks building integrations for specific tools or maintaining those connections after the fact.

How CDPs can help

Easily collect data from everywhere

Use one API for all customer data collection.

Integrate new tools in minutes

Skip time-consuming and redundant work.

Query your data in SQL

Create a clean and ready-to-go data set.

How to measure success

- Engineering productivity
- Product performance (e.g., page load speed, uptime)
- Reduction of bugs introduced to production
- Faster time to value of technology investments

> " Segment allows us to smoothly handle the disparate datasets we use. It doesn't matter where you look at the data, with Segment, it's always consistent. "
>
> **NIC SAURIOL,**
> Software Development Leader, IBM

Analytics

Trustworthy reporting comes from good data. CDPs give analytics teams a complete, accurate, and clean data set to work from and the tools to keep it that way. With CDPs, data is automatically standardized across tools, including data warehouses. This eliminates time spent data munging and frees up time for deep data analysis.

How CDPs can help

Standardize data collection

Implement a shared and enforceable data dictionary.

Ensure data quality

Automate data validation and violation reporting.

Empower users with actionable data

Enable "self-serve" analytics for all business teams.

How to measure success

- Improvement in marketing acquisition KPIs (e.g., return on ad spend, customer acquisition cost)
- Speed of product and customer experience iteration
- Customer lifetime value
- Productivity and efficiency across teams

> " Segment seamlessly combines all of our shopper and transactional data, giving us a comprehensive view of our customer and shopper interactions. "
>
> **CHE HORDER**
> Former Director of Analytics, Instacart

How a CDP is used across your organization

A **recent study by Forrester Consulting** revealed that the proliferation of enterprise software apps and tools is leaving employees overwhelmed. A majority (79%) of knowledge workers reported that teams throughout their organizations are siloed, and 68% said their work is negatively impacted because they don't have visibility into cross-functional projects.

With all the moving workstreams, teams are feeling out of sync with each other. Marketing is tracking their specific data; sales and support are doing the same, and engineering teams are spending thousands of hours building point-to-point connections between these different data sources.

The benefit of a CDP is that it is a silo breaker, and its value extends throughout the entire business, not just one team.

In the same way that a CDP is designed to aggregate data from multiple touch points, a CDP is a strategic asset for multiple departments in your organization.

With a CDP, you can ensure everyone who needs access to your customer data can access, trust, and use the data as needed.

Here are three examples of the inherently collaborative nature of a CDP.

79%
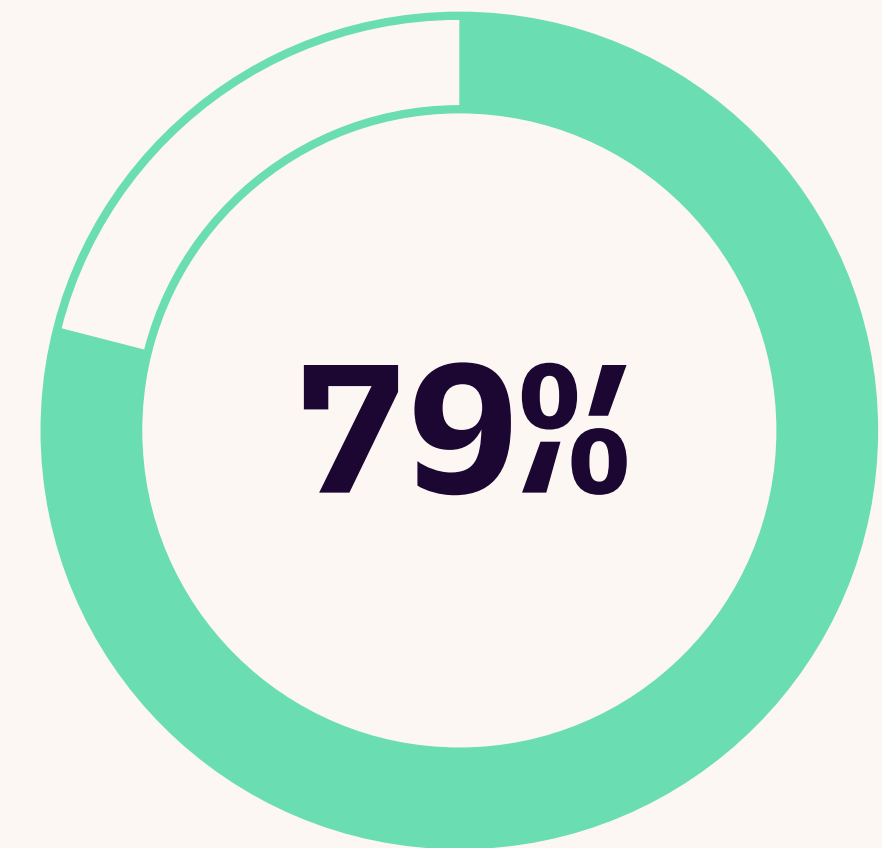
79% of knowledge workers report their teams are siloed

68%
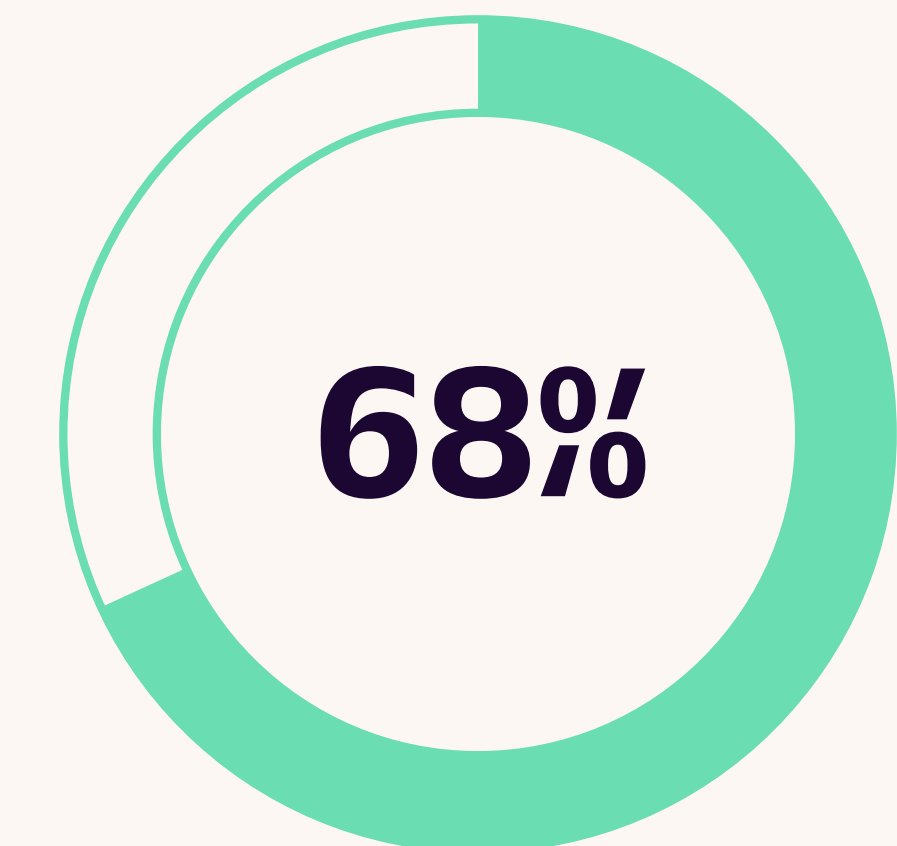
68% of knowledge workers report their work is negatively impacted by silos

EdX empowers each team's unique workflows

At **edX**, an online course provider to more than 20 million students, each team had their own tools and way of tracking data that caused inefficiencies and duplicated work for already busy teams.

Because each team had a custom way of tracking data, they often tracked the same things, like when a student searches for a class or signs up for a new one. This caused a lot of redundant work for both the go-to-market and engineering teams.

Go-to-market teams were blocked from quickly accessing the metrics they needed for new initiatives, which meant the engineering team had to manage these data requests on top of their other work.

Rather than building and maintaining their own data pipelines to solve this issue, edX turned to Segment. With a Customer Data Platform, they got an out-of-the-box solution which meant less time manually connecting disparate data sets, and more time on the work that improved the customer experience.

edX

" Segment provides an easy way to manage our analytics services. We don't need to deploy code or touch configuration files whenever we want to change something which saves us a lot of time. "

OLGA STROILOVA, Ph.D.
Analytics and Research

Staples Canada accelerated their digital transformation

At **Staples Canada**, the leading office supply retailer, customer-facing teams struggled with siloed data in legacy systems. With customer data fragmented between point of sales systems, call centers, and multiple websites, the marketing and analytics teams were missing out on a goldmine of valuable customer data that could have improved the customer experience.

In order to accelerate their digital transformation, Staples Canada turned to Segment to gather their customer data from several disparate sources, unify it, and make that data accessible to multiple teams. Choosing to purchase a CDP instead of building one internally freed up their engineering team to focus on other mission-critical initiatives for the company.

With Segment at the heart of their tech stack, different teams at Staples Canada have gained unprecedented agility to work with the tools they needed to understand and take action on customer data. The company was also able to better support each customer – regardless of what channel they were on – with a complete, real-time view of their customer data.

staples[]

" Segment allowed us to have a single view of our customers across all our digital properties. "

AARON CARTER
Manager, Data Sciences & Digital Analytics, Staples Canada

Frame.io uses a single view of the customer

At **Frame.io**, a professional video software company, the marketing, engineering, and support teams tracked data across the customer lifecycle. Their problem wasn't the amount of data collected, it was that they couldn't use that data effectively.

As Kyle Gesuelli, their VP of Growth & Analytics, said: "Despite all the data points, we didn't have a global picture or place to manage the customer's profile."

They needed a definitive "single source of truth" where they could unify diverse data sources that would provide the full picture of their customers for every team in the organization.

By connecting all their customer data with a CDP, Frame.io gained a unified view of each customer across all touchpoints. Since they no longer had to stitch together different datasets, they reduced campaign coordination time by 50%.

Meanwhile, the increased accuracy and quality of the data improved campaign performance by 50%.

))⊪· Frame.io

" Having our entire marketing automation programming powered by Segment reduced campaign coordination time by 50%. "

KYLE GESUELLI
VP of Growth & Analytics, Frame.io

CDP + AI creates a competitive edge

Combining real-time data from a CDP with AI/ML capabilities can provide businesses with a significant competitive edge. Take, for example, increased operational efficiencies at airports, instant identification of fraudulent banking activities, improved recommendations for online transactions, and better patient care at hospitals, to name just a few.

Investments in AI/ML are also helping businesses to reduce costs, better serve customers, and gain competitive advantage in rapidly evolving markets. Titanium Intelligent Solutions, a global SaaS IoT organization, saved one customer over 15% in energy costs across 50 distribution centers, thanks in large part to AI.

26
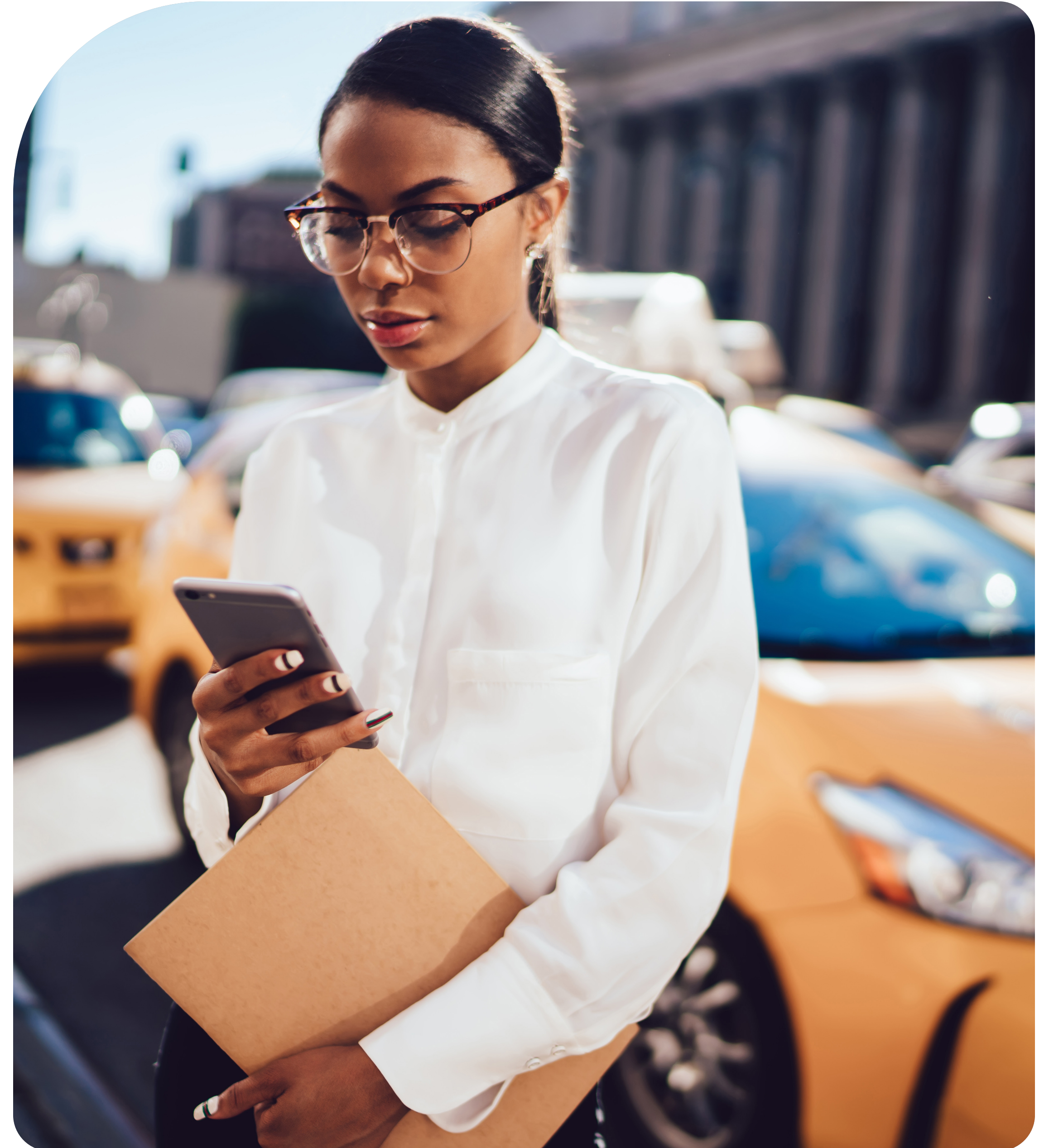
Increased personalization and marketing campaign optimization

AI/ML can also analyze real-time data from a CDP to understand customer preferences, behaviors, and buying patterns. This enables businesses to deliver highly personalized experiences, recommendations, and offers, enhancing customer satisfaction and loyalty.

Faster decision-making

Businesses can make informed decisions in real time, so they can respond swiftly to customer needs and emerging trends. Airlines can optimize ticket prices using AI to analyze demand and competition in real time, leading to more efficient pricing decisions.

Predictive analytics

By analyzing historical and real-time data, AI/ML can predict future trends, demand patterns, and potential issues. Businesses can proactively adjust strategies and operations to capitalize on opportunities or mitigate risks. Segment's predictive AI/ML empowers Instacart's ad platform to drive the right ad for the right user at the right time.

Segment makes it easier than ever to understand, predict, generate, and engage each individual customer in real-time and at scale. Learn how to **power your AI with our best data infrastructure**.

Transform your data strategy with a CDP

The growth and evolution of the customer data platform category is an acknowledgment that data quality, governance, privacy, and integration are key to the customer experience today.

An effective Customer Data Platform allows your business to collect reliable customer data from many different channels and unify it in one, easy-to-access location for all of your departments. This creates a single, accessible, and up-to-date view of your customers that can be used to personalize every customer experience.

CDPs can have a transformative impact on your business by allowing you to build a fully connected digital marketing stack with your customers at the center.

FORRESTER®

Total Economic Impact

Forrester TEI report found that companies that use Segment see an ROI of $41 million within three years.

Download the Forrester TEI report >

28

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.

Together Twilio and Segment can engage consumers across every digital channel, from SMS to voice to email and more, allowing businesses to tap into the full power of all their customer data, with access for marketing, engineering, product, sales, customer service and data teams.

Schedule a demo to see how a CDP can improve your data strategy by enabling best-in-class data collection, governance, synthesis, and activation.
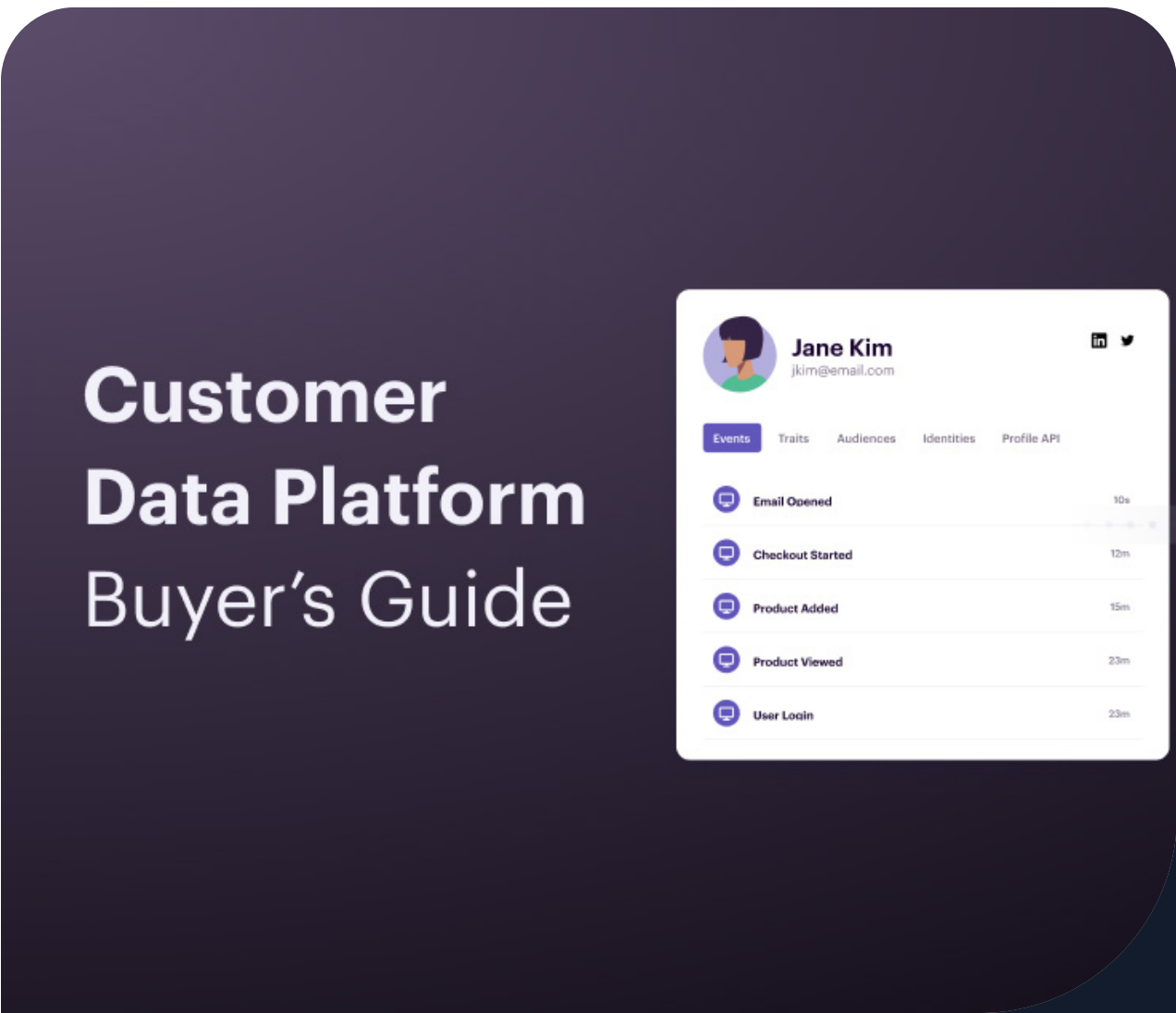
29

Recommended Reading

Customer Data Maturity

This step-by-step guide will help you make the most of your customer data platform, including how to establish a foundational data architecture, profiles, and data-driven engagement.

Learn more >

CDP Buyer's Guide

Our buyer's guide for CDPs will help you understand when it's time to buy a CDP, which features you need, and how to evaluate the various CDP vendors out there.

Learn more >

CDP RFP Guide

Our CDP RFP Guide provides best practices, frameworks, and an RFP template to help you identify your CDP requirements, create an effective RFP, and select the right CDP vendor.

Learn more >

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